

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

O.A. NO. 137 OF 2026

IN THE MATTER OF :

AAKASH RANISON

...APPLICANT

VERSUS

CENTRAL POLLUTION CONTROL BOARD & ORS

...RESPONDENTS

INDEX

S.NO	PARTICULARS	PAGE NO.
1	ANNUAL REPORT (interim) 2021-22 on IMPLEMENTATION OF PLASTIC WASTE MANAGEMENT RULES 2016	1-97
2	ANNUAL REPORT 2023-24	98-367
3	PRESS RELEASE REGARDING GENERATION OF PLASTIC WASTE	368-375
4	ANNUAL REPORT 2020-21 ON IMPLEMENTATION OF PLASTIC WASTE MANAGEMENT RULES 2016.	376-600

NEW DELHI

FILED BY:

19/02/2026



Narender Pal Singh

Advocate

CH.#8 lawyers chambers

Patiala house courts,

New Delhi- 110001.

K-18, level-1, Green Park Main,

New Delhi-110016

Email-danubeconsulting@gmail.com, Mob: 9311010090

**Annual Report (Interim)
2021-22
on Implementation of
Plastic Waste
Management Rules, 2016**



Central Pollution Control Board

Delhi

Table of Contents

1. Introduction	
2. Observation	2
2.1 Plastic Waste Generation	2
(a) Total Waste generation	2
(b) Per capita waste generation	3
2.2. Status of Submission of Annual Report (AR) by ULBs to SPCBs/PCCs	4
2.3 Complete Ban on Use of Plastic Carry Bags and Implementation of Thickness >50 Microns Carry Bags as per Provisions 4(c & d, thickness criteria condition) of PWM Rules, 2018 & (column 3 – form vi)&Partial/Complete Ban on Use of Plastic Carry Bags (through executive order) (column 5 – form vi).	7
2.4 Details of Plastic Waste Management as per Provisions 5,6&9 of PWM Rules, 2016, As Amended, 2018	8
2.5 Details of Registered Manufacturing/Recycling Units	10
2.6 Details of Unregistered Plastic Manufacturing /Recycling Units	11
2.7 Status of Marking & Labeling on Carry bags/Multilayered Packaging	11
2.8 Details of Violations & Action Taken on Non-Compliance of Rules	12
3.1 Andaman & Nicobar	12
3.2 Andhra Pradesh	12
3.3 Arunachal Pradesh	13
3.4 Assam	13
3.5 Bihar	13
3.6 Chandigarh	14
3.7 Chhattisgarh	15
3.8 Delhi	15
3.9 Goa	16
3.10 Gujarat	17
3.11 Haryana	17
3.12 Himachal Pradesh	18
3.13 J&K	18
3.14 Jharkhand	18
3.15 Karnataka	19
3.16 Kerala	19

3.17 Ladakh.....	20
3.18 Lakshadweep.....	20
3.19 Madhya Pradesh.....	21
3.20 Maharashtra.....	21
3.21 Meghalaya.....	22
3.22 Mizoram.....	23
3.23 Nagaland.....	23
3.24 Odisha.....	24
3.25 Puducherry.....	24
3.26 Punjab.....	25
3.27 Rajasthan.....	26
3.28 Sikkim.....	26
3.29 Tamil Nadu.....	27
3.30 Telangana.....	28
3.31 Tripura.....	29
3.32 Uttar Pradesh.....	29
3.33 Uttarakhand.....	30
3.34 West Bengal.....	30
4.0 Recommendations.....	31

1. Introduction

As per rule “17(3)” of Plastic Waste Management Rule, 2016 (as amended) each State Pollution Control Board or Pollution Control Committee shall prepare and submit the Annual Report to Central Pollution Control Board on the implementation of these rules by the 31st July of each year. Also, as per provision “17(4)” of PWM Rules, 2016 (as amended), the Central Pollution Control Board shall prepare a consolidated report on use and management of plastic waste and forward it to the Central Government along with its recommendation by 31st August of each year.

In accordance with the PWM Rules, 2018 based on information submitted by 31 SPCBs/PCCs, a consolidated annual report for the year 2021-22 has been prepared, including State-wise observations of the current status of implementation of Plastic Waste Management Rules in each State/UT.

2. Observation

2.1 Plastic Waste Generation

(a) Total Waste generation

34 SPCBs/PCCs have provided information on implementation of Plastic Waste Management Rules. The information as per Form VI of PWM Rules has been compiled and is placed at **Annexure I**. As per details provided by 34 States/UTs estimated plastic waste generation during the year 2021-22 is approximately **3846936 TPA**. Percentage distribution of plastic waste generation in different States/UTs is illustrated in Fig.1. It is observed that maximum quantity of plastic waste is generated in Karnataka followed by Telangana, Tamil Nadu, Delhi & Uttar Pradesh in that order.

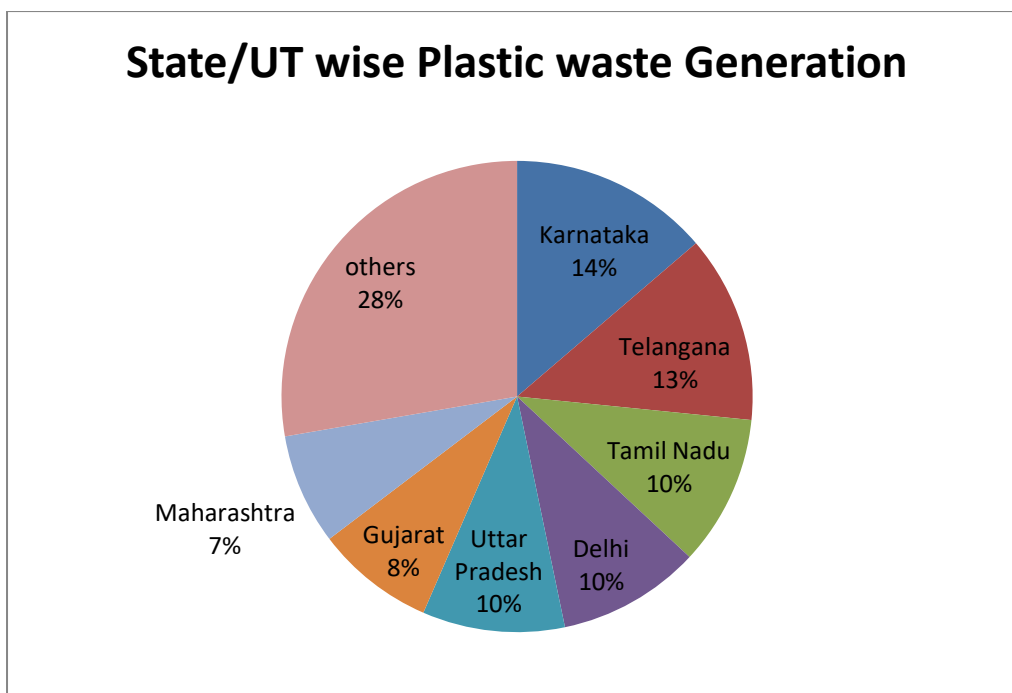


Fig.1: State/UT wise Plastic Waste Generation

(b) Per capita waste generation

Per capita plastic waste generation has been calculated based on the population of the states which have submitted their reports. The trend of per capita waste generation for the last five years (2017-22) is presented in Figure 2. It is observed that the per capita plastic waste generation has decreased from last year.

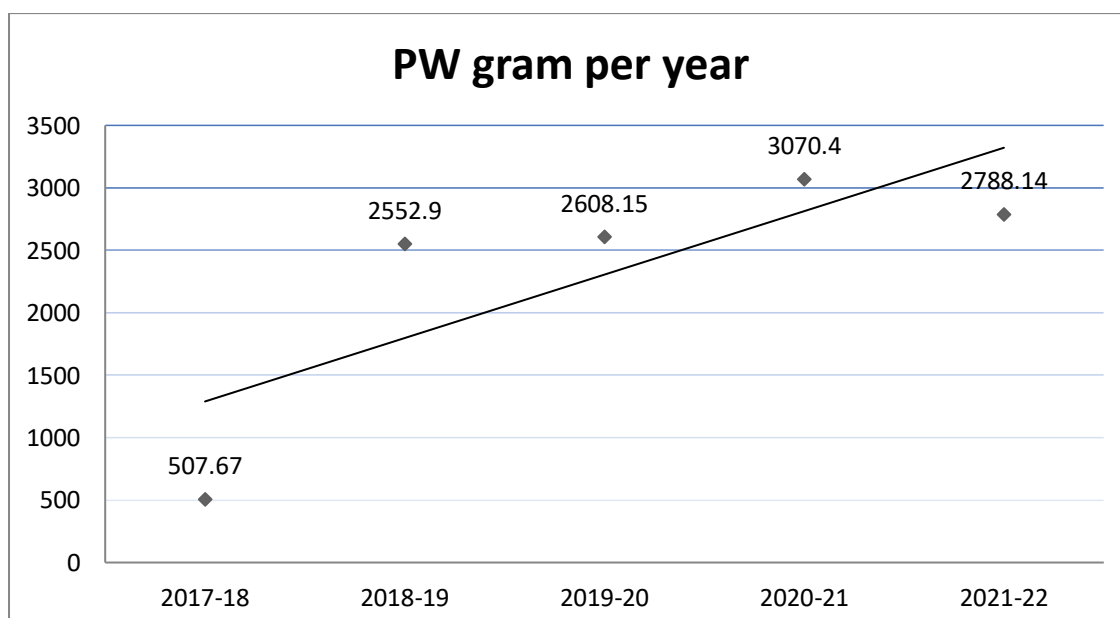


Fig. 2: Year wise PW generation trend

State wise per capita waste generation for the year 2021-22 is illustrated in Figure 3. Goa, Delhi, Telangana have reported the highest per capita plastic waste generation and Sikkim, Nagaland & Tripura have reported the lowest per capita plastic waste generation.

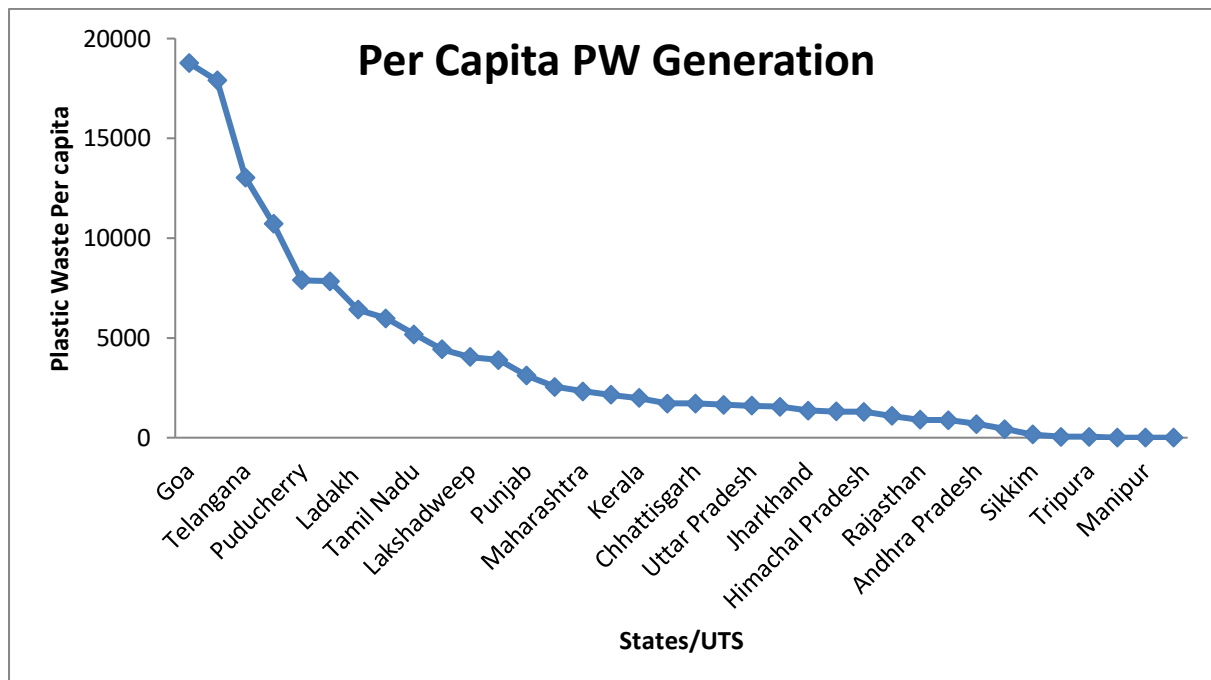


Fig. 3: Per capita State/UT wise Plastic waste generation

2.2. Status of Submission of Annual Report (AR) by ULBs to SPCBs/PCCs

As per provision 17(2) of PWM Rules “Every local body shall prepare and submit an annual report in Form –V to the concerned Secretary-in-charge of the Urban Development Department under intimation to the concerned State Pollution Control Board or Pollution Control Committee by the 30th June, every year”.

In 23 States / UTs (Andaman & Nicobar Island, Andhra Pradesh, Arunachal Pradesh, Bihar, Chandigarh, Chhattisgarh, Delhi, Haryana, Jammu & Kashmir, Jharkhand, Karnataka, Ladakh, Maharashtra, Meghalaya, Mizoram, Nagaland, Odisha, Punjab, Pondicherry, Rajasthan, Tamil Nadu, Telangana, Tripura, West Bengal) all ULBs have submitted the Annual Report to concerned SPCB/PCC. In 2 states namely Mizoram and Andaman and Nicobar have reported submission of AR by some of VPs. Status of

submission of Annual report by ULBs and Gram Panchayats in each State/UT is given in the Table 2.0

Table 2.0: Status of submission of Annual Report by ULBs & GPs to SPCB/PCC

	States/UTs	ULBs		VPs		Any other	
		Total No.	No. Submitted AR	Total No.	No. Submitted AR	Total No.	No. Submitted AR
1	A&N	1	1	70	70	GAP	GAP
2	Andhra Pradesh	110	110	GAP	GAP	GAP	GAP
3	Arunachal Pradesh	33	33	GAP	GAP	GAP	GAP
4	Assam	96	45	GAP	GAP	GAP	GAP
5	Bihar	141	141	GAP	GAP	GAP	GAP
6	Chandigarh	1	1	0	GAP	0	0
7	Chhattisgarh	169	169	GAP	GAP	GAP	GAP
8	DDN	GAP	GAP	GAP	GAP	GAP	GAP
9	Delhi	5	5	GAP	GAP	GAP	GAP
10	Goa	14	GAP	GAP	GAP	GAP	GAP
11	Gujarat	170	170	GAP	GAP	GAP	GAP
12	Haryana	86	86	GAP	GAP	GAP	GAP
13	Himachal Pradesh	68	GAP	GAP	GAP	GAP	GAP
14	J&K	80	80	GAP	GAP	GAP	GAP
15	Jharkhand	42	42	GAP	GAP	GAP	GAP
16	Karnataka	309	309	GAP	GAP	GAP	GAP
1	Kerala	93	64	GAP	GAP	GAP	GAP

7							
	Ladakh	2	2	GAP	GAP	GAP	GAP
1 8	Lakshadweep	10	GAP	GAP	GAP	GAP	GAP
1 9	Madhya Pradesh	391	374	GAP	GAP	GAP	GAP
2 0	Maharashtra	403	403	GAP	GAP	GAP	GAP
2 1	Manipur	GAP	GAP	GAP	GAP	GAP	GAP
2 2	Meghalaya	7	1	GAP	GAP	GAP	GAP
2 3	Mizoram	17	17	141	141	NA	NA
2 4	Nagaland	39	39	GAP	GAP	GAP	GAP
2 5	Odisha	114	114	GAP	GAP	GAP	GAP
2 6	Pondicherry	5	5	10	GAP	GAP	GAP
2 7	Punjab	155	155	GAP	GAP	GAP	GAP
2 8	Rajasthan	206	196	GAP	GAP	GAP	GAP
2 9	Sikkim	GAP	GAP	GAP	GAP	GAP	GAP
3 0	Tamil Nadu	649	649	GAP	GAP	GAP	GAP
3 1	Telangana	142	142	GAP	GAP	GAP	GAP
3 2	Tripura	20	20	GAP	GAP	GAP	GAP
3 3	Uttar Pradesh	734	651	GAP	GAP	GAP	GAP

3 4	Uttarakhand	100	88	GAP	GAP	GAP	GAP
3 5	West Bengal	128	128	GAP	GAP	GAP	GAP

NA: Not applicable; GAP: Information not provided

2.3 Complete Ban on Use of Plastic Carry Bags and Implementation of Thickness >50 Microns Carry Bags as per Provisions 4(c & d, thickness criteria condition) of PWM Rules, 2018 & (column 3 – form vi)&Partial/Complete Ban on Use of Plastic Carry Bags (through executive order) (column 5 – form vi).

As per annual report submitted by 31 states/UTs summary of status of implementation of the above provisions of PWM Rules across various States/UTs is given below:

- **Complete ban on plastic carry bags:** 20 States/ UTs namely, Andaman & Nicobar, Bihar, Chandigarh, Chhattisgarh, Goa, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Lakshadweep, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh.
- **Ban on plastic carry bags of thickness <75microns:** 4 States/UTs namely, Arunachal Pradesh, Jammu & Kashmir, Mizoram, Nagaland have imposed ban on plastic carry bags of thickness <75 microns
- **Status of implementation in remaining 6 states/UT:** Details are as given below:
 - **Andhra Pradesh:** Certain Urban Local Bodies like Tadipatri, Vijayawada, Tirupati & Bobbili have imposed ban on Plastic carry bags irrespective of their thickness. All local bodies have taken stand on ban on their own.
 - **Gujarat:** Complete ban in Gandhinagar City vide Notification No: VN (14)/Env-10-2008-2100-E Dated 28th June, 2011
 - **West Bengal:** Single use Plastic ban and Darjiling has banned
 - **Telangana:** Complete ban on <50-micron thickness plastic carry bags is under implementation.

- **Delhi:** No additional executive orders have been issued.
- **Ladakh :** Plastic Waste Management (Amended) Rules, 2021 is strictly implemented in UT of Ladakh
- **Pondicherry :** Ban on Single Use Plastics with effect from 02.08.2019
- **Sikkim:** Prepared Bye-Laws for implementation of PWM Rules.

Details of Orders issued in various States/UTs regarding ban of plastic carry-bags/items is enclosed at **Annexure-II**.

Note:

As per amendment to Plastic Waste Management Rules notified by MoEF& CC in August 2021 “The manufacture, import, stocking, distribution, sale and use of following single use plastic (SUP), including polystyrene and expanded polystyrene, commodities shall be prohibited with effect from the 1st July, 2022:

(a) ear buds with plastic sticks, plastic sticks for balloons, plastic flags, candy sticks, ice-cream sticks, polystyrene [Thermocol] for decoration;

(b) Plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays, wrapping or packing films around sweet boxes, invitation cards, and cigarette packets, plastic or PVC banners less than 100 microns, stirrers.

Plastic bags and sheets less than 120-micron thickness are not permitted beyond December 31, 2022.

2.4 Details of Plastic Waste Management as per Provisions 5,6&9 of PWM Rules, 2016, As Amended, 2018

Plastic waste generated by States/UTs is being utilized in different purposes such as recycling, road construction, Waste to Energy plants, waste to oil plants and in cement plants for co-processing.

Details for plastic Waste Management has been provided by 20 states/UTs (A&N, Assam, Arunachal Pradesh, Bihar, Chandigarh, Gujarat, Haryana, Jharkhand,

Karnataka, Kerala, Madhya Pradesh, Maharashtra, Mizoram, Odisha, Pondicherry, Rajasthan, Sikkim, Tamil Nadu, Tripura}.

Table 3. Status of Plastic Waste Management

S.No.	State/UT	Recycling(TPA)	Road Making(TPA)	Co-Processing(TPA)	RDF(TPA)	Other(TPA)	Pyrolysis	Total Waste processed (TPA)
1.	Kerala	219000	915	1300.5	0	0	NP	221215.5
2.	Madhya Pradesh	223869	436.1	61595	0	0	NP	285900.1
3.	Maharashtra	240164	11518.5	46881	166845	0	5486	470894.5
4.	Odisha*	44165	0	4380	0	0	NP	48545
5.	Ladakh	1420	49.9	0	243	0	0	1712.9
6.	Haryana	138299.64	0	0	0	6544.7	NP	144844.34
7.	Tripura	124	2.5	0	0	0	NP	126.5
8.	Sikkim	73.48	0	0	0	0.5	NP	73.98
9.	Jharkhand	29468.085	0	0	0	598.082	NP	30066.167
10.	Puducherry	3650	0	1460	0	0	NP	5110
11.	Bihar	17101	0	0	0	2878	0	19979
12.	Tamil Nadu**	5073	5102	54122	7734	22265	NP	94296
13.	Assam	9490	0	0	0	0	0	9490
14.	Gujarat	0	0	50277.6	0	0	0	50277.6
15.	Mizoram	324.8	0	2.19	0	0	NP	326.99
16.	Chandigarh	0	0	0	1544.12	0	0	1544.12
17.	Rajasthan	0	0	1749	0	6417	NP	8166
18.	Arunachal Pradesh	177	0	0	0	0	0	177
19.	Karnataka	12381	0	5862	0	0	NP	18243

20.	A&N	0	23.22	0	0	0	0	23.22
	Total	944780.05	18047.22	227629.29	176366.12	38703.282	5486	1411011.917

Percentage of State wise waste processing (25 states/UTs) is illustrated in Figure 4. Kerala, Madhya Pradesh, & Maharashtra have reported the highest waste processing and Arunachal, Karnataka and Rajasthan have reported the lowest plastic waste processing.

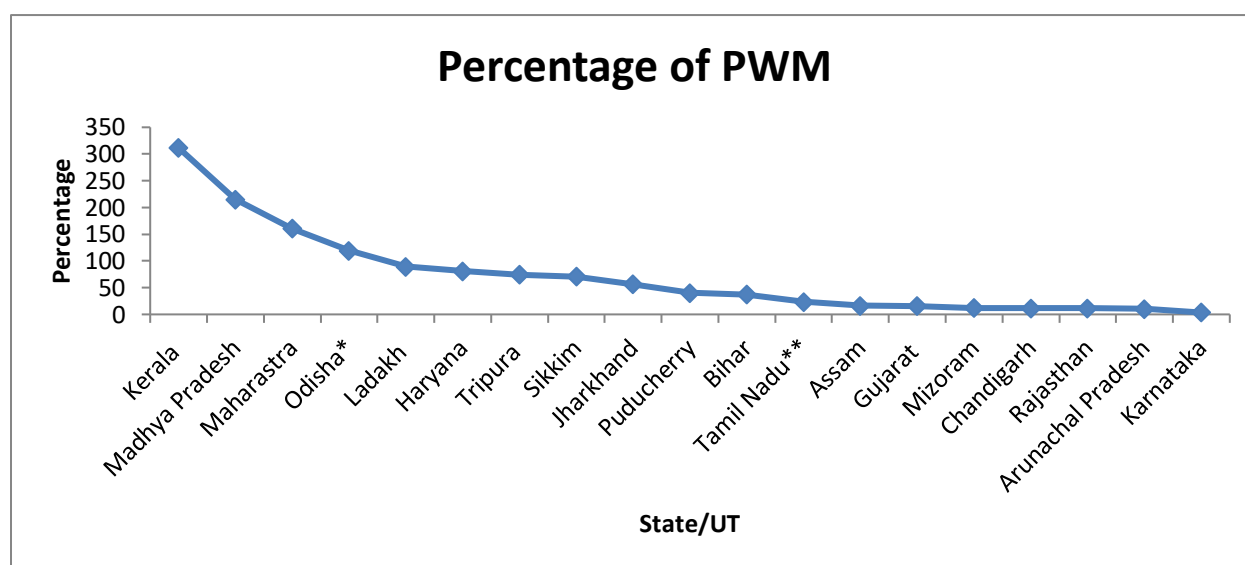


Fig 4. State/UT -wise Plastic Waste Management

2.5 Details of Registered Manufacturing/Recycling Units

As per the provision „13(1) “ of PWM Rules, 2018, all the plastic manufacturing/recycling units shall be registered with the concerned SPCBs/PCCs. There are **6431** (3736–Plastic Manufacturers/producers, 1649-Recyclers., 81-Compostable Mfg., 371-MLP) registered units in 29 States/UTs. There are no plastic carry bag manufacturing units in 6 States/UTs namely Arunachal Pradesh, Andaman and Nicobar, Mizoram, Sikkim, Ladakh & Lakshadweep. No information for DD& DHN and Manipur provided in this regard.

However, as per provision 4(h) of PWM Rules, 2018 CPCB has issued total 275 certificates to manufacturer/seller for marketing and selling of compostable carry bags/products till now.

2.6 Details of Unregistered Plastic Manufacturing /Recycling Units

There are 184 unregistered plastic manufacturing/recycling units running in Karnataka, Punjab and Tamil Nadu. No unregistered plastic units have been reported in 23 States/UTs (A&N, Andhra Pradesh, Arunachal Pradesh, Chandigarh, Goa, Gujarat, Haryana, Himachal Pradesh, J&K, Jharkhand, Ladakh, Lakshadweep, Madhya Pradesh, Maharashtra, Meghalaya, Mizoram, Nagaland, Odisha, Puducherry, Rajasthan, Sikkim, Telangana, Tripura, Uttar Pradesh,). 8 states/UTs (Assam, Bihar, Chhattisgarh, Delhi, Gujarat, Kerala, Uttarakhand, West Bengal) have not provided the information regarding unregistered units operating in their jurisdiction.

2.7 Status of Marking & Labeling on Carry bags/Multilayered Packaging

Status of implementation is as given below:

9 States/UTs (Andhra Pradesh, Assam, Gujarat, Haryana, Jammu and Kashmir, Punjab, Telangana, U.P., West Bengal) have informed that they have complied with the Rule on Marking & Labeling on Carry bags/Multilayered Packaging.

20 states/UTs (Adman and Nicobar, Arunachal Pradesh, Bihar, Chandigarh, Chhattisgarh, Goa, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Ladakh, Lakshadweep, Madhya Pradesh, Maharashtra, Mizoram, Odisha, Pondicherry, Rajasthan, Sikkim, Tamil Nadu, Tripura) have informed that the Rule is not applicable in their jurisdiction as complete ban on carry bags has been imposed in the respective State /UT.

The Rule has not been complied in Delhi in some units

4 States/UTs (Meghalaya, Nagaland, Odisha, & Uttarakhand,) has not provided information for the same.

Further, as per Certificate issued by CPCB to manufacturer/seller for marketing and selling of compostable carry bags/products **“Each carrybag shall bear a label “COMPOSTABLE” IS/ISO:17088 titled as Specifications for “Compostable Plastic” in English & regional language and also have printed code and Certificate Number of “MANUFACTURER” on it.”**

2.8 Details of Violations & Action Taken on Non-Compliance of Rules

As per provision „12“ “the prescribed Authorities for implementation of Rules” of PWM Rules, 2018, **27 States/UTs** (Andhra Pradesh, Andaman and Nicobar, Assam, Bihar, Chandigarh, Chhattisgarh, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Mizoram, Odisha, Punjab, Puducherry, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand and West Bengal) have imposed fine, issued notices, closure directions to the defaulters & seized the material in their respective State/UT. Besides, no violations have been reported in **6 States/UTs** (Arunachal Pradesh, Lakshadweep, Meghalaya, Nagaland, Sikkim, Tripura). 2 State/UTs (DD& DNH, Jharkhand) have not submitted the information in this regard.

3.1 Andaman & Nicobar

- The estimated plastic waste generation in the state is approximately 688.025 TPA during 2021-22.
- Approximately 578.64 Tons of plastic waste was sent to mainland for recycling. Plastic utilized in road is 23.22 MT.
- The A&N Administration has imposed complete ban on use, storage, import, manufacture, transportation, distribution or sale and disposal of plastic carry bags of all types vide A&N Gazette Notification No. 202, dated 02.08.2010.
- There is no plastic manufacturing or recycling unit operational in Andaman & Nicobar Islands.
- Under Andaman & Nicobar Islands scheme for exemption of Freight Charges for transportation of Plastic, Glass & E-waste, 100% freight exemption is provided to transport waste plastic, glass and e-waste for recycling in Mainland.

3.2 Andhra Pradesh

- The estimated plastic waste generation in the State is 36620.101 TPA during the year 2021-22.
- Rule 4(c & d) for thickness criteria has been implemented in the state.

- There are 283 plastic manufacturing units and 1 compostable plastic unit and no unregistered unit in the State.
- State Urban Development Dept., constituted 989 Taskforce teams 261.58 Tons of plastic carry bags were seized and Rs. 221,30,109 of fines was collected from defaulters.

3.3 Arunachal Pradesh

- The estimated plastic waste generation in the state is approximately 1693.65 TPA during 2021-22.
- There are no plastic manufacturing or recycling & unregistered units in State.
- 177 TPA of plastic waste is channelized for recycling
- Complete ban on usage of plastic carry bags of thickness <75microns.
- Annual Report submitted by all 141 Urban Municipal Authorities (16 Municipal Corporation, 73 Municipal Councils, and 52 Nagar Panchayats).
- No Violations of PWM rules have been observed in the state.

3.4 Assam

- The estimated plastic waste generation in the State is approximately 58765 TPA during 2021-22.
- Rule 4(c & d) for thickness criteria has been implemented in the state. (carry bag below thickness of 75 microns is prohibited)
- There are 17 plastic manufacturing units, 5 multilayer plastics units in the State.
- Plastic waste used in co-processing (26 TPD by ULBS and around 120 TPD of legacy waste)
- Out of 90 ULBs on 45, have furnished complete Annual Reports.

3.5 Bihar

- The estimated plastic waste generation in state is approximately 53232.339TPA during 2021-22.
- There are 18 registered plastic manufacturers/Recyclers in the state.

- A total no" of 102 producers, 64 Brand Owners and 6 recyclers have been identified. Out of which 162 Brand Owners are registered with CPCB & 21 with BSPCB and 18 recyclers are registered with State
- Plastic carry bags (irrespective of thickness and size) banned completely in the State of Bihar vide Gazette Notification No. 943 dt. 24.10.2018 (Urban Area) and 1043 dated. 1.12.2018 (Rural Area). Single Use Plastics are also banned in the state of Bihar vide Gazette Notification No. 1012 DT. 11.12.2021. It will come in force from 01.07.2022
- 46340.007 Tons of plastic waste collected, 17101.544 Tons of Plastic waste channelized for recycling, 2878.648 is channelized for reuse and 63474.187.15 is being sent to landfill.
- Annual Report submitted by all 141 Urban Municipal Authorities (16 Municipal Corporation, 73 Municipal Councils, and 52 Nagar Panchayats)
- Violation of Rules was observed; proposed direction issued to 6 Recyclers –and 102 Producers.

3.6 Chandigarh

- The estimated plastic waste generation in the UT is approximately 13107.15 TPA during 2021-22.
- Chandigarh Administration vide Notification No.ED/2019/1648, dated 27.09.2019 has imposed complete ban on manufacture, store, import, sell, transport, supply or use of the Polythene /plastic carry bags with or without handle irrespective of size, shape & color.
- Plastic waste in the city informally is going to recyclers. However, as two mechanical MRFs have been made functional, engagement of waste recyclers will be done soon for these facilities. 1544.12 MT RDF has been produced during the period (Jan to Dec 2021).
- There are no registered & unregistered plastic manufacturing units in the UT. Further, there are 7 registered recycling units in the UT and registration for rest is in process.
- The Municipal Corporation Chandigarh has issued 961 nos. of challans issued to Defaulters/Violators (In Calendar year 2021) and EC has been imposed.

3.7 Chhattisgarh

- The estimated plastic waste generation in the state is approximately 51100 TPA during 2021-22.
- 360 SLRM centers (Material Recovery Centers) have been established in 167 ULBs having infrastructure for segregation, collection, storage, disposal of recyclable plastic waste. 02 ULBs namely Ambikapur and Rajnandgaon have used plastic waste in road construction so far. Cement Plants have signed the agreements with 9 ULBs to utilize Segregated Combustible Fraction in their cement kilns.
- Government of Chhattisgarh has issued directions for ban on manufacture, storage, import, sale, transport and use of plastic carry bags, short life, PVC and chlorinated plastics i.e. advertising and publicity materials (banners, flexs, hoardings and foam boards of PVC etc.) and plastic items used for catering (cups, plates, glasses, bowls and spoons) in the state vide notification dated 27th Sep 2017. Further, vide clarification dated 13.01.2020, the state Government has also clarified that the non- woven carry bags are also banned in the state.
- Urban Administration Department has issued notification dated 28.01.2019 for imposition of fine for open burning of solid waste including plastic waste. Total approx Rs. 46.12 Lakhs fine have been collected and 13400 nos. of cases have been filed against violators of the rules as on May 2021.
- There are 2 The notices/directions for closure is being issued by Chhattisgarh Environment Conservation Board to the unregistered units operating in the State 2 registered units (10 plastic producers & 12 Plastic Recycling) in the State.
- There are 169 Municipal Authorities in the State.

3.8 Delhi

- The estimated plastic waste generation is approximately 377596 TPA during 2021-22.
- Door to Door waste collection from households. The collected waste sent to waste to energy plant. NDMC Deployed Metro Waste Handling Pvt. Ltd. for waste collection and transportation.

- There are total 840 Producers, 778 recyclers and 236 plastics raw material/producer registered units in the UT.
- As per the meeting held before CS, Govt. of NCT of Delhi on 05.06.2015, it has been decided that action against industries operating Residential/Non-conforming in areas and violating the master plan of Delhi will be taken under the Delhi Development Act by the DDA in development areas and Municipal Corporations of Delhi in all other areas.
- 14 Nos. of units. Not complying with Marking & Labeling on carry bags (Rule 8).
- Environmental Compensation (EC) of Rs.2,84,82,500/- was imposed on total 82 Units found non-complying the norms under PWM Rules, 2018 during the year 2021-2022. Out of which, 51 units have deposited EC of Rs.1,66,12,500/-

3.9 Goa

- Approximately 29440.9 TPA of plastic waste generated in the state during 2021-22.
- Rule 4 (c&d) of PWM Rules regarding thickness criteria has been implemented in the State.
- Amendment made in the Goa non-biodegradable Garbage Control Act which bans single use plastic.
- There are 12 registered plastic manufacturing units, 1 Compostable plastic unit and no unregistered units in the State.
- The non-biodegradable waste collected by local bodie/ULBs is sent for co-incineration in Cement Plants through Goa Waste Management Corporation (GWMC).
- The GWMC has setup 3 bailing stations ie. Bicholim, Verna, Cacora. In addition to above bailing stations, 11 ULBs and 4 VPs have bailing facilities and solid waste management facilities at Saligao. Violation of Rules has been observed, 631 cases have been booked and an amount of Rs. 4, 40,200/- has been collected from the defaulters.
- As per the data submitted by local bodies, 393 cases have been booked and amount of Rs. 2,19,300 has been collected.

3.10 Gujarat

- The estimated plastic waste generation in the state is approximately 313918.57 TPA during 2021-22.
- Total 246 plastic manufacturing, 03 Compostable units are registered in the State. There is no unregistered plastic manufacturer/recycler present in the State.
- As per provision '5(b)' of PWM Rules, 2018 approximately 50277.6 MT of plastic waste has been used for co-processing in cement plants.
- The use of plastic carry bags is banned in the city of Gandhinagar vide Notification No. VN (14)/ENV- 10-2008-2100-E, dated:28.06.2011.
- Action taken under PWM Rules 2016 (Period from 01/04/2021 to 31/03/2022)
 - SCN issued: 717
 - Notice of direction issued: 301
 - Direction (Closure) issued: 36
- In case of violation, Board & Local Body take necessary action against violating units.

3.11 Haryana

- The estimated plastic waste generation is approximately 179406.47 TPA during 2021-22.
- Ban on plastic carry bags vide Haryana state Govt. notification dated 25.02.2022.
- Door to door waste collection & segregation is being done through private bodies in almost all MCs.
- Out of 88 MCs, 78% MCs have setup the Material Recovery Facility Centre for sorting and storage & Processing of Plastic Waste. Further, all the MCs have been directed to setup the MRF centers as per requirement and to manage their Plastic waste as per SWM Rules-2016 & Plastic Waste Management Rules-2016.
- State is exploring the possibility to use RDF as fuel meanwhile plastic waste is being used on road construction and co- processing in cement plant.
- 138299.64 T of plastic waste is being channelized for recycling.

- At present 54 nos. of Plastic Waste recyclers are registered under PWM Rules, 2016 to recycle and reutilize the plastic waste in Haryana.
- ULB Department, Haryana has prepared an action plan for Plastic Waste Management which has already been submitted to CPCB.
- Ban has been imposed on usage of plastic carry bags vide Haryana state Govt. notification dated 25.02.2022.
- 2868 Challans done for amount of Rs. 2650600 from January-December 2021.

3.12 Himachal Pradesh

- The estimated plastic waste generation is approximately 9,654.45 TPA during 2021-22.
- Complete ban on usage of carry bags in the state.
- State of HP has its own HP Non-Biodegradable Act, 1995 under which in year 2021-22, 165 challans were done and fine of Rs. 2,01,500/- were collected w.r.t. use of plastic carry bags and littering Non-biodegradable items.

3.13 J&K

- The estimated plastic waste generation in UT is approximately 34384 TPA during 2021-22.
- Complete ban of polythene carry bags below 75 microns in J&K.
- Rule (5) is being followed. Rule (6) is being partially followed. Action Plan stands furnished.
- 26.06 MT of illegal polythene and 01.45 MT of SUP seized during 2021-22 & Violations Compounded on spot to the tune of Rs. 624,600 /-.
- Annual Report submitted by all ULBs-
- There are 242 registered plastics manufacturing units, 34 MLP manufacturing units in the State.

3.14 Jharkhand

- The estimated plastic waste generation in state is approximately 53432.966 TPA during 2021-22.
- Complete ban on plastic carry bags in the entire state vide notification letter no 3900 dated 15/09/20217.

- 44715.945 TPA of plastic waste has been collected, out of which 29468.085 TPA has been recycled, 598.082 TPA has been reused and 13605.069 TPA has been landfilled.
- Reverse Vending Machine has been installed at Ranchi, Dhanbad & Jamshedpur cities for recycling of plastic bottles as pilot project. In Chas & Jamshedpur waste plastic has been used for construction of road. M/s ACC Limited Chaibasa Cement Works (registered with CPCB & JSPCB) having facility of Co-processing plastic wastes.
- There are 57 registered plastic manufacturing units in the State.
- All 42 ULBs submitted their annual report:-

3.15 Karnataka

- The estimated plastic waste generation in state is approximately 5,28,031 TPA during 2021-22.
- In Karnataka all kinds of Compostable & Non Compostable carry bags of all thickness are banned as per Gok Notification dated:11.03.2016.
- There are 256 plastic manufacturing / recycling units & 110 unregistered plastic manufacturing/recycling units in the State.
- 108000 TPA is recycled and remaining 36000TPA of low value plastic is supplied to ACC Cement, Zuari and Bharathi cement
- Violation of Rules have been observed, Raid conducted – 9,439, No. of cases booked – 2, Fines collected – 53.72 lakhs
- 309 local bodies, , have submitted the Annual Report to KPCB.

3.16 Kerala

- The estimated plastic waste generation is approximately 71000 TPA during 2021-22.
- Ban of single use plastic items including plastic carrybags irrespective of thickness in the State w.e.f 01/01/2020 vide G.O. (Ms) No. 6/2019 Env dated 27-01-2020; vide GO no. G.O. (Ms) No. 6/2019env dated 27-11-2019, G.O. No. (Ms) No. 2/2020/envt dated 27-01-2020; vide G.O. no. G.O. (Ms) 4/2020/envt dated 28-02-2021.

- There are 556 manufacturers¹²³ recyclers, 2 compostable plastic unit and 33 MLP units registered & no unregistered plastic manufacturing/recycling units in the State
- Detail of Plastic waste utilization is as given below:
 - i. Recycling: 600 TPD
 - ii. Road Construction: 915.75 MT
 - iii. Co-processing: 1300.5 MT
- Usage of plastic carry bags irrespective of thickness is banned in the State w.e.f 01/01/2020 vide G.O. (Ms) No. 6/2019 Env dated 27-01-2020; vide GO no. G.O. (Ms) No. 6/2019env dated 27-11-2019, G.O. No. (Ms) No. 2/2020/envt dated 27-01-2020; vide G.O. no. G.O. (Ms) 4/2020/envt dated 28-02-2021.
- 373 local bodies (64 urban) have submitted AR to Kerala SPCB.

3.17 Ladakh

- The estimated plastic waste generation in the State is approximately 1915.05 TPA during 2021-22.
- Quantity of Plastic waste Collected - 1915.05 TPA
- PW Channelized for recycling - 1420.23 TPA
- Road Construction - 49.9 TPA
- Used in RDF - 243.67 TPA
- Violation have been observed in the UT. 330 kg of plastic seized from 40 violators and Rs. 31500/- penalty was imposed by ULBs.
- UT consists of 2 ULBs and both have submitted Annual Report for PWM.

3.18 Lakshadweep

- The estimated plastic waste generation in the State is approximately 279.09 TPA during 2021-22.
- Village (Dweep) Panchayat is coordinating waste management by placing waste bins to households in all islands. Plastic wastes collected from the bins are transported to common depository site in each island. Segregated Plastic waste are packed and transported to authorized recycling unit in mainland. There are no facility available for coprocessing plastic materials in road construction etc.

- SUP items completely ban vide Notification No. 66/33/2019 dated 25.01.2029 & 13.04.2021
- There are no manufacturers and producers of plastic items available in Lakshadweep.
- Notice issued to 9 offenders and Rs. 8000/- penalty was imposed.
- 10 Dweep Panchayats have submitted Annual Report on PWM.

3.19 Madhya Pradesh

- The estimated plastic waste generation in the State is approximately 132955.4 TPA during 2021-22.
- Collected plastic waste is utilized as:
 - Recycling: 223869.9 MT
 - Co-processing: 61595.98 MT
 - 436.19 MT in road construction
- Complete ban has been imposed on plastic carry bags in the State vide Notification No. F-5-2015-18-5, dated: 24.05.2017.
- There are 89 plastic manufacturing and 131 recycling units, 29 MLP and 3 compostable plastic manufacturing unit registered and no unregistered plastic units in the State.
- 819 Awareness Programs were conducted, 19494 Raids were conducted, 29.45MT Plastic seized from 17930 Violators and penalty of Rs 39.50 Lakh was imposed by ULBS.
- 374 ULBs and Cantt Boards out of 391 have submitted Annual Report. Total village panchayats are 22814 and not required to submit annual report under PWM Rules

3.20 Maharashtra

- The estimated plastic waste generation in state is approximately 292987 TPA during 2021-22.
- Complete ban on usage of carry bag.As per Maharashtra Plastic & Thermocol Notification 2018, all types of carry bags are banned irrespective of thickness.

The efficiency of plastic waste collection and segregation is 81% and disposal is 64%.

- Collected plastic waste is utilized as:
 - Quantity recycled (Tons)- Plastic Granules: 46351.3
 - Quantity recycled (Tons)- Pyrolysis: 5486.84
 - Quantity recycled (Tons)- Road Construction: 11518.5
 - Quantity recycled (Tons)- RDF (Refuse Derived Fuel): 166845
 - Quantity of Plastic Waste sent to Landfilling facility (Tons): 46881.753
- There are 234 plastic manufacturing unit, 6 MLP producing unit and 14 registered compostable plastic manufacturing units are in the state.
- All ULB 403 ULBs has submitted the annual report.

3.21 Meghalaya

- Details regarding plastic waste generation has not been submitted by any of the 7 municipal boards.
- The Waste is collected as municipal waste segregated into dry waste and wet waste. The plastic waste is segregated from the dry waste at the dumpsite and collected for compaction and bailing.
- Co-processing of plastic waste in cement kilns undertaken by the following cement plants in the state of Meghalaya:
 1. Dalmia Bharat Limited, Lumshnong, East Jaintia Hills District
 2. Star Cement Meghalaya Limited, Lumshnong, East Jaintia Hills District
 3. Meghalaya Cements Limited, Lumshnong, East Jaintia Hills District
- A 1 (one) km road was constructed in Nongkynjeng Village in West Khasi Hills, Meghalaya using plastic waste.
- Use and sale of Plastic bags less than 50 microns has been prohibited and public notice has been issued regarding compliance of PWM.
- There are 7 no of plastic manufacturing units & no unregistered plastic manufacturing/recycling units in the State.
- Use and sale of plastic bags less than 75 microns, non-woven plastic carry bag less than 60 GSM; manufacture, import, stocking, distribution, sale and use of Ear buds with plastic sticks, plastic sticks for balloons, plastic flags, candy sticks,

ice-cream sticks, polystyrene (Thermocol) for decoration, plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays, wrapping or packing films around sweet boxes, invitation card, and cigarette packets, plastic or PVC banners less than 100 micron, stirrers have been prohibited.

- Public notice has been issued vide No. MSPCB/PWM-2/2019/2021-22/66 dated 18th February, 2022.
- Raids/checking/survey was conducted by MSPCB along with KHADC officials at the local market for compliance to the PWM Rules, 2021.

3.22 Mizoram

- The estimated plastic waste generation in state is approximately 2634.794 TPA during 2021-22.
- Complete ban on usage of carry bags less than 50 microns within Municipal Corporation Area already enforced. Govt. already banned packaged drinking water in plastic bottles in every government programs/functions.
- 0.89 MT of recyclable plastic waste is collected, PW are used in Road construction, 0.176 MTA PW used for co-processing, and 1.4 tons is disposed in landfills.
- There are no registered & unregistered plastic manufacturing/recycling units in the State.

3.23 Nagaland

- The estimated plastic waste generation in the state is approximately 92.84 TPA during 2021-22.
- Plastic waste is Collected by by rag pickers and sold to scrap dealers/material recovery centre who in turn sell to recyclers.
- 2 Polymer Bitumen road is also practiced in limited way using plastic wastes.
- The Govt. of Nagaland vide notification No. UDD/7-GEN/07-PWM/2018 dated Kohima, 29th Nov, 2018 notified restricting the use of single use plastic less than 50 microns, specially plastic bags and plastic cutleries including Styrofoam and thermocol disposal plates which will be banned with effect from 1st Dec, 2018.

- There are 4 registered plastic manufacturing units & no unregistered plastic manufacturing/recycling unit in the State.

3.24 Odisha

- The estimated plastic waste generation in the state is approximately 40696.43 TPA during 2021- 22.
- Govt. of Odisha has imposed complete ban on plastic carry bags irrespective of size thickness in all ULBs of the State of Odisha.
- Plastic waste Management
 - Plastic waste collection- 40696.43 TPA
 - Plastic waste sent for coprocessing- 76151 TPA
 - Plastic waste use for granules making- 76906 TPA
- There are 20 registered plastic manufacturing units & 6 unit of multilayer packaging units. No unregistered plastic manufacturing/recycling unit in the State.
- All ULBs have submitted Annual report for plastic waste Management.

3.25 Puducherry

- The estimated plastic waste generation in the state is approximately 12775 TPA during 2021-22.
- 22 All Local bodies have identified and established Material Recovery Facility (MRF) within their Jurisdiction
 - Collection - 34 TPD
 - Recycling / re-processing - 10TPD
 - Co-processing - 4 TPD
 - Landfill - 20 TPD
- The Producer Responsibility organizations are collecting the PW from their units and sending it for authorized recycling units and for Co-processing.
- M/s Oulgaret Municipality is proposed to set up 20TPD State – to Art-Material Recovery Facility Centre at Truck Terminal, Mettupalayam under EPR mode by engaging Recity Network Pvt. Ltd.,

- So far, 792.5 MT of Plastic waste are collected and disposed by PROs and Local bodies. Units with production capacity 100 TPD were closed.
- Govt. of Puducherry has imposed total ban on Single Use Plastics with effect from 02.08.2019.
- 13 units which were manufacturing SUP were closed by issuing directions and disconnection of power.
- 2 stockiests who involved in stocking and storing of banned SUP items were sealed, 3 tons of banned plastic items were seized.
- As per the provision of Plastic Waste Management Rules, 2016, Bye-laws have been framed by the two Urban Local Bodies (ULBs). As per the report received from the ULBs Rs. 44,900/- have been received from violators.
- 5 Municipalities and 10 Commune Panchayats have submitted Annual Report.
- There are 43 plastic manufacturing / recycling, 4 MLP manufacturing, 3 compostable plastic registered plastic units & no unregistered plastic manufacturing /recycling units in the State.

3.26 Punjab

- The estimated plastic waste generation in the state is approximately 94958.95 TPA during 2021-22.
- All the ULBs of the State have started Door to Door collection and source segregation of solid waste and the segregated recyclable plastic waste is channelized to authorized recyclers waste management agencies/kabaris from 266 Mater Recovery Facilities (MRF), which have been setup in the State till 31.12.2021.
- Department of Local Govt. Punjab vide notification no. 5/18/2016-4lg4/692717/1 dated 18/02/2016 and Department of Rural Development & Panchayat, Punjab vide notification no. S.O. 438/P.A./9/1994/S30/2016 dated 29/03/2016 has prohibited the manufacturing, stocking, distribution, recycling, selling or use of plastic carry bags in the State.
- Plastic carry bags manufacturing is prohibited in the State. Further, there are 2 MLP manufacturing unit which are doing marking and labelling as per Rules 8 of

the PWM Rule & also there are 5 compostable product manufacturing units which are doing manufacturing and labelling as per rule.

- 57 no. of plastic units were issued show-cause notices for not obtaining registration under the Plastic Waste Management Rules, 2016.
- 155 ULBs have submitted Annual Return under PWM Rules, 2016.

3.27 Rajasthan

- The estimated plastic waste generation is approximately 72044.771 TPA during 2021-22.
- State Gov.t has imposed complete ban on manufacture, storage, import, sell or transport of plastic carry bags vide notification dt. 21/07/2010 irrespective of thickness.
- As per information received from Municipalities/ULBs details are as under:
 - (a) Collection-60650.191 TPA
 - (b) Segregation-1120.90 TPA
 - (c) Processing-6417.88 TPA
 - (d) Co-processing-1749.65 TPA
- There are 94 plastic manufacturing and 6 Multilayer plastic units registered and 6 Compostable units and no unregistered plastic units in the state.
- Violations have been observed in the state, total violations – 7; closure direction issued – 01; quantity of plastic seized- 1414; Fine imposed- 600
- Total 206 Municipal Authorities are under jurisdiction and all have submitted the annual reports.

3.28 Sikkim

- The estimated plastic waste generation is approximately 104.74 during 2021-22.
- Notices have been issued as per the PWM Rules 2021 (amendment) by SPCB-Sikkim as well as ULBs. Further ULBS have started inspecting the units.
- Plastic waste collection is as follows:
 - Collected-104.74 TPA
 - Channelized for recycling =73.48 TPA iii) Channelized for use =0.5 TPA (Making basket handicraft by MNP SHG)
 - Landfill site =30.76 TPA

- Urban Development Department has framed Bye Laws on Plastic Waste Management for Urban Local Bodies.
- Inspection has been carried by ULBs through field inspection app for implementation of SUP ban.
- Notice issued through F.No.-/SPCB/286 dated 29/03/2022 to inform all PIBOs to obtain registration from centralized portal for registration of PIBOS and Letter has sent to IPR department to publication of notice in social media platform.
- Quantity of Plastic Waste generated from each ULBs are: -
 - i) Gangtok Municipal Corporation- 39.7 TPA
 - ii) Gyalsing Nagar Panchayat -1.5 TPA
 - iii) Naya Bazar Jorethang Nagar Panchayat-4.5 TPA
 - iv) Mangan Nagar Panchayat -5.4 TPA
 - v) Namchi Municipal Council -7.14 TPA
 - vi) Rangpo Nagar Panchayat-45 TPA
 - vii) Singtam Nagar Panchayat 1.5 TPA

3.29 Tamil Nadu

- The estimated plastic waste generation is approximately 397387.684 TPA during 2021-22.
- Tamil Nadu Govt. in G.O. (Ms) No. 84 dated 25-06-2018 notified ban on manufacture, storage, supply, transports, sales, distribution of use and throw away plastics irrespective of thickness including plastic carry bags of any size and thickness and came into effect from 01-01-2019.
- Plastic waste collected i Plastic waste collected is segregated and low value plastics & multi-layer plastics used for road laying, recyclable plastic waste sold to recyclers and non-recyclable plastic waste disposed to cement industries for co-processing.
- The total amount of plastic waste collected during the year in the State is 3,75,31.255 tonnes and half (approx.1.7 lakh tonnes) of collected plastic waste is channelized for recycling.

- Around 1028.25 tons/ day is collected by the ULBs and sent for recycling and processing.
- The segregated waste is sent to resource recovery facilities where it is bailed and the recyclable waste is sold to the local vendors and registered recyclers for sale and the non-recyclable waste are sold to cement manufacturers for coprocessing. segregated, low value plastic & MLP used for Road laying, recyclable plastic waste sold to recyclers and non-recyclable plastic waste disposed to cement industries for Co-processing.
- There are 232 plastic manufacturing/recycling units, 216 recycling 10 MLP manufacturing units & 39 no. of compostable plastic manufacturing units in the State.
- TNPCB is issuing consent under Water and Air Act to Plastic Manufacturing (Producers)/ Recycling units located in industrial and commercial zones and consent is not issued to units located in residential areas. Unregistered units (50 nos. found in operation were closed).
- The Board issued order of closure to 50 units who manufactured banned plastic items.
- 21 Municipal Corporations, 138 Municipalities and 490 Panchayats have submitted annual report to TNPCB.

3.30 Telangana

- The estimated plastic waste generation in the state is approximately 494940 TPA during 2021-22.
- Complete ban on 75 micron thickness plastic carry bags is under implementation from 30.09.2021 and <120 micron thickness after 31.12.2022. Single Use Plastic items as notified by GoI will be effective from 01.07.2022...
- Door to door waste collection done by staff of ULBs and segregated plastic waste utilized for recycling 8912 MT.
- There are 321 plastic manufacturing/recycling units, 4 MLP manufacturing units and 12 compostable unit & no unregistered plastic manufacturing / recycling units in the State.

- Marking is being carried out on the carry bags.
- Violation has been observed in the state and Collected fine of Rs. 810700 Lakhs from violators during April 2021 to March 2022

3.31 Tripura

- The estimated plastic waste generation is approximately 169.63 TPA during 2021-22.
- All types of plastic carry bags are banned in the State of Tripura.
- 100% collection of plastic waste.
 - Quantity of plastic waste utilized in recycling- 124.54
 - Quantity of PW used in recycling of road construction-2.5 MT
- The State Government has issued complete ban order on all kinds of plastic carry bags in Tripura.
- A revised notification has been issued enhancing monetary penalty for use, sell, store and import of banned plastic carry bags.
- There are 20 no. of plastic items manufacturing units and 12 nos. of recycling units and 4 compostable established in Tripura. Among them no plastic carry bag manufacturing unit is there.
- 20 ULBs have submitted the Annual Report.

3.32 Uttar Pradesh

- The estimated plastic waste generation in the state is approximately 375950 TPA during 2021-22.
- Total 89 recyclers/coprocessors and Disposal facilities out which 59 units has obtained registration
- 514 MRF in 514 ULB are operational with cumulative capacity of 2575 TPD
- Utilization of Plastic Waste for Road Construction: 100 Tons Plastic Waste used in Lucknow, Kanpur, Meerut and Jhansi in 2019.
- Plastic Waste disposal in Paper Mills:
 - 48 Nos. of Units have executed agreement with M/s Ultratech Cement for co-processing of Plastic Waste. Total 33705.4 MT Plastic Waste has been disposed as co-processing during FY 2019 to 2023 (till Nov. 2022)

- Carry bags made of plastic are banned by Government of U.P. CPCB has authorized 5 compostable carry bags manufactured in Uttar Pradesh and they are following the provisions of Rules.
- Regular enforcement drives are being carried out for implementation of ban on SUP. Details of
- Action taken since 1.7.2022 till December 2022 is as below:
 - Total inspection carried out: 26221
 - Total Challans issued: 834790
 - Penalty imposed against defaulter (Rs): 1.3 Cr.
 - Quantity of SUP Seized: 388.7 Ton
- 734 Urban Local Bodies are in U.P. and they have submitted annual report to UPPCB. Based on data the annual report for the state has been compiled by UPPCB.

3.33 Uttarakhand

- The estimated plastic waste generation is approximately 44924.71 TPA during 2021-22
- Government of Uttarakhand has imposed complete ban on sale, use & storage of Plastic carry bags, plates, glasses, cups & packaging items, vide Notification No. 88/x-3-17-13(11)/2001, Dated: 25.01.2017.
- There are 41 plastic manufacturing/recycling units, 01 compostable plastic units, 24 MLP manufacturing units.
- Violations have been observed and Board has issued directions to all District Magistrates for compliance of PWM Rules, 2016.
- Out of 91 ULBs report of 88 ULBs received and out of 7791 Gram Panchayats none have submitted the Annual Report to Uttarakhand Environmental Protection & Pollution Control Board.

3.34 West Bengal

- The estimated plastic waste generation is approximately 128837.03 TPA during 2021-22.

- WBPCB published plastic Notice in 08 leading newspapers on 22.04.2022. A Notification has been issued by Dept. of Environment Govt. of West Bengal on 27.06.2022 prohibiting the manufacture, import, stock, distribute, sell and use of SUP items.
- In Darjeeling district the use and sale of plastic carry bag is totally banned. State PWD has already constructed road by using plastic waste. However, UD & MA Dept. GoWB has prepared State policy for collection, segregation and disposal of plastic waste.
- Comprehensive action plan for Plastic waste management has been prepared for the State.
- There are 126 plastic manufacturing/recycling units, 3 compostable, 11 MLP manufacturing units
- Violations have been observed imposed fine on 52 defaulters

4.0 Recommendations

- a. Annual Report complete in all respects to be submitted by all concerned local authorities to SPCBs/PCCs.
- b. SPCBs/PCCs to validate the information submitted by local bodies through random sampling/ field inspection
- c. SPCBs/PCCs to coordinate with local bodies to ensure that banned plastic items neither manufactured nor sold in their jurisdiction.
- d. States/UTs are required to setup PWM system as per Rule 6 &7 of PWM Rules, 2018 in each and every ULB and GP. Emphasis has to be laid on provision of facilities for secondary segregation of waste with more emphasis in Village Panchayats.
- e. SPCBs/PCCs to coordinate with local bodies to maximize processing of plastic waste through recyclers/ co-processing / waste to energy and road making
- f. All unregistered units to be brought under the purview of legal framework as per provision of PWM Rules.
- g. SPCBs/PCCs along with the State Authorities to ensured setting-up of institutional mechanism for implementation of PWM Rules.

S. No.	Name of the SPCB/PPCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PPCC	Submission of Annual Report to CPCB
1	Andaman & Nicobar	688.025	The A&N Administration has imposed complete ban on use, storage, import, manufacture, transportation, distribution or sale and disposal of plastic carry bags of all types vide A&N Gazette Notification No. 202, dated. 02.08.2010	Under A&N Islands scheme for exemption of Freight Charges for transportation of Plastic, Glass & E-waste, 100% freight exemption is provided to transport such waste for recycling in Mainland. 578.64 T of plastic waste was sent to mainland for recycling. Plastic utilised in road is 23.22 MT	Complete ban	Nil	Nil	Nil	Nil	Not Applicable Does not arise, since manufacturing of plastic carry bags do not take place	Nil	NA	Total no. of Municipal Authority 01 and Total no. of GPs 70 under jurisdiction. All ULB and GPs submitted Annual report.	Yes

S. No.	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
2	Andhra Pradesh	36620.101	Complied	The ULBs are collecting and segregating the plastic waste and sent to recyclers. Most of the Plastic waste is channelized through Kabadiwalas to recyclers. The non-recyclable plastic waste generated from the municipalities and from bio mining	GAP	283	1	Nil	Nil	Complying The Board is issuing Registrations to producers for labeling the same in carry bags.	State Urban Development Dept., constituted 989 Taskforce teams 261.58 Tons of plastic carry bags were seized and Rs. 221,30,109 of fines was collected from defaulters.	Rule 15 was omitted as per Notification on GSR 285(E) dated 27.03.2018	Furnished by all ULBs.	Complied.

S. No.	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
				operating is being sent to Cement plants and partly for road formations.										
3	Arunachal Pradesh	1693.65	Complete ban on usage of plastic carry bags of thickness <75 microns	98.00 tons per year of plastic waste is channelized for recycling.	Complete ban on usage of plastic carry bags of thickness <75microns	Nil	Nil	Nil	Nil	Not applicable There are no manufacturer of plastic carry bags and multi-layered packing units in the state.	Nil	NA	33 (31 Towns + 2 Municipalities)	Yes

S. No.	Name of the SPCB/PPCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PPCC	Submission of Annual Report to CPCB
4	Assam	58765	implemented (carrybag below thickness of 75 microns is prohibited)	sent for co-processing (26 TPD by ULBS and around 120 TPD of legacy waste)	not banned (only carrybags prohibited by rules are banned)	22	nil	5	GAP	Complying implemented	identification of violators under process ; challans issued by ULBs to street vendors.	not implemented	45 ULBs out of 96 submitted	submitted

S. No.	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
5	Bihar	53232.339	GAP	Quantity of plastic waste collected--46340.007 17101.544 Tons of Plastic waste channelized for recycling, 2878.648 is channelized for reuse and 63474.187.15 is being sent to landfill.	• Plastic carry bags (irrespective of thickness and size) banned completely in the State of Bihar vide Gazette Notification No. 943 dt. 24.10.2018 (Urban Area) and 1043 dated. 1.12.2018 (Rural Area). Single Use Plastics are also banned in the state of Bihar vide Gazette Notification No. 1012 DT. 11.12.2021. It	18	Nil	Nil	GAP	Not Applicable Production of carry bags is completely banned in the State and hence not applicable Rule 11(a). However, the Board is in process of taking producers and Brand	Proposed direction issued to violators - Recyclers - 6; Producers - 102	This rule is omitted vide notification no. G.S.R. 285(E dt. 27.03.2019	Annual Report submitted by all 141 Urban Municipal Authorities (16 Municipal Corporations, 73 Municipal Councils, and 52 Nagar Panchayats)	Yes

S. No.	Name of the SPCB/PPCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PPCC	Submission of Annual Report to CPCB
					will come in force from 01.07.2022					Onwers under the ambit of Rule 13 and 9. Accordingly, they shall be imposed conditions for compliance of Rule 11(b)				

67
Annual Report 2021-22 on Implementation of PWM Rules 2016 (As amended)

S. No.	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
6	Chandigarh (same data)	13107.15	Complete ban has been imposed vide Notification dated 27.09.2019 on manufacture, storage, import, sell, supply or use of plastic carry bags with or without handle irrespective of size, shape & colour.	Plastic waste is informally sent to recyclers. However, as 2 mechanical MRFs are functional, engagement of waste recyclers will be done soon for these facilities. 1544.15 MT RDF has been produced during the period (Jan to Dec 2021).	Complete ban	07 plastic recycling unit has been registered	Nil	Nil	Nil	Not applicable No plastic carry bag manufacturing unit.	The Municipal Corporation Chandigarh has issued 961 nos. of challans issued to Defaulters/Violators (In Calendar year 2021) and EC has been imposed	NA	During the year 2020 no meeting of SLAB was held due to Covid-19. Annual Return report submitted.	Yes

S. No.	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
7	Chattisgarh	51100	GAP	360 Material Recovery Centers have been established in 167 ULBs for segregation, collection, storage, disposal of recyclable plastic waste. 02 ULBs: Ambikapur and Rajnandgaon have used plastic waste in road construction.	Government of Chattisgarh has issued directions for ban on manufacture, storage, import, sale, transport and use of plastic carry bags, short life, PVC and chlorinated plastics i.e. advertising and publicity materials (banners, flexes, hoardings and foam boards of PVC etc.) and plastic items used for catering	Producers-11 Recyclers-11	Nil	Nil	GAP	NA	Urban Administration Department has issued notification dated 28.01.2019 for imposition of fine for open burning of solid waste including plastic waste. Total approx. Rs. 46.12 Lakhs fine have been collected and 13400 nos. of cases have been filed against violators of the rules as on May 2021.	This rule has been omitted in PWM Rules.	There are 169 Municipal Authorities in the State. The annual report for the year of 2020-21 from all local bodies has been received.	Yes

[illegible]

S. No .	Name of the SPCB/P CC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation , Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/un approved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/P CC	Submission of Annual Report to CPCB		
8	Daman Diu & Dadar nagar haveli	Not Submitted														
9	Delhi	377596	GAP	Door to Door waste collection from households. The collected waste sent to waste to energy plant. NDMC deployed metro waste handling pvt ltd for waste collection and transportation.	No additional executive orders have been issued	Producers-840	Recyclers-778	Manufacturer-236	GAP	GAP	GAP	Not complying 14 Nos. of units.	Environmental Compensation (EC) of Rs.2,84,82,500/- was imposed on total 82 Units found non-complying the norms under PWM Rules, 2018 during the year 2021-2022. Out of which, 51 units have	Information is not available.	5	Submitted

S. No.	Name of the SPCB/PPCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PPCC	Submission of Annual Report to CPCB
											deposited EC of Rs.1,66,12,500/-.			

72
Annual Report 2021-22 on Implementation of PWM Rules 2016 (As amended)

S. No.	Name of the SPCB/PC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PC	Submission of Annual Report to CPCB
10	Goa	29440.9	Implemented	1. The non-biodegradable waste collected by local bodies/ULBs is sent for co-incineration in Cement Plants through Goa Waste Management Corporation (GWMC). 2. The GWMC has setup 3 baling stations i.e. Bicholim, Verna, Cacora. In	Amendment in the Goa Non-biodegradable Garbage Control Act banned single use plastic. Registration No. G-2/RNP/GOA/32/2018-2020.	12	1	0	Nil	NA	As per the data submitted by local bodies, 393 cases have been booked and amount of Rs. 2,19,300 has been collected.	GAP	Complied	Yes

[illegible]

74

Annual Report 2021-22 on Implementation of PWM Rules 2016 (As amended)

S. No.	Name of the SPCB/PPCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PPCC	Submission of Annual Report to CPCB
11	Gujarat	313918.57	GAP	Total plastic waste coprocessing is 50277.6 MT	Complete ban in Gandhinagar city vide Notification dated 28th June 2011.	246	No new units added in year 2021-22	No new units added in year 2021-22	GAP	Complying at large however in case of violation of Board takes necessary action.	Action taken under PWM Rules 2016 (Period from 01/04/2021 to 31/03/2022) SCN issued: 717 Notice of direction issued: 301 Direction (Closure) issued: 36	Provision removed as amended 2018	Compiled	Yes

S. No.	Name of the SPCB/PPCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PPCC	Submission of Annual Report to CPCB
12	Haryana	179406.47	Ban on plastic carry bags vide Haryana state Govt. notification dated 25.02.2022.	Door to door waste collection & segregation is being done through private bodies in almost all MCs. · Out of 88 MCs, 78% MCs have setup the Material Recovery Facility Centre for sorting and storage & Processing of Plastic Waste..	Ban has been imposed on usage of plastic carry bags vide Haryana state Govt. notification dated 25.02.2022.	Plastic Units - 100 (including 54 recyclers)	2	59	Nil	Complying	2868 Challans done for amount of Rs. 2650600 from January-December 2021.	GAP	Submitted by ULBs	submitted

[illegible]

[illegible]

S. No.	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
13	Himachal Pradesh	9654.45	GAP	GAP	Complete ban on usage of carry bags in the state.	98	3	Nil	Nil	Not Applicable Complete ban on usage of carry bags in the state.	State of HP has its own HP Non-biodegradable Act, 1995 under which in year 2021-22, 165 challans were done and fine of Rs. 2,01,500/- were collected w.r.t. use of plastic carry bags and littering Non-biodegradable items	Complete ban on usage of carry bags in the state.	Total ULB-68 1. Municipal Corporation-5 2. Municipal Council-29 3. Nagar Panchayat-27 4. Cantonment Board-7	Yes

S. No.	Name of the SPCB/PPCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not complied)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PPCC	Submission of Annual Report to CPCB
14	J&K	34384	Below 75 microns carry bags is banned in J&K.	Rule(5) is being followed. Rule (6) is being partially followed. Action Plan stands furnished.	Complete ban of polythene carry bags below 75 microns in J&K.	242	Nil	34	Nil	Complying All the units have complied Rule 11	26.06 MT of illegal polythene and 01.45 MT of SUP seized during 2021-22 & Violations Compounded on spot to the tune of Rs. 624,600/-	GAP	Yes, Annual Report submitted by all ULBs	Yes

S. No.	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
15	Jharkhand	53432.966	Complete ban on plastic carry bags in the entire state vide notification letter no 3900 dated 15/09/20217	Collection-44715.945 TPA Recycle-29468.085 TPA Reuse-598.082 TPA Landfill-13605.069 TPA Reverse Vending Machine has been installed at Ranchi, Dhanbad & Jamshedpur cities for recycling of plastic bottles as	Complete ban by notification letter dated 15.09.2017	57	GAP	GAP	Nil	NA	Data has not been provided by ULBs	NA	All 42 ULBs submitted their annual report.	Submitted

[illegible]

S. No.	Name of the SPCB/PPCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PPCC	Submission of Annual Report to CPCB
16	Karnataka	5,28,031	In Karnataka all kinds of Compostable & Non Compostable carry bags of all thickness are banned as per Gok Notification dated:11.03.2016. The details of action taken for implementation of PWM Rules especially after	Plastic Waste Collected: 942.46 Plastic waste Processed: 345.7 1. Plastic Waste sent to cement factories- 5862 tons 2. Plastic waste sent to recyclers- 12337 tons Total-18199 tons 108000 TPA is recycled and remaining 36000TPA of low value	In Karnataka all kinds of Compostable & Non Compostable carry bags of all thickness are banned as per Gok Notification dated:11.03.2016. The details of action taken for implementation of PWM Rules especially after MOEF & CC, Ban Notification dtd: 12.08.2021	128	Manufac	turer	128	Recycler				
						110				NP	(i) Raid conducted – 9,439 (ii) No. of cases booked – 21 (iii) Fines collected – 53.72 lakhs	GAP	GAP	GAP

[illegible]

S. No.	Name of the SPCB/PPCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PPCC	Submission of Annual Report to CPCB
17	Kerala	71000	Ban of single use plastic items including plastic carrybags irrespective of thickness in the State w.e.f 01/01/2020 vide G.O. (Ms) No. 6/2019 Env dated 27-01-2020; vide GO no. G.O. (Ms) No. 6/2019env dated 27-11-2019, G.O. No. (Ms) No. 2/2020/envt dated 27-01-2020; vide G.O. no. G.O.	Quantity of Plastic waste utilized in recycling (TPD) is 600 TPD Quantity of Plastic waste utilized in recycling Road Construction is 915.75 TPA Quantity of waste co-processed in plastic waste in cement kilns is 1300.5 TPA	Ban of single use plastic items including plastic carrybags irrespective of thickness in the State w.e.f 01/01/2020 vide G.O. (Ms) No. 6/2019 Env dated 27-01-2020; vide GO no. G.O. (Ms) No. 6/2019env dated 27-11-2019, G.O. No. (Ms) No. 2/2020/envt dated 27-01-2020; vide G.O. no. G.O. (Ms) No. 4/2020/envt dated 28-02-2021. Plastic carry bags irrespective of thickness are included in single use plastic bags.	Manufacturers / Producers - 556 Recyclers - 123	Complastic manufacturers 2	Multilayer plastic manufacturer 33	GAP	Not applicable Usage of plastic carry bags irrespective of thickness is banned in the State w.e.f 01/01/2020 vide G.O. (Ms) No. 6/2019 Env dated 27-01-2020; vide GO no. G.O. (Ms) No. 6/2019env dated 27-11-2019, G.O. No. (Ms) No. 2/2020/envt dated 27-01-2020; vide G.O. no. G.O.	1) State control room to monitor Enforcement of Single Use plastic ban constituted on 02/07/2022 2) Direction issued to urban Directorate, Directorate of Panchayat, All local bodies regarding the direction received from CPCB dated on 02.07.2022 3) Direction issued to Additional Chief Secretary	Usage of plastic carry bags irrespective of thickness is banned in the State w.e.f 01/01/2020 vide G.O. (Ms) No. 6/2019 Env dated 27-01-2020; vide GO no. G.O. (Ms) No. 6/2019env dated 27-11-2019, G.O. No. (Ms) No. 2/2020/envt dated 27-01-2020;	373 local bodies (64 urban)	14.10.2022

S. No.	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
18	Ladakh Pollution Control Committee	1915.05	Plastic Waste Management (Amended) Rules, 2021 is strictly implemented in UT of Ladakh	Quantity of Plastic waste Collected- 1915.05 PW Channelised for recycling - 1420.23 Road Construction - 49.9 Used in RDF - 243.67	Plastic Waste Management (Amended) Rules, 2021 is strictly implemented in UT of Ladakh	Nil	Nil	Nil	Nil	NA	Violations- 40 Plastic Seized- 330 Kg Penalty Imposed by ULB -- 31500	NA	Total no. of ULB = 02 02 ULB Submitted the report for 2021-2022	yes

S. No.	Name of the SPCB/PPCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PPCC	Submission of Annual Report to CPCB
19	Lakshadweep	279.09	GAP	Village (Dweep) Panchayat is coordinating waste management by placing waste bins to households in all islands. Plastic wastes collected from the bins are transported to common depository site in each island. Segregated Plastic waste are packed	SUP items completely ban vide Notification No. 66/33/2019 dated 25.01.2029 & 13.04.2021	Nil	Nil	Nil	Nil	Not applicable (There are no manufacturers and producers of plastic items available in Lakshadweep.	Notice issued to offenders-9 Cumulative amount of penalty imposed Rs. 8000/-	Not applicable	10	Submitted

[illegible]

S. No.	Name of the SPCB/PPCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PPCC	Submission of Annual Report to CPCB
20	Madhya Pradesh	132955.4	GAP	Recycled-223869.9 MT Co-processed-61595.98 MT Road - 436.19 MT Total 2859021.07 MT	Complete ban has been imposed on plastic carry bags in the State vide Notification No. F-5-2015-18-5, dated: 24.05.2017.	Manufacturer - 89, Recyclers - 131 Total - 220	3	29	Nil	Not Applicable	Awareness Programs-819, Raids conducted-19494, Violators - 17930, Plastic seized-29.45MT Penalty imposed by ULBS-Rs 39.50 Lakh	Not Applicable	374 ULBs and Cantt Boards submitted out of 391. Total village panchayats are 22814 and not required to submit annual report under PWM Rules.	GAP

S. No.	Name of the SPCB/PPCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PPCC	Submission of Annual Report to CPCB
21	Maharashtra	292987	Complete ban on usage of carry bag. As per Maharashtra Plastic & Thermocol Notification 2018, all types of carry bags are banned irrespective of thickness.	Collection: 30,5059 Quantity channelized for recycling (Tons)- 240164 Quantity recycled (Tons)- Granules - 46351.3 (Tons)- Pyrolysis - 5486.84 Quantity recycled (Tons)- Road Construction - 11518.5 Quantity recycled (Tons)- RDF	Complete ban on usage of plastic carry bag vide Notification, Maharashtra Plastic & thermocol Notification 2018 dated 23.3.2018 (No. Plastic-2018/C.R. No.24ITC4)	234	14	6	Nil	Not Applicable as the Government of Maharashtra has imposed complete ban on plastic carry bags irrespective of size and thickness in the State of Maharashtra.	5	Not Applicable as the Government of Maharashtra has imposed complete ban on plastic carry bags irrespective of size and thickness in the State of Maharashtra	Total ULB-403 All ULB submitted the annual report	Submitted on 30/07/2022

S. No .	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
				(Refuse Derived Fuel) - 166845 Quantity of Plastic Waste sent to Coprocessing in cement plant (Tons) - 46881.753										
22	Manipur	Not Submitted												

[illegible]

S. No.	Name of the SPCB/PPCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PPCC	Submission of Annual Report to CPCB
23	Meghalaya	AR not submitted by Municipal Corporations.	GAP	The Waste is collected as municipal waste segregated into dry waste and wet waste. The plastic waste is segregated from the dry waste at the dumpsite and collected for compaction and bailing. Limited, Lumshnong, East Jaintia Hills District Limited, Lumshnong, East Jaintia Hills District	Use and sale of plastic bags less than 75 microns, non-woven plastic carry bag less than 60 GSM; manufacture, import, stocking, distribution, sale and use of Ear buds with plastic sticks, plastic sticks for balloons, plastic flags, candy sticks, ice-cream sticks, polystyrene (Thermocol) for decoration, plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays,	7	Nil	Nil	Nil	GAP	Nil	GAP	1 out of 7	GAP

[illegible]

[illegible]

S. No.	Name of the SPCB/PPCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PPCC	Submission of Annual Report to CPCB
24	Mizoram	2634.794	GAP	0.89 MT of recyclable plastic wastes are collected PW are used in Road construction 0.176 MTA PW used for co-processing Disposal to landfill- 1.4	Complete ban on usage of carry bags less than 50 microns within Municipal Corporation Area already enforced. Govt already banned packaged drinking water in plastic bottles in every government programmes/functions.	Nil	Nil	Nil	Nil	N.A. as there is no manufacturer.	As per Annexure-II Nil or Data not provided by ULB & Urban Town	Not Applicable as Rule 15 has been omitted in the PWM Amendment Rules, 2018. Prior to the amendments above, the Aizawl MC	Total ULB-01 Urban Town-16 GP 155 Submitted Annual Report ULB-01 Urban Town-16 GP 141	GAP

S. No.	Name of the SPCB/PPCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PPCC	Submission of Annual Report to CPCB
25	Nagaland	92.84	Plastic Carry bags less than 50 microns have been banned by the G.O.N vide notification No. UDD/7-GEN/07-PWM/2018 dated Kohima, 29th Nov 2018 notified restricting the use of single use plastics less than 50 microns, specially plastic bags and plastic cutleries including Styrofoam	1. Collected by a rag picker and sold to scrap dealers/material recovery centre who in turn sell to recyclers. 2. Polymer Bitumen road is also practiced in limited way using plastic wastes.	The Govt. of Nagaland vide notification No. UDD/7-GEN/07-PWM/2018 dated Kohima, 29th Nov, 2018 notified restricting the use of single use plastic less than 50 microns, specially plastic bags and plastic cutleries including Styrofoam and thermocol disposal plates which will be banned with effect from 1st Dec, 2018. The Govt. of Nagaland vide notification No. UDD/7-GEN/07/2018 dated Kohima, 29.11.2018, 17.06.2019,	4	Nil	Nil	Nil	GAP	Nil	N.A.	All ULBs submitted their annual report.	Submitted

S. No.	Name of the SPCB/PPCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PPCC	Submission of Annual Report to CPCB
26	Odisha	40696.43	Not applicable as the Govt. of Odisha has imposed complete ban on plastic carry bags irrespective of size thickness in all ULBs of the state of Odisha	i. Plastic waste collection- 40696.43 TPA ii. Plastic waste sent for coprocessing - 76151 TPA iii. Plastic waste use for granules making- 76906 TPA iv. In compliance of order dated 04.12.2019 passed by NGT in the matter of O.A. no.	The State of Odisha imposed complete ban within all ULBs on certain plastic products. i. Plastic bags with or without handle irrespective of size and thickness. Ii. Single use disposable items like cups, plates, straws, spoons etc. iii Non-woven polythene bags and thermo products (Manufacture, usage, sale, transport,	20	Nil	6	Nil	GAP	Nil	Nil	Total No. of ULBs 114 Annual Reports submitted by 114 No. of ULBs	Submitted

[illegible]

S. No.	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not complied)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
27	Puducherry	12775	22 units with production capacity 100 TPD were closed	All Local bodies have identified and established Material Recovery Facility (MRF) within their Jurisdiction Collection - 34 TPD Recycling / re-processing - 10TPD Co-processing - 4 TPD Landfill - 20 TPD · The Producer	Govt of Puducherry has imposed total ban on Single Use Plastics with effect from 02.08.2019	45	3	4	Nil	Not Applicable All types of carry bags irrespective of thickness is banned in the UT of Puducherry with effect from 02.08.2019	13 units which were manufacturing SUP were closed by issuing directions and disconnection of power 2. 2stockiests who involved in stocking and storing of banned SUP items were sealed. 3 tons of banned plastic items were seized. 3. As per the	All types of carry bags irrespective of thickness is banned in the UT of Puducherry with effect from 02.08.2019	5 Municipalities and 10 Commune Panchayats	GAP

S. No.	Name of the SPCB/PPCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PPCC	Submission of Annual Report to CPCB
				Responsibility organisations are collecting the PW from their units and sending it for authorized recycling units and for Co-processing. • M/s Oulgaret Municipality is proposed to set up 20TPD State – to Art-Material Recovery							provision of Plastic Waste Management Rules, 2016, Bye-laws have been framed by the two Urban Local Bodies (ULBs). As per the report received from the ULBs Rs. 44,900/- have been received from violators.			

[illegible]

S. No.	Name of the SPCB/PC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PC	Submission of Annual Report to CPCB
28	Punjab	94958.95	GAP	All the ULBs of the State have started Door to Door collection and source segregation of solid waste and the segregated recyclable plastic waste is channelized to authorized recyclers waste management agencies/kabaris from 266 Mater Recovery	Department of Local Govt. Punjab vide notification no. 5/18/2016-4lg4/692717/1 dated 18/02/2016 and Department of Rural Development & Panchayat, Punjab vide notification no. S.O. 438/P.A./9/1994/S30/2016 dated 29/03/2016 has prohibited the manufacturing, stocking, distribution, recycling, selling or use of	298	5	2	24	Complying Plastic carry bags manufacturing is prohibited in the State. Further, there are 2 MLP manufacturing unit which are doing marking and labelling as per Rules 8 of the	57 no. of plastic units were issued show-cause notices for not obtaining registration under the Plastic Waste Management Rules, 2016.	NA	155 ULBs have submitted Annual Return under PWM Rules, 2016.	Annual Reports upto 2019-20 have already been submitted to CPCB

S. No.	Name of the SPCB/PPCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PPCC	Submission of Annual Report to CPCB
				Facilities (MRF), which have been setup in the State till 31.12.2021	plastic carry bags in the State.					PWM Rule & also there are 5 compostable product manufacturing units which are doing manufacturing and labelling as per rule.				

S. No.	Name of the SPCB/PPCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PPCC	Submission of Annual Report to CPCB
29	Rajasthan	72044.771	State Govt. has imposed complete ban on manufacture, storage, import, sell or transport of plastic carry bags vide notification dt. 21/07/2010 irrespective of thickness.	As per information received from Municipalities/ULBs details are as under: (a) Collection-60650.191 TPA (b) Segregation-1120.90 TPA (c) Processing-6417.88 TPA (d) Co-processing-1749.65 TPA	State Govt. has imposed complete ban on manufacture, storage, import, sell or transport of plastic carry bags vide notification dated 21/07/2010.	94	2	6	Nil	Not applicable as State Government has imposed complete ban on manufacture, storage, import, sell or transport of plastic carry bags vide notification dt. 21/07/2010	Total violations - 76 closure direction issued - 01 quantity of plastic seized- 1414 Fine imposed- 600	Not applicable as State Government has imposed complete ban on manufacture, storage, import, sell or transport of plastic carry bags vide notification dt. 21/07/2010	Total 206 Municipal Authorities are under jurisdiction and all have submitted the annual reports.	Submitted

S. No.	Name of the SPCB/PC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PC	Submission of Annual Report to CPCB
30	Sikkim	104.74	Notices have been issued as per the PWM Rules 2021 (amendment) by SPCB-Sikkim as well as ULBs. Further ULBs have started inspecting the units	i) Collected-104.74 TPA ii) Channelized for recycling =73.48 TPA iii) Channelized for use =0.5 TPA (Making basket handicraft by MNP SHG) iv) Landfill site =30.76 TPA.	Urban Development Department has framed Bye Laws On Plastic Waste Management for Urban Local Bodies	Nil	Nil	Nil	Nil	Not Applicable	Inspection has been carried by ULBs through field inspection app for implementation of SUP ban.	Notice issued through F.No.-/SPCB/286 dated 29/03/2022 to inform all PIBOs to obtain registration from centralized portal for registration of PIBOS and Letter has sent to IPR department to publication of notice in social media platform.	Quantity of Plastic Waste generated from each ULBs are:- i) Gangtok Municipal Corporation- 39.7 TPA ii) Gyalsing Nagar Panchayat -1.5 TPA iii) Naya Bazar Jorethan g Nagar Panchayat- 4.5 TPA iv)	Submitted

S. No.	Name of the SPCB/PC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PC	Submission of Annual Report to CPCB
31	Tamil Nadu	397387.684	Tamil Nadu Govt. in G.O. (Ms) No. 84 dated 25-06-2018 notified ban on manufacture, storage, supply, transports, sales, distribution of use and throw away plastics irrespective of thickness including plastic	Plastic waste collected is segregated and low value plastics & multi-layer plastics used for road laying, recyclable plastic waste sold to recyclers and non-recyclable plastic waste disposed to cement industries for co-processing. The total	The Government of Tamil Nadu vide G.O. (Ms) No.84 dated 25.06.2018 notified ban on manufacture, store, supply, transport, sale or distribute of use and throwaway plastics which came into effect from 01.01.2019.	Recycling Units: 216 Nos. Plastic Manufacturing Units: 232 Nos.	39	10	50	Not Applicable Tamil Nadu Government in G.O. (Ms).No. 84 dated 25.06.2018, notified ban on manufacture, store, supply, transport, sale or distribute of use and	The Board issued order of closure to 50 units who manufactured banned plastic items.	As per PWM Amendment Rules, 2018, Rule 15 is omitted. Hence, does not arise.	Corporations - 21 Municipalities - 138 Town Panchayats - 490 All ULBs have submitted their Annual Report as per prescribed format.	Yes

S. No .	Name of the SPCB/PPCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation , Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/un approved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PPCC	Submission of Annual Report to CPCB
			carry bags of any size and thickness and came into effect from 01-01-2019.	amount of plastic waste collected during the year in the State is 3,75,31.255 tonnes and half (approx.1.7 lakh tonnes) of collected plastic waste is channelized for recycling. Around 1028.25 tonnes/ day is collected by the ULBs and sent for						throwaway plastics irrespective of thickness including plastic carry bags of any size and thickness and hence marking and labelling is not applicable.				

[illegible]

[illegible]

S. No.	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
32	Telangana	494940	GAP	Complete ban on 75 micron thickness plastic carry bags is under implementation from 30.09.2021 and <120 micron thickness after 31.12.2022. Single Use Plastic items as notified by Govt will be effective from 01.07.2022.	Complete ban on <50 micron thickness plastic carry bags is under implementation.	321 (321	12	4	Nil	Complying The marking is being carried out on plastic carry bag and compostable carry bag	Collected fine of Rs. 810700 Lakhs from violators during April 2021 to March 2022	The Govt. issued G.O.Ms. No.79, dt.30.12.2016 banning manufacture, stock, sale and use of carrybags <50 microns thickness prescribing explicit pricing of carrybags @ Rs. 48,000/- per annum for the shopkeepers and street vendors willing to	No. of Municipal Authorities- 142 All submitted the report	GAP

S. No.	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
33	Tripura	169.63	All types of plastic carry bags are banned in the State of Tripura	100% collection of plastic waste. Quantity of plastic waste utilized in recycling- 124.54 Quantity of PW used in recycling of road construction- 2.5 MT	The State Government has issued complete ban order on all kinds of plastic carry bags in Tripura. A revised notification have been issued enhancing monetary penalty for use, sell, store and import of banned plastic carry bags.	20 plastic items manufacturing units and 12 nos. of recyclers	Nil	4	Nil	Not Applicable	Nil	Not applicable	Total no. of ULB= 20 20 ULB Submitted the annual report for 2021-2022	Submitted

S. No.	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
34	Uttar Pradesh	375950	GAP	82 recyclers with capacity 1908.5 TPD 08 Coprocessing with capacity 150 TPD Waste to Energy with capacity 268.97 TPD • 3 Waste to Oil units with capacity 33.1 TPA set up • Plastic usage in road construction initiated	Nagar Vikas Anubhag-7, U.P. Shashsan, vide its Notification No. 10569-7-18-29(Lucknow)18, Dated Lucknow 15 July, 2018 has imposed prohibition on the use, manufacture, sale, distribution, storage, transport, Import and Export of cups, glasses, plates, spoons, tumblers etc. made up of plastic or	76	2	32	0	Complying Carry bags made of plastic are banned by Government of U.P. CPCB has authorized 5 compostable carry bags manufactured in Uttar Pradesh and they	Regular enforcement drives are being carried out for implementation of ban on SUP. Details of Action taken since 1.7.2022 till December 2022 is as below: total inspection carried out: 26221. Total Challans issued: 834790	Carry bags made of plastic banned by Government of Uttar Pradesh.	734 Urban Local Bodies are in U.P. and they have submitted annual report to UPPCB. Based on data the annual report for the state has been compiled by UPPCB	GAP

S. No.	Name of the SPCB/PPCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PPCC	Submission of Annual Report to CPCB
				514 MRF in 514 ULB are operational with cumulative capacity of 2575 TPD Utilization of Plastic Waste for Road Construction : 100 Tons Plastic Waste used in Lucknow, Kanpur, Meerut and Jhansi in 2019. Plastic Waste disposal in Paper Mills:	thermocool disposable after one time. Notification dated 15.07.2018 is attached.					are following the provisions of Rules.	Penalty imposed against defaulter(Rs): 1.3 Cr. Quantity of SUP Seized: 388.7 Tons			

S. No.	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing/recycling units (in residential/unapproved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
35	Uttarakhand	44924.71	GAP	GAP	Yes, single use plastic is banned by Uttarakhand Govt notification dated 16.02.2021	41	1	24	GAP	GAP	UKPCB has issued direction to all district Magistrate for compliance of PWM rules, 2016 and ban on plastic on dated 25.06.2019 and 20.07.2021	GAP	Out of 100 ULBs report of 88 ULBs received and no gram panchayat report is received in UKPCB	Submitted

S. No .	Name of the SPCB/P CC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation , Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/un approved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/P CC	Submission of Annual Report to CPCB
36	West Bengal	128837.03	GAP	A good number of municipalities disposed plastic waste through waste management agencies (WMA). The dry wastes are being disposed through authorized recyclers (PWP) for the processing.	WBPCB published plastic Notice in 08 leading newspapers on 22.04.2022. A Notification has been issued by Dept. of Environment Govt. of West Bengal on 27.06.2022 prohibiting the manufacture, import, stock, distribute, sell and use of SUP items.	126(plastic recycling units)	3 (yet to start commercial production)	11	GAP	Complying Urban Development & Municipal Affairs Department, GoWB has prepared a State Policy & Strategy on Plastic Waste Management wherein guidelines have been issued to the stakeholders regarding this issue.	Fine imposed by ULBs on 100 defaulters	Urban Development & Municipal Affairs Department, GoWB has prepared a State Policy & Strategy on Plastic Waste Management wherein guidelines have been issued to the stakeholders regarding this issue.	Number of Municipal authority is 125 & 3 nos recently added and gram Panchayat is 3354. All the ULBs have submitted annual return in form V. Panchayats and rural Development Departments	Submitted

S. No .	Name of the SPCB/P CC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 75 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation , Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or executive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/un approved areas)	Status of Marking Labelling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/P CC	Submission of Annual Report to CPCB
				Apart this a good number of PROs/WMA s are collecting MLP plastic waste on behalf of producers and scrap dealer/aggregators for disposal (mostly for coprocessing). good numbers of WMA are working for collection. transportation KMC has set up a Plastic Waste Management Plant of capacity 2TPD at Dhapa.	In Darjeeling district the use and sale of plastic carry bag is totally banned. State PWD has already constructed road by using plastic waste. plastic waste. However, UD & MA Dept. GoWB has prepared State policy for collection, segregation and disposal of Comprehensive action plan for Plastic waste management has been prepared for the State.					Frequent Raids are being conducted d by some ULBS to ensure ensure the implementation of Rule 8 of PWM. 2016. Subsequently imposed violators lines are against the violators.		Frequent Raids are being conducted by some ULBS to ensure the implementation of Rule 8 of PWM. 2016. Subsequently imposed violators lines are against the violators.	GoWB has issue an order regarding collection, removal, segregati on and ban of plastic carry bags to be implemented by all Gram Panchaya ts.	

Annexure-II**Notification for banning manufacture, use, sale import and handling of Plastic carry bags/items****(Based on the data available in Annual reports submitted by SPCBs/PCCs)**

S. No	Name of State/UT	Complete or Partial Ban	Executive order Date and No.	Remarks
1	Andaman & Nicobar Islands	Complete ban	Date: 02.08.2010 Notification No.: 202	Complete ban on manufacture, store, import, distribution, transportation, recycle, sell & use of plastic carrybags.
2	Andhra Pradesh		Not available	Certain Urban Local Bodies like Tadipatri, Vijayawada, Tirupati & Bobbili have put Ban on Plastic carry bags irrespective of their thickness. All local bodies have taken stand on ban on their own.
3	Arunachal Pradesh	Partial ban	Date: 16.07.2019 Notification No.: FOR.129/E(A)/2019/12713-60	Complete ban on manufacture, store, stock, sale of plastic <50 microns.
4	Assam		Notification not available	
5	Bihar	Complete ban	Date: 24.10.2018 Notifications No. 943 (urban) Dated 11.12.2018 Notification 1043	Complete ban on manufacture, store, import, distribution, transportation, recycle, sell & use of plastic carrybags (irrespective of thickness)
6	Chandigarh	Complete ban	Notification No. ED/2019/1648 Dated 27.09.2019	Complete ban on manufacture, storage, import, sale, use transportation & disposal of plastic items
7	Chhattisgarh	Complete ban	Notification F 5-7/18/2011	Complete ban on manufacture, store,

S. No	Name of State/UT	Complete or Partial Ban	Executive order Date and No.	Remarks
			dated 24.12.2014 (Gazette) Date: 27-09-2017 Notification No.: क्रमांक एफ 05-88/2014/32	import, transportation, recycle, sell & use of polythene/plastic carrybags. Further for banned short life PVC and chlorinated plastic
8	Daman Diu & Dadra Nagar Haveli	Complete ban	Notification No. PCC/DMN/PLASTIC Bags/12-13/473 Dated 24.01.2014	Forbidding the use, sale/ storage of all kinds of plastic bags
9	Delhi		Information not available	No executive order additional to PWM Rules have been issued
10	Goa	Complete ban	Amendment bill The Goa nob-biodegradable garbage Dated :08.08.2019	Government imposed ban on Manufacture, stock, import, transportation, recycle, sale & use of plastic (carrybags, cups, forks, paper plates, spoons) And other non-biodegradable items.
11	Gujarat		Notification No: VI,1(14/Env-10-2008-2100-E Dated 25th June, 2011	Complete ban on plastic products in Gandhi Nagar
12	Haryana	Complete ban	Date: 20 Aug, 2013	Complete ban on manufacture, stock, import, transportation, recycle, sell & use of plastic carrybags,
13	Himachal Pradesh	Complete Ban		Complete ban on use of Carrybags (irrespective of size), polythene, non-biodegradable material, disposable plastic cups, plates, and glasses
14	Jammu & Kashmir	Partial ban	Notification: SRO-45 of 2017 dated :03.02.2017	Partial ban on Polyethene carry bags of thickness below 50 microns

S. No	Name of State/UT	Complete or Partial Ban	Executive order Date and No.	Remarks
15	Jharkhand	Complete Ban	Notification no 3/Praya Pradu- 52/2007- 3900 Dated 15.09.2017	Complete ban on manufacture, import, storage, transport, sell and usage of plastic carrybags in the whole State
16	Karnataka	Complete ban	Date: 11-03-2016 Notification No.: FEE 17EPC 2012, Bengaluru	State government banned the plastic banners, buntings, carrybags (plastic & compostable), cups, cling films, flex, flags, plates, spoons & sheets made of plastic or Thermocol and microbeads usage in the entire state
17	Kerala	Complete ban	Notification No.: G.O.(Ms)No.6/2019Env dated 27-11-2019 G.O.(M/s) No. 2/2020/ENVT dated 27-01-2020 GOno. GO(Ms) No. 4/2020 Envnt dated 16-02-2020	Complete ban on Single use plastic And plastic carrybags(plastic and compostable)
18	Lakshadweep	Complete ban	Date: 25.01.2019 Notification No.: F.No.66/33/2019	Complete ban on Single use plastic includes : Plastic carrybags of all thickness, plastic coated carry bags, plastic flags, plastic sheets/films used for wrapping, plastic sheets used as dining table covers, thermocol cups and plates, plastic coated paper cups and plates, plastic teacups, plastic tumblers, plastic teacups, water pouches/packets/PET plastic water bottles, straws,
19	Madhya Pradesh	Complete ban	Notification : F5-2-2015-18-5 Dated :24.05.2017	Production, Storage, Transportation, sale & use of plastic

S. No	Name of State/UT	Complete or Partial Ban	Executive order Date and No.	Remarks
				carrybags.
20	Maharashtra	Complete Ban	No Plastic-2018/C.R.24/TC-4 Notification, dated 23.3.2018 and amendment dated 11.4.2018, 30.6.2018 & 14.06.2019	complete ban on certain plastic products like i) plastic bags with or without handle irrespective of size and thickness, singleuse disposable items like cups, plates, straws, spoons etc, Nonwoven Polypropylene bags through Maharashtra Plastic and Thermocol Products (Manufacture, Usage, Sale, Transport, Handling and Storage)
21	Manipur	Complete ban	Date: 12-09-2017 Notification No.: 56/38/99-for&Envt	Complete ban on use, store & sale of plastic carrybags
22	Meghalaya	Partial ban	Date: 16-02-2017 Notification No. MPCB/TB-144(B)/2016-2017/79	Use and sale of plastic bags less than 50 microns has been prohibited and public notice has been issued
23	Mizoram	Partial ban	With effect from :01.08.2019by Aizal municipal corporation	Complete ban on plastic carry bags below 50 microns
24	Nagaland	Partial ban	Date: 29 th Nov, 2018 Notification No.: UDD/7-GEN/07-PWM/2018	Complete ban on single use plastic less than 50 microns,
25	Odisha	Complete ban	Notification Order No. 18441, Dt. 30.09.2019	Polythene carry bags thickness of any shape and size has been banned in all Municipal limits in the State. Govt. of Odisha. Further in the said order State has been prohibited (use

S. No	Name of State/UT	Complete or Partial Ban	Executive order Date and No.	Remarks
				polythene sheets of less than 50 micron thickness for storing, transporting, dispensing or packaging of any articles, commodity or food items)
26	Puducherry	Complete ban	Not Available	total ban on single use plastics with effect from 02.08.2019.
27	Punjab	Complete ban	Notification no 5/18/2016-4lg4/692717/1 dated 18.02.2016 S.O.438/P.A. 9/1994/S30/2016 dated 29.03.2016	Complete ban on Manufacture, stock, distribute, recycle, sale & use of plastic carrybags.
28	Rajasthan	Complete ban	Notification dated : 21.07.2010	Complete ban on use, store & sale of plastic carrybags
29	Sikkim	Complete ban	Notification No.: GOS/UD&HD97-98/6(85) Date: 04-06-1998	Complete ban on sale & use, storage of plastic carry bags
30	Tamil Nadu	Complete Ban	Date: 25.06.2018 Notification No.: G.O. (Ms). No.84 dated 25.06.2018	Complete ban on manufacture, sell, use, storage, Transportation and distribution of "Single- use plastics" i.e. plastic carrybags, flags, sheets using for food wrapping, straws, tea cups, tumblers, water packets & pouches
31	Telangana	Not Banned		Not Banned
32	Tripura	Complete ban	Notification no:F.B(30)/DSTE/ENV/Pt-II//1679-97 dated 10.03.2015	Complete ban on Sell, use, storage, Transportation & import of plastic carrybags (including polypropylene, non-woven fabric type) plastic tube to pack or

S. No	Name of State/UT	Complete or Partial Ban	Executive order Date and No.	Remarks
				cover any book including magazine & invitation/greeting cards.
33	Uttar Pradesh	Complete ban	Date: 15-07-2018 Notification No. 1056/9-7-18-29(Lucknow)/18	Manufacture, Sell, use, Storage, Transportation & import of plastic carrybags of thickness 50 microns and cups, bowl, container, tumblers, glasses & plates etc made of plastic or thermocol
34	Uttarakhand	Complete Ban	Date: 25.01.2017 Notification No. 88/x-3-17-13(11)/2001	Manufacture, Sell, use, Storage, Transportation & import of plastic carrybags, cups, bowl, container, tumblers, glasses & plates etc made of plastic or thermocol
35	West Bengal		Not available	Restricted use & sale of plastic carry bags in ecologically fragile areas and in certain heritage & tourist spots



125

98

Annual Report 2023-24



GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE



Annual Report 2023-24



GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

CONTENTS

S.No.	Chapters and Sections Name	Page. No.
	Abbreviations	v
	Role and Mandate of the Ministry	vii
	Brief Statement of Activities of the Ministry	xi
	1 Mission LiFE	
1.1	Life Style For Environment	02
1.2	Green Credit Program	10
	2 Environment, Climate and Sustainability Working Group (G20 Presidency)	
2.1	G20- Background	13
2.2	ECSWG Meetings	13
	3 Environment - Abatement of Pollution, Policy and Law	
3.1	Control of Pollution	19
3.2	Central Pollution Control Board	31
3.3	Hazardous Substances Management	38
3.4	Policy and Law	46
3.5	National Green Tribunal (NGT)	47
3.6	Eco-labelling	47
	4 Environmental Impact Assessment and Clearance	
4.1	Environmental Impact Assessment	49
4.2	Coastal Regulation Zone (CRZ)	52
	5 Conservation - Biodiversity	
5.1	Biodiversity	57
5.2	Biosafety	59
5.3	Zoological Survey of India (ZSI)	61
5.4	Botanical Survey of India (BSI)	66
5.5	Assistance to Botanical Gardens	69
5.6	Biosphere Reserves	71
5.7	Eco-Sensitive Zone	74

6 Wetlands & Coastal Ecosystem		
6.1	National Plan for Conservation of Aquatic Eco-System (NPCA)	78
6.2	Sustainable Coastal Management (SCM)	83
6.3	NCSCM	87
7 Conservation-Forest		
7.1	Forest Conservation	90
7.2	Compensatory Afforestation Fund Management and Planning Authority (CAMPA)	90
7.3	Forest Establishment	97
7.4	Forest Policy	99
7.5	Forest Protection	102
7.6	Survey and Utilization	104
7.7	Forestry Research	111
7.8	National Afforestation and Eco-development Board (NAEB)	134
7.9	National Green India Mission	135
8 Conservation-Wildlife		
8.1	Wildlife Conservation	138
8.2	Wildlife Crime Control Bureau	144
8.3	Central Zoo Authority	147
8.4	Project Elephant	151
8.5	Project Tiger/National Tiger Conservation Authority (NTCA)	156
8.6	Wildlife Institute of India	160
9 Climate Change		
9.1	Climate Change	165
9.2	Ozone layer Protection	169
9.3	United Nation Convention to Combat Desertification	182
10 International Cooperation		
10.1	International Cooperation	184
10.2	Externally Aided Projects	192
11 Research		
11.1	Research in Environment	196
11.2	G.B. Pant National Institute of Himalayan Environment and Sustainable Development	197
11.3	National Mission on Himalayan Studies	199



12 Environmental Information, Education and Awareness		
12.1	Environmental Education, Awareness and Training	202
12.2	National Museum of Natural History (NMNH)	204
12.3	Media Cell	206
12.4	Swachh aur Swastha Bharat Cell	207
12.5	Economic Division	208
12.6	Statistics Division	220
12.7	Non-Governmental Organization (NGO) Cell	224
13 Administration and Civil Construction		
13.1	Administration	226
13.2	Indian Forest Service (IFS) Cadre Management	228
13.3	Vigilance Division	229
13.4	Parliament Section	230
13.5	Information Technology and e-Governance	231
13.6	Right to Information Cell (RTI)	237
13.7	General Administration (GA) Section	238
13.8	Public Grievance Cell	238
13.9	Implementation of Official Language Policy	239
13.10	Civil Construction Unit (CCU)	241
14 Development Monitoring & Evaluation, Budget and Accounts		
14.1	Development monitoring & Evaluation Division	245
14.2	Budget and Accounts	245

Abbreviations

AICOPTAX	: All India Coordinated Project on Capacity Building in Taxonomy
A.W	: Animal Welfare
BSI	: Botanical Survey of India
BUR	: Biennial Update Report
CAMPA	: Compensatory Afforestation Fund Management and Planning Authority
CBD	: Convention on Biological Diversity
CDM	: Clean Development Mechanism
CES	: Centre for Ecological Science
CMW	: Conservation and Management of Wetlands
COP	: Conference of the Parties
CPA	: Control of Pollution Air
CPB	: Cartagena Protocol on Biosafety
CPCB	: Central Pollution Control Board
CPW	: Control of Pollution Water
CRZ	: Coastal Regulation Zone
CSD	: Commission on Sustainable Development
CT	: Clean Technology
DSS	: Decision Support System
DTEPA	: Dehanu Teluka Environment Protection Authority
EIVR	: Entities of Incomparable Value Regulations
ENVIS	: Environmental Information System
EPTRI	: Environment Protection Training & Research Institute
ESA	: Ecologically Sensitive Areas
GBPNIHESD	: G.B. Pant National Institute of Himalayan Environment and Sustainable Development
GEAC	: Genetic Engineering Approval Committee
GEF	: Global Environment Facility
GIM	: Green India Mission

GLOBE	: Global Learning & Observation to Benefit the Environment
GOI	: Government of India
GSDP	: Green Skill Development Programme
HSMD	: Hazardous Substance Management Division
ICIMOD	: International Centre for Integrated Mountain Development
IFS	: Indian Forest Service
IGPP	: Indira Gandhi Paryavaran Puraskar
INCCA	: Indian Network for Climate Change Assessment
IPCC	: International Panel on Climate Change
MBP	: Man and Biosphere Programme
MoEF&CC	: Ministry of Environment, Forest and Climate Change
NATCOM	: National Communication
NBA	: National Biodiversity Authority
NBAP	: National Biodiversity Action Plan
NCZMA	: National Coastal Zone Management Authority
NEPTRI	: National Environmental Protection Training and Research Institute
NESFP	: National Environmental Science Fellows Programme
NFA	: National Fellowship Awards
NFAP	: National Forestry Action Programme
NFC	: National Forest Commission
NGO	: Non Governmental Organisation
NGRBA	: National Ganga River Basin Authority
NGT	: National Green Tribunal
NLCP	: National Lake Conservation Plan
NMCG	: National Mission on Clean Ganga
NMNH	: National Museum for Natural History



NNRMS	: National Natural Resources Management Systems
NTCA	: National Tiger Conservation Authority
NZP	: National Zoological Park
OC	: Ozone Cell
OL	: Official Language
PE	: Project Elephant
PG	: Public Grievances
PT	: Project Tiger
RE	: Research in Environment
RFD	: Results Framework Document
RO	: Regional Office
ROHQ	: Regional Office Head Quarter
RT	: Research & Training
RTI	: Right to Information
SACON	: Salim Ali Centre for Ornithology & Natural History
SBA	: Swachh Bharat Abhiyan

SD	: Sustainable Development
SDG	: Sustainable Development Goals
SICOM	: Society for Integrated Coastal Management
SOER	: State of Environment Report
STP	: Sewage Treatment Plants
TOF	: Trees Outside Forest
UNCCD	: United Nations Convention to Combat Desertification
UNDP	: United Nations Development Programme
UNEP	: United Nations Environment Programme
WCCB	: Wildlife Crime Control Bureau
WGEEP	: Western Ghat Ecology Expert Panel
WHC	: World Heritage Conservation
WII	: Wildlife Institute of India
ZSI	: Zoological Survey of India



ROLE AND MANDATE OF THE MINISTRY



The Ministry of Environment & Forest and Climate Change (MoEF&CC) is the nodal agency in the Central Government for overseeing the implementation of India's environment and forest policies and programmes relating to conservation of the country's natural resources including lakes and rivers, its biodiversity, forests and wildlife, ensuring the welfare of animals and prevention and abatement of pollution. While implementing these policies and programmes, the Ministry is guided by the principle of sustainable development. The Ministry is also the nodal agency for the United Nations Environment Programme (UNEP), South Asia Co-operative Environment Programme (SACEP), International Centre for Integrated Mountain Development (ICIMOD) and the United Nations Conference on Environment and Development (UNCED). The Ministry also coordinates with multilateral bodies such as the Commission on Sustainable Development (CSD), Global Environment Facility (GEF), Green Climate Fund (GCF) and regional bodies such as Economic and Social Council for Asia and Pacific (ESCAP) and South Asian Association for Regional Cooperation (SAARC) on matters pertaining to environment. National Compensatory Afforestation Fund Management and Planning Authority (CAMPA) was constituted vide order dated 13.8.2009 primarily to lay down guidelines for State CAMPA, monitor/assist/ and provide recommendations to State CAMPA and resolve issues.

The broad objectives of the Ministry are:

- Conservation and survey of flora, fauna, forests and wildlife
- Prevention and control of pollution
- Afforestation and regeneration of degraded areas
- Protection of environment and wildlife
- Facilitate activities related to India's commitments and obligations with three Rio Conventions i.e. UNFCCC, UNCCD and CBD and related reporting process.
- Facilitate activities related to Basel, Rotterdam, Stockholm Conventions and enable India to meet its commitments as per Montreal Protocol under the Vienna Convention

These objectives are well supported by a set of legislative and regulatory measures, aimed at the preservation, conservation and protection of the environment. Besides the legislative measures, a National Conservation Strategy and Policy Statement on Environment and Development, 1992, National Forest Policy, 1988, a Policy Statement on Abatement of Pollution, 1992 and a National Environment Policy, 2006 also guide the Ministry's work.

Subject under the Ministry of Environment, Forest and Climate Change.

The following items of work have been allocated to the Ministry of Environment, Forest and Climate Change:

MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE (PARYAVARAN, VAN AUR JALVAAYU PARIVARTAN MANTRALAYA)¹

1. Environment and Ecology, including environment in coastal waters, in mangroves and coral reefs but excluding marine environment on the high seas.
2. Environment Research and Development, education, training, information and awareness.
3. Environmental Health.
4. Environmental Impact Assessment.
5. Forest Development Agency and Joint Forest Management Programme



- for conservation, management and afforestation.
6. Survey and Exploration of Natural Resources particularly of Forest, Flora, Fauna, Ecosystems etc.
 7. Bio-diversity Conservation including that of lakes and Wetlands.
 8. **Omitted.**²
 - 8A **Omitted.**³
 9. Wildlife conservation, preservation, protection planning, research, education, training and awareness including Project Tiger and Project Elephant.
 10. International co-operation on Issues concerning Environment, Forestry and Wildlife.
 11. Botanical Survey of India and Botanical Gardens.
 12. Zoological Survey of India.
 13. National Museum of Natural History.
 14. Biosphere Reserve Programme.
 15. National Forest Policy and Forestry Development in the country, including Social Forestry.
 16. All matters relating to Forest and Forest Administration in the Union territories.⁴
 17. Indian Forest Service.
 18. Wild Life Preservation and protection of wild birds and animals.
 19. Fundamental and applied research and training including higher education in forestry.
 20. Padmaja Naidu Himalayan Zoological Park.
 21. National Assistance to Forestry Development Schemes.
 22. Indian Plywood Industries Research and Training Institute, Bangalore.
 23. Afforestation and Eco-Development which shall include National Afforestation and Eco Development Board.
 - 23A. Bio-fuel plantations in forest, wastelands and environmental issues concerning bio-fuels.⁵
 24. Desert and Desertification.
 25. Forest Survey of India.
 26. Indian Institute of Bio-diversity, Itanagar.
 27. Central Pollution Control Board.
- ¹ Modified vide Amendment series no. 306 dated 31.07.2014
 - ² Omitted vide Amendment series no. 350 dated 14.06.2019 (Earlier substituted vide Amendment series no.306 dated 31.07.2014).
 - ³ Omitted vide Amendment series no. 350 dated 14.06.2019 (Earlier inserted vide Amendment series no.306 dated 31.07.2014).
 - ⁴ Modified vide Amendment series no. 300 dated 26.02.2012
 - ⁵ Inserted vide Amendment series no. 287 dated 12.07.2006
28. G.B.Pant Institute of Himalayan Environment & Development.
 29. Wildlife Institute of India and Indian Board for Wildlife.
 30. Indian Institute of Forest Management.
 31. Central Zoo Authority including National



- Zoo Park.
32. Indian Council of Forestry Research & Education.
 33. Andaman and Nicobar Islands Forest and Plantation Development Corporation Limited.
 34. **Omitted.**¹
 35. **Omitted.**²
 36. **Omitted.**³
 - 36A. Climate change and all other matters related thereto.⁴
 37. **Omitted.**⁵
 38. **Omitted.**⁶
 39. **Omitted.**⁷
 40. The Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974).
 41. The Water (Prevention and Control of Pollution) Cess Act, 1977 (36 of 1977).
 42. The Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981).
 43. The Indian Forest Act, 1927 (16 of 1927).
 44. The Wild Life (Protection) Act, 1972 (53 of 1972)
 45. The Forest (Conservation) Act, 1980 (69 of 1980).
 46. The Environment (Protection) Act, 1986 (29 of 1986).
 47. The Public Liability Insurance Act, 1991 (6 of 1991).

48. The National Green Tribunal Act, 2010 (19 of 2010).⁸

NOTE:-

The Ministry of Environment, Forest and Climate Change will be responsible for overall policy in relation to forests, except all matters, including legislation, relating to the rights of forest dwelling Schedule Tribes on forest lands.⁹

-
- ¹Omitted vide Amendment Series no. 349 dated 04.04.2019 (transferred to D/o Animal Husbandry and Dairying).
 - ²Omitted vide Amendment Series no. 349 dated 04.04.2019 (transferred to D/o Animal Husbandry and Dairying).
 - ³Omitted vide Amendment Series no. 349 dated 04.04.2019 (transferred to D/o Animal Husbandry and Dairying).
 - ⁴Inserted vide Amendment series no. 306 dated 31.07.2014.
 - ⁵Omitted vide Amendment Series no. 349 dated 04.04.2019 (transferred to D/o Animal Husbandry and Dairying).
 - ⁶Omitted vide Amendment Series no. 334 dated 06.07.2017.
 - ⁷Omitted vide Amendment Series no. 334 dated 06.07.2017.
 - ⁸Inserted vide Amendment series no. 334 dated 06.07.2017.
 - ⁹Inserted vide Amendment series no. 285 dated 17.03.2006.



Brief Statement of Activities of the Ministry



1 Climate Change

1.1 Reduction in the Emission Intensity of GDP:

India's emission intensity of GDP reduced by 33% between 2005 and 2019. The original target has been achieved 11 years ahead of schedule. The share of non-fossil fuel sources in India's total installed electricity generation capacity reached 43.82% as on 31 October 2023. The original target has been achieved 9 years ahead of schedule.

1.2 Updated Nationally Determined Contributions (NDCs)

The Hon'ble Prime Minister of India at the 26th session of the Conference of Parties to the United Nations Framework Convention on Climate Change (UNFCCC COP-26) offered India's vision to the global community on meeting the challenge of climate change by presenting to the world five nectar elements (*Panchamrit*) of climate action by India. The Union Cabinet approved India's updated 'Nationally Determined Contribution' (NDC) on 3rd August 2022. This translates the '*Panchamrit*' targets announced by Hon'ble Prime Minister at COP-26 in December 2021 into enhanced climate targets for India. The enhanced NDCs are a step towards achieving India's long-term goal of reaching net-zero by 2070.

1.3 Long Term- Low Emission Development Strategy (LT-LEDS)

India has submitted LT-LEDS to UNFCCC in Nov, 2022 highlighting strategic low-emissions development transitions for the country. The LT-LEDS was prepared in the light of India's right to an equitable & fair share of the Global Carbon Budget which is the practical implementation of Climate Justice.

1.4 India's achievements against the NDC targets are presented in the table below:

NDC (2015)	TARGET (2030)	ACHIEVEMENT
Reduce Emissions Intensity of its GDP	33-35% over 2005 level	33% (2019)
Non-fossil electric installed capacity	40% cumulative	43.8% (2023)
Additional Carbon sink	2.5 to 3 billion tonnes	1.97 billion tonnes (2021)

India's updated NDCs:

In August 2022, India updated its NDC, India stands committed

- to reduce Emissions Intensity of its GDP by 45 percent by 2030, from 2005 level;
- to achieve about 50 percent cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030, with the help of transfer of technology and low-cost international finance including from Green Climate Fund; and
- to put forward and further propagate a healthy and sustainable way of living based on traditions and values of conservation and moderation, including through a mass movement for 'LIFE'— 'Lifestyle for Environment' as a key to combating climate change.

1.5 The Third National Communication to the United Nations Framework Convention on Climate Change was released on December 9, 2023. The report contains information on India's Greenhouse Gas Emissions, its vulnerability to climate change, and the measures it is taking to mitigate emissions and adapt to the impacts of climate change. As of 2019, India has reduced its emission intensity of GDP by 33% over 2005 levels.

Energy sector contributed the most to the overall anthropogenic emissions with



75.81 percent, followed by agriculture sector with 13.44 percent, Industrial Process and Product Use (IPPU) with 8.41 percent and Waste with 2.34 percent.

1.6 **Mission LiFE** was launched by Prime Minister Shri Narendra Modi on 20th October 2022. At the 2021 UN Climate Change Conference (UNFCCC COP26), Hon'ble PM had announced Mission LiFE, to bring individual behaviours at the forefront of the global climate action narrative. LiFE has been acknowledged by various international foras, including IPCC Climate Change 2022, Mitigation of Climate Change Working Group III Report, 2022. Cover decision of Sharm el-Sheikh Implementation Plan, 2022, G7 Communique adopted in Sapporo, Japan, 2023, Shanghai Cooperation Organisation Communique, 2023., G20 Leaders' Declaration, 2023 and 9th G20 Parliamentary Speakers Summit (P20) and Parliamentary Forum, 2023.

1.7 **Hydrochlorofluorocarbons Phase out Management Plan (HPMP)** : India is the first country in the world to develop a comprehensive Cooling Action Plan, which seeks to provide an integrated vision towards cooling across sectors encompassing inter alia reducing cooling demand, refrigerant transition, enhancing energy efficiency and better technology options with a 20-year time horizon. During HPMP Stage-II implementation, India completely phased out the use of HCFC- 141b in manufacturing of rigid foam, the first among the developing countries to achieve the milestone. As against target of 35% reduction from the baseline as on 1.1.2020, India achieved a reduction of 44%, highlighting India's efforts in protection of the stratospheric ozone layer.

1.8 **COP 28** : The 28th Conference of Parties (COP28) was held in Dubai, United Arab Emirates (UAE), from 30th November to 13th December 2023. The major outcome from COP 28 included the decision on Outcome of the First Global Stocktake, ratcheting up global climate ambition before the end of the decade. These global efforts will be taken up by the countries in a nationally determined manner taking into account the Paris Agreement and their different national circumstances. Another major outcome of COP 28 is the agreement on the operationalization of the Loss and Damage Fund and its funding arrangements.

The decision on the operationalization of the new funding arrangements, including a Fund, for responding to loss and damage was taken by consensus by all Parties including India. The purpose of the Fund is to assist developing countries that are particularly vulnerable to the adverse effects of climate change in responding to economic and non-economic loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events.

India's showcased a comprehensive and proactive approach to tackling climate change. Emphasizing the urgency of accessible climate finance for developing nations, Hon'ble Prime Minister highlighted the need to implement Nationally Determined Contributions (NDCs) and voiced concerns on behalf of the Global South. The initiatives launched, including LeadIT 2.0 for industry transition, the Green Credits Programme incentivizing pro-environment actions, and the focus on the Himalayan region's vulnerability, demonstrate India's commitment to diverse strategies for sustainable development.

India's involvement in the Quad Climate Working Group and the Mangrove Alliance illustrates



recognition of the pivotal role played by local communities and regional governments in fostering sustainable lifestyles and holistic conservation efforts.

2. G20 Initiatives launched Under India's presidency in the Environment and Climate Sustainability Work Group (ECSWG).

The following were launched:

- 2.1 Inception of a Global Alliance on land restoration of forest fire and mining affected areas under the Gandhinagar Implementation Roadmap and the Gandhinagar Information Platform (GIR-GIP).
- 2.2 Resource Efficiency Circular Economy Industry Coalition (RECEIC) with 40 founding members from private sector across the globe.
- 2.3 High-Level Principles for a Sustainable and Resilient Blue/ Ocean-based Economy (HLPSRBE). G20 countries formally adopted the 9 comprehensive high-level principles. It includes the baseline studies for preparation of Marine Spatial Planning for promotion of blue economy as per HLPSBE.

3. Green Credit Programme

Green Credit Initiative was launched by Hon'ble PM at CoP 28. It is an initiative within the governments broader Lifestyle for Environment or LIFE movement. The Green Credit Rules, 2023, have been notified on 12th October 2023 under the Environment Protection Act 1986. These rules put in place a mechanism to encourage voluntary environmental positive actions resulting in issuance of green credits. In its initial phase, voluntary tree plantation is envisaged on degraded land, waste land, watershed area etc. under the control and management of Forest departments.

The generation of Green Credit under Green Credit Rules, 2023 is independent of the carbon credit under Carbon Credit Trading Scheme 2023.

Governance structure of GCP includes the steering committee members from concerned ministries/departments, experts and institutions. The Indian Council of Forestry Research and Education (ICFRE) is designated as GCP administrator and is responsible for implementation and management of GCP. Digital process of GCP includes dedicated web platform and GC registry for streamlining the operations. In addition to these methodologies and guidelines, including registration, accounting and GC issuance, monitoring ensures the transparency and accountability of GCP.

4. Forest Conservation

- 4.1 **Remarkable Increase in the Number of Ramsar Sites of the Country:** India has increased its tally of Ramsar sites (Wetlands of International Importance) to 80 from existing 75 by designating five more wetlands as Ramsar sites. The number of Ramsar sites has increased from 26 to 80 in the last ten years. Amrit Dharohar Yojana has been launched for conservation of Ramsar sites through community participation on the environment day 2023. Faunal inventory of the 75 Ramsar Sites has been published by ZSI on 1st September 2023 and Floral inventory for Ramsar Sites is under preparation.
- 4.2 **Environmental Clearance and Forest Clearance:** Policy reforms and newer version of PARIVESH, which automated various processes, has resulted in reduction of an average time taken for grant of EC at Central Level in all the sectors from more than 600 days before 2014 to less than 72 days in 2022-23. Similarly, average time



taken for grant of FC has reduced to less than 135 days in 2021-2022. The PARIVESH platform now provides a common application form for 4 types of clearances: Environmental, Wild life, Forest and CRZ clearance. It has evolved a Decision Support System (DSS) which provide an efficient and effective environmental appraisal without compromising on its rigour. In CRZ clearance, all nine State Coastal Zonal Management Authority were onboarded, for the first time, on PARIVESH 2.0 for online submission and processing of applications. PARIVESH 2.0 is further integrated with the national single window system and the Gati Shakti portal.

4.3 Forest (Conservation) Amendment Act, 2023: To achieve the country's national as well as international commitments of NDCs, carbon neutrality, eliminate the ambiguities and bring clarity about the applicability of the Act in various lands, promoting the plantation in non-forest land, enhancing the productivity of the forests, amendment in the existing Act has been made by promulgating the Forest (Conservation) Amendment Act, 2023. During last two years, the Forest Conservation Division has issued approximately 60 guidelines or clarifications to further streamline the process of approval under the Forest (Conservation) Act, 1980.

4.4 Increase in the number of Protected Areas: The number of Protected Areas in the country, which stood at 745 in the year 2014 have risen to 998. This accounts for 5.28% of the country's total geographic area. The numbers of Community Reserves in the country have increased from 43 in the year 2014 to 220 presently.

4.5 Increase in forest and tree cover: As per India State of Forest Report (ISFR) 2021,

the total forest and tree cover in India is 80.9 million hectares, which is 24.62% of the geographical area of the country. Out of this, the increase in the forest cover has been observed as 1,540 sq km and that in tree cover is 721 sq km as compared to 2019. **589.70** Cr seedlings were planted and a total of 8.77 million Hectares of area was covered under tree plantation till October 2023 as compared to 2020.

4.6 Mangrove Initiative for Shoreline Habitats & Tangible Incomes (MISHTI) was launched on the World Environment Day (5th June 2023) by the Hon'ble Prime Minister. The aim of the MISHTI is to "Restoration of mangrove forests" by undertaking mangrove reforestation/afforestation measures along the coast of India by adopting existing best practices in India and globally. Ministry has prepared a proposal and same has been submitted to National CAMPA authority for allocation of funds under MISHTI for FY 2023-24. Rs. 100 Crores have been allocated as Project outlay for the FY 2023-24.

4.7 Blue Flag Beaches: There were no blue flag certified beaches in India in 2014. Government of India initiated the beach development work and 08 beaches conferred blue flag certification in 2020. In 2022, total 12 beaches had blue flag certification.

5. Air Quality/Pollution

5.1 Improvement in Air quality: Under NCAP (National Clean Air Programme) and XV FC grants, 131 non-attainment cities are being monitored for the air quality. They have shown a positive impact as there is progressive reduction observed in the annual average concentration of PM10 in these 131 cities which has ultimately resulted in the improved air quality. Under

Swachh Vayu Sarvekshan more than 100 cities are monitored for air quality with an intent and plan to improve the air quality through holistic approach.

AIR QUALITY	2019-20	2020-21	2021-22	2022-23
Reduction in annual concentration of PM 10 levels vis a vis base year 2017	Improvement in 85 cities	Improvement in 102 cities	Improvement in 95 cities	Improvement in 131 cities

6. Circular Economy

6.1 Mission Circular Economy: 11 Committees constituted for development of Circular Economy (CE) and Action Plans for 10 waste categories (Li-ion batteries; E-waste; Toxic and hazardous industrial waste; Scrap metal (ferrous and non-ferrous); Tyre and Rubber; End of Life Vehicles; Gypsum, Used Oil, Municipal solid waste and Solar Panels). Accordingly, the following amendments were made to Promote mission of circular economy to move fast towards achieving climate goals.

- A) Plastic Waste Management Rule was amended on 27.04.2023.
- B) Extended Producer Responsibility (EPR) for Used Oil'' was amended on 18.09.2023.
- C) E-Waste (Management) Rules, was amended on 30.01.2023.
- D) Battery Waste Management Rules, was amended on 25.10.2023.

6.2 Total plastic packaging of around 3.3 million tonnes been covered under EPR for the year 2022-23. Registered PIBOs: 36111 Registered Plastic Waste Processors: 2350, till December 2023.

7. Wild Life

7.1 **Transcontinental relocation of Cheetah:** 8 cheetahs from Namibia and 12 cheetahs from South Africa have been translocated to Kuno National Park in Sept'22 and Feb, 2023 respectively. Cheetah had become extinct in the country in the late 1940/early 1950s.

7.2 **International awards to tiger reserves:** Four more tiger reserves i.e. Pench Tiger Reserve, Madhya Pradesh and Pench Tiger Reserve, Maharashtra (jointly) & Satpura Tiger Reserve Madhya Pradesh and Manas Tiger Reserve, Assam have been conferred with Conservation Excellence Award in recent years.

7.3 **50 years of project tiger:** As per the latest Tiger Census report released in August 2023 India is home to more than 75% tiger population of the world. Tiger Estimation (2022) shows an increase from 2226 in 2014 to 3,682 in 2023 with 12 tiger reserves with Excellent category. The International Big Cat Alliance (IBCA) has been launched by the Hon'ble Prime Minister of India on 9th April 2023 for conserving global big cats including tiger.

7.4 **Digitization of Flora, Fauna and herbarium records:** The BSI and ZSI has carried out the digitization of 16500 specimens with 45000 images of the Type and Non-Type of Indian Faunal specimens. ZSI has completed faunal documentation from 27 States and Union Territories as well as all of the 10 Biogeographic Zones across the country. Data of 6124 springs in 11 IHR States and 1 UT (J&K) has been geo-tagged spatially online on the HIMAL Geo portal.

8. Budget and Accounts

Annual Plan for 2023-24

The Ministry has been allocated an outlay of Rs. 3079.40 crore in the Budget Estimates (BE) for

the Financial Year 2023-24.

The financial outlays and expenditure during 2023-24 is given in the following table:

Umbrella Scheme-wise Allocation (2023-24)

(Rs. in Crores)

Sl No.	Name of the Scheme	BE 2023-24	AE 2023-24 (upto 31.10.2023)
1	Environmental Knowledge and Capacity Building (CS)	92.86	60.01
2	National Coastal Management Programme (CS)	12.50	5.18
3	Environmental Education, Awareness, Research and skill development (CS)	87.40	25.23
4	Control of Pollution (CS)	756.00	376.61
5	National Mission for a Green India (CSS)	220.00	117.09
6	Integrated Development of Wildlife Habitats (CSS)	491.80	165.62
7	Conservation of Natural Resources and Ecosystems (CSS)	47.00	13.04
	Total	1707.56	762.78

Umbrella Non Scheme-wise Allocation (2023-24)

(Rs. in Crores)

Sl No.	Name of the Scheme	BE 2023-24	AE 2023-24 (upto 31.10.2023)
1	Secretariat	355.44	129.19
2	Attached/ Subordinate offices	558.00	275.44
3	Assistance to Autonomous Bodies	309.00	199.23
4	Statutory & Regulatory Bodies	1021.25	80.48
	Total	1365.84	684.34

List of Pending C&AG Paras (upto 9 November 2023)

S.No.	Report No. & Year	Para No.	Subject
1	27 of 2014	6.3	Wasteful Expenditure on hiring of office accommodation.
2	26 of 2022	2.1 (ii)	Deficiencies in Internal Controls in Central Autonomous Bodies
3	26 of 2022	2.1 (iii)	Deficiencies in Internal Controls in Central Autonomous Bodies
4	21 of 2022	5.3	Unfruitful expenditure of Rs. 73.35 lakh on a demonstration project
5	26 of 2022	2.2 (ii)	Common deficiencies noticed in the accounts of CABs
6	26 of 2022	2.3.4 (Sl. No. 48)	Current Assets, Loans, Advances: Rs. 83.32 crore
7	4 of 2022	Entire Report	Performance Report on 'Conservation of Coastal Ecosystems'
8	26 of 2022	2.3.4 (Sl.No. 47)	Current Assets (Schedule 11): Rs. 16.79 crore
9	21 of 2022	5.4	Short recovery of rent of Rs. 96.72 lakh from a bank
10	21 of 2022	5.2	Pollution Caused by Plastic
11	26 of 2022	2.1 (i)	Deficiencies in Internal Controls in Central Autonomous Bodies
12	21 of 2022	5.1	Assistance to Botanic Gardens Schemes



CHAPTER - 1

Mission LiFE

1.1 Life Style for Environment:

Introduction

LiFE was envisioned as an India-led global mass movement to nudge individual and community behaviour towards sustainable actions for the environment. The idea of lifestyle-based changes to reduce climate change was covered in the Hon'ble Prime Minister's speech at COP26 in Glasgow, wherein he introduced the concept of LiFE, i.e. Lifestyle for Environment and gave a clarion call to rekindle a global pursuit of Lifestyles for Environment (LiFE).

At COP26, Hon'ble PM's announcement of L.I.F.E was as follows:

"This One-Word, in the context of climate, can become the foundation of One World. This is a word - LIFE...L, I, F, E, i.e. Lifestyle For Environment. Today there is a need for come together, with collective participation, to take Lifestyle For Environment (LiFE) forward as a campaign. This can become a mass movement of Environmentally Conscious Lifestyle. What is needed today is Mindful and Deliberate Utilization, instead of Mindless and Destructive Consumption. These movements together can set goals that can revolutionize many sectors and diverse areas such as fishing, agriculture, wellness, dietary choices, packaging, housing, hospitality, tourism, clothing, fashion, water management and energy."

To reflect India's commitment to LiFE, it was included in India's updated Nationally Determined Contributions to the UNFCCC. The text reads;

"To put forward and further propagate a healthy and sustainable way of living based on traditions and values of conservation and moderation, including through a mass movement for 'LiFE'— 'Lifestyle for Environment' as a key to combating climate change."

The concept of LiFE only grew larger and larger, and on the occasion of World Environment Day, 5th June 2022, the Hon'ble Prime Minister announced Mission LiFE. NITI Aayog launched the LiFE Global Call for Ideas on the occasion. Building on the same, on 20th October 2022, Hon'ble Prime Minister launched Mission LiFE in the presence of the UN Secretary General, António Guterres at Kevadia, Gujarat. The LiFE logo and Mission Document were released at this event.

Important activities undertaken

Pavilions on LiFE

LiFE Pavilions were set up at G20 Environment and Climate Sustainability Working Group (ECSWG) venues in Bangalore, Gujarat, and Chennai. Additionally, LiFE Pavilions were setup in Mysuru, Karnataka for the 'Commemoration of 50 years of Project Tiger', in Bhopal, at G20



LiFE Pavilion at the venue of 1st meeting of ECSWG of G20, Bengaluru from February 09-11th, 2023



LIFE Pavilion at 4th meeting of ECSWG at Chennai from July 26-28th, 2023

Parliamentary Speakers' Summit (P20 Summit) and at the World Food India Program, New Delhi. These pavilions increased awareness about LiFE and increased its global outreach.

Co-branding of Mission LiFE

World Wetlands Day, (02nd February, 2023) was celebrated in alignment with Mission LiFE by Eco-clubs across various States like Assam, Madhya Pradesh, Kerala, Tamil Nadu, etc. More than 15,000 students participated in these celebrations. National celebrations of World Wetlands Day were held at Nanda Lake, Goa's first Ramsar Site.

Hon'ble Minister of EF&CC launched the 'Save Wetlands Campaign' in the presence of Hon'ble Chief Minister of Goa



Mission LiFE was co-branded at World Sustainable Development Summit organized by TERI at India Habitat Centre during February 22-24th, 2023 through standees, videos, photo booth, distribution of LiFE souvenirs to delegates and participants, etc.

On September 7th, 2023, the International Day of Clean Air for Blue Skies, Hon'ble Minister of EF&CC, the Hon'ble Chief Minister of Madhya Pradesh Shri Shivraj Singh Chouhan, and the Hon'ble Minister of New & Renewable Energy, Environment Department of Madhya Pradesh, Shri Hardeep Singh Dang inaugurated the exhibition at Kushabhau Thakre International Convention Centre (KTICC), Bhopal, and took the blue pledge to embrace an environment-friendly lifestyle.



'International Day of Clean Air for Blue Skies' event

Promotion of Mission LiFE on International Platforms

Hon'ble Minister for EF&CC had discussions on combating climate change with UNFCCC Executive Secretary Mr Simon Stiell in New Delhi on February 25th, 2023. He also presented a LiFE badge to Mr Stiell.

Promoting Mission LiFE at **G7 Ministers' Meeting on Climate, Energy and Environment** in Sapporo, Japan (April 15-16th, 2023), Hon'ble Minister for EF&CC, said that India has focused on action by all, including individual and community actions through Mission LiFE and changing individual

and community behaviour alone can make a significant dent in the environmental and climate crises.



HMEFCC presenting LiFE Badge to UNFCCC Executive Secretary Mr Simon Stiell



Ms Ruchira Kamboj, Permanent Representative of India to the United Nations tweeted praise for the Mission LiFE exhibition organised at UN Headquarters, exclaiming that displayed photographs on the theme of LiFE serve as a reminder that modest efforts can result in significant progress in protecting our planet.

During September 9-10th, 2023, the Leaders of the G20 Nations resolved to act in concrete ways through partnerships for Mainstreaming Lifestyles for Sustainable Development. The leaders committed to take robust collective

actions that will enable the world to embrace sustainable production and consumption patterns and mainstream Lifestyles for Sustainable Development. 'Travel for LiFE' initiative was recognized, along with the need to support smart destinations that are responsible and sustainable.

At CoP-28, held at UAE from November 30th, 2023 to December 12th, 2023, Hon'ble Minister for EF&CC spoke of a sustainable lifestyle through a paradigm shift from mindless and destructive consumption to mindful and



Shanghai Co-operation Organization (SCO) meeting



deliberate utilization. Enshrined in Mission LIFE, the Hon'ble Minister invited people to assess the environmental impact of their actions and evaluate if the actions contribute to the problem or enhance the solution.

Initiatives by other Ministries for Promotion of Mission LIFE

A mega campaign 'Meri LIFE, Mera Swachh Shehar' was launched by Ministry of Housing & Urban Affairs (MoHUA) on May 15th, 2023. Thousands of Reduce, Reuse, and Recycle (RRR) Centres were set up across the country where

citizens can give their used clothes, shoes, old books, toys and plastic to be reused or recycled.

Public Service Announcements (PSA) in movie theatres-Subsequent to the issuance of certificate by Central Board of Film Certification (CBFC), Ministry of Information and Broadcasting for theatrical release of two Mission LIFE videos, these were disseminated as Public Service Announcements (PSAs) in 82 theatres in 59 cities/ towns/ villages across the States of Andhra Pradesh, Kerala, Tamil Nadu, Telangana, Maharashtra and Odisha. A total of 3512 shows



of *Mission of LiFE* video and 3473 shows of *Save Water* video were exhibited during the 15 days between 17th February and 3rd March, 2023.



Promotion of LiFE was done during the five-day celebrations of National Panchayat Awards Week 2023 organized by Ministry of Panchayati Raj during April 17-21st, 2023. Screening of two videos on Mission LiFE was done on April 20th, 2023 during the Clean Green Panchayat session of the 'National Conference on Sarvottam Panchayat Satat Vikas Prayas – Way forward for 2047', organized as a part of the week.

MoPNG launched a social media campaign on the LiFE theme of Save Water on 24th of August 2023. The Ministry tweeted graphics and posters to spread awareness regarding fixing leakages in taps to reduce wastage of water.



Industry Initiatives

As a co-branding initiative, ITC Ltd. prominently featured the LiFE themes and logo on their Classmate notebook products, to create greater awareness about LiFE among the youth.

CII Industry Members have adopted best practices that are aligned with the Mission LiFE initiative. The best practices for various corporates, including Coca-Cola and ITC, exemplify Industry's commitment to environmental responsibility and promote a greener and more sustainable future.



LiFE messages on ITC Classmate Notebooks

Progress / Innovations

To catalyze pan-India advocacy and awareness about LiFE, a month-long mass mobilisation drive was undertaken from 5th May 2023 to 5th June 2023 in the run-up to World Environment Day programme on 5th June, 2023. The Ministry developed two dedicated portals for LiFE, for dissemination of resource materials and to create a structured reporting format that can track the progress made on propagation of LiFE concepts. During this month-long campaign, more than 1.6 million action and awareness events were undertaken by the Ministries, State/UT Governments, and their Field Offices and Institutions, with participation from over 24 million individuals. 22 million individuals took



Best practices by the industry members of CII to adopt Mission LiFE

the LiFE Pledge for environmentally sustainable behaviour.

To add further momentum to this campaign, a mobile application – the Meri LiFE app was also launched by Hon'ble Minister for EF&CC on 15th of May, 2023.

Every month, the Ministry focuses on one of the 7 themes of LiFE and publishes creatives and videos on that theme. So far 97 creatives and 17 videos have been published on 7 themes of LiFE. For example, the theme for the month of December 2023 was "Say No to Single Use Plastic".

Achievements

As of December 2023, MoEF&CC has mobilized 79 Central Government Ministries and all 36 State Governments and UTs who have conducted 16.82 lakh awareness and action events with 2.69 crore participants.

Conferences organized in India/ International

The World Environment Day 2023 was celebrated around the theme "Solutions to Plastic Pollution", a topic which aligns with one of the 7 themes of Mission LiFE: "Saying No to Single-use Plastics" and is also linked to implementation of a number



Inauguration of Meri LiFE mobile app by Hon'ble Minister of Environment, Forest and Climate Change

of LiFE actions. *Hon'ble Prime Minister, Shri Narendra Modi addressed the gathering on the World Environment Day through video message.* Union Minister of Environment, Forest and Climate Change and Labour and Employment, Shri Bhupender Yadav graced the occasion and walked through exhibition comprising Paintings and Digital exhibition on LiFE.

Progress/ Achievements both cumulative :

- i. **Two portals developed- The Mission LiFE Portal** (missionlife-moefcc.nic.in) is an open access knowledge and social media creatives repository and also for maintaining the database of the Action Plans of the Ministries/Departments. The Meri LiFE Portal (merilife.nic.in) has been developed for Ministries, Departments and Institutions to upload actions and



Meri LiFE dashboard (merilife.nic.in) Mission LiFE dashboard (missionlife-moefcc.nic.in)



Art installation made out of plastic waste with the message 'Say No To Plastic'.

awareness generation events' reports and capture the progress of the mass mobilisation drive.

- ii. **Digital Pavilions-** LiFE Pavilions were set up at G20 Environment and Climate Sustainability Working Group (ECSWG) venues in Bangalore, Gujarat, and Chennai. Additionally, LiFE Pavilions were setup in Mysuru, Karnataka for the 'Commemoration of 50 years of Project Tiger', in Bhopal, at G20 Parliamentary Speakers' Summit (P20 Summit) and at the World Food India Program, New Delhi. These pavilions increased awareness about LiFE and increased its global outreach.
- iii. **Mass Mobilisation Campaign-** To catalyse pan-India advocacy and awareness about LiFE, a month-long Mass Mobilization Campaign was undertaken in the run-up



Art installation made out of plastic waste with the message 'Say No To Plastic'.

to World Environment Day, from 5th May 2023 to 5th June 2023.

iv. G20 Declaration: The G20 countries, based on the G20 High-Level Principles, have committed to robust collective actions that will enable the world to embrace sustainable production and consumption patterns and mainstream Lifestyles for Sustainable Development. Towards this end, they:

- Committed to implement the G20 HLPs on Lifestyles for Sustainable Development.
- Supported the implementation of HLPs through international cooperation, financial support, and development, deployment and dissemination of technology.
- Noted the launch of “Travel for LiFE” and supported the development of smart destinations that are responsible and sustainable

vii. CoP 28: Promotional material of LiFE was shared for showcasing at India Pavilion in

CoP 28 held at UAE from November 30th, 2023 to December 12th, 2023. ‘Did You Know Facts’ for CoP 28 LiFE Panel and Loop of LiFE videos (11 Video) also shared for display at India Pavilion.

viii. Social Media Outreach-Social media outreach has been ongoing since the launch of LiFE on 20th October 2022, on all MoEF&CC’s social media platforms. The key hashtags, #MissionLife and #ProPlanetPeople, have reached a global audience.

1.2 Green Credit Programme:

1. The Green Credit Rules have been notified by the Government of India on 12th October 2023 under the Environment Protection Act, 1986, as mechanism to encourage voluntary plantation activity across the country, resulting in award of Green Credits and also to build an inventory of land which can be utilised for afforestation programmes.

2. **The Green Credit Programme (GCP)** has the following objectives:



- (i) To encourage voluntary plantation
 - (ii) Registration of land on the web portal to build a land bank which can be offered for plantation activities. This land inventory will be available to individuals/entities for voluntary plantation, plantation under CSR and for plantation under Accredited Compensatory Afforestation.
 - (iii) Registration of activities related to plantation on the web portal, either on land selected from the land bank or any other land.
 3. Entities who can register land for plantations include individuals, gram panchayat/municipalities, communities, institutions, mining companies for reclaimed mining land, forest departments for degraded forest land. The types of land that can be registered include degraded forest land, watershed areas, waste land, etc. The entities who can undertake these tree plantation activities include individuals/institutions/communities etc.
 4. The individual/entities who carry tree plantation activities will be issued Green credits, as per methodology notified by the Central Government. Registration of the activity will be done using technology-based tools. Digital processes have been developed including a web platform and a registry for the programme. The verification of the details submitted for registration will also be undertaken through technology/digital tools, primarily.
- GCP will encourage private sector as well as other entities to meet their existing obligations, stemming from other legal frameworks, by undertaking plantations for generating green credits. Private sector, through generation of Green Credits, may be able to demonstrate environmental and social responsibility. This may help the private sectors to access low-cost capital from investors as well as financial institutions.



CHAPTER - 2

ENVIRONMENT, CLIMATE AND
SUSTAINABILITY WORKING GROUP
(G20 PRESIDENCY)



2.1 G20- Background:

The G20 Countries represent a spectrum of developed and emerging economies at different stages of growth and development. Collectively, they support 85 per cent of global GDP and 75 per cent of global trade. However, they are also responsible for over 80 per cent of the current annual greenhouse gas (GHG) emissions and facing the detrimental impacts of changing climate and environmental degradation.

India assumed the G20 presidency on 1st of December, 2022, taking over from Indonesia. As the largest democracy in the world, and the fastest growing economy, India's G20 presidency played a crucial role in building upon the significant achievements of the previous 17 presidencies. India's presidency focused on the theme of Vasudhaiva Kutumbakam - 'One Earth, One Family, One Future', with the agenda being inclusive, ambitious, action oriented and decisive. The theme affirms the value of human, animal, plant, and microorganisms and their interconnectedness on planet Earth and in the wider universe.

The Environment and Climate Sustainability Working Group is one of thirteen under the Sherpa Track, which identified the below thematic priorities for deliberation during the India's Presidency.

- Preventing, reducing and reversing land degradation; accelerating ecosystem restoration and halting and reversing biodiversity loss
- Protecting and conserving the ocean, promoting a sustainable and resilient blue/ocean-based economy
- Promoting resource efficiency and circular economy, preventing pollution and minimizing its risks

The Indian Presidency also spotlight Lifestyle for Environment (LiFE), with an emphasis on environmentally sustainable and responsible choices at both the individual lifestyle and the national development level, with the aim of achieving a cleaner, greener, and bluer future. Accelerating climate action and sustainable lifestyles spotlighting the India led Lifestyle for Environment (LiFE) were cross cutting elements that were mainstreamed across the three thematic priorities.

Cooperation amongst G20 Countries is essential to build economic resilience through resource security, achieve sustainable development, improve ecosystems and biodiversity via conservation and restoration, and combat climate change. The G20 Countries during the proceedings of this working group exhibit a spirit of renewed multilateralism, linking energy, development, and climate action priorities to deliver jobs, growth, and sustainability. The same was reflected at the Summit wherein the countries unanimously adopted the Green Development Pact, rendering consensus on key matters of climate and environment.



2.2 Environment and Climate Sustainability Working Group (ECSWG) Meetings

Indian's presidency came at a crucial time when the world is grappling with climate change, geopolitical tensions, economic challenges, escalating food and energy prices, and the long-term effects of the pandemic. India focused on various areas during its G20 presidency,



including women's empowerment, digital public infrastructure, health, agriculture, education, culture, tourism, climate financing, circular economy, global food security, energy security, green hydrogen, disaster risk reduction and resilience, fight against economic crime, and multilateral reforms. Throughout its G20 presidency, India conducted around 200 meetings in 32 different sectors at various locations across the country. The G20 Summit was one of the most high-profile international events hosted by India. The Indian leadership paved a new path for development and prosperity. India led the world towards sustainable and inclusive growth, and its G-20 presidency was, ambitious, decisive, and action-oriented.

India's G20 presidency aimed at bringing an integrated, comprehensive and consensus-driven approach to address climate change and pursue sustainable growth. India promoted LiFE- Lifestyle for Environment and resilient development paradigm for G20. Under India's Presidency, 13 Working Groups and 2 Initiatives met through the Sherpa Track to discuss priorities and provide recommendations. Environment, Climate & Sustainability was one of these working groups. The Ministry of Environment, Forest and Climate Change (MoEF&CC) hosted four Meetings of the Environment and Climate Sustainability Working Group (ECSWG), and deliberations were focussed on the thematic priorities and cross cutting issues as stated in the preceding section.

The first meeting of the ECSWG was held from 9th to 11th of February 2023 in Bengaluru, Karnataka. All three priority issues were taken up for the discussion during this meeting. G20 countries showed their interest and commitment to constructively working towards delivering outcomes on the three priority areas. During the meeting best practices for ecosystem restoration of forest fire and mining affected areas were

showcased, and a visit to the Bannerghatta National Park and Kalkere Arboretum was conducted to showcase the forest ecosystems of Karnataka, ecosystem restoration and ecotourism models, as well as wildlife protection. Throughout the meeting it was highlighted that India intends to address matters of environment and climate change through an action-oriented and consensus driven approach. The ECSWG worked in close collaboration with other G20 key working groups to holistically address issues relating to environment, sustainability and climate change. The discussions also included the creation of circular economies in various sectors including steel and biowaste and the role of extended producer's responsibility in creation of a circular economy. The idea of a G20 industry coalition for resource efficiency and circular economy was also tabled. The deliberations witnessed an enthusiastic participation of delegates from all countries. The Oceans and Blue Economy discussions covered a range of issues including marine litter, conservation and enhancement of coastal and marine ecosystems and marine spatial planning, over three meetings and one side event. The focus of discussions on was on the problem of marine plastic litter and its adverse impacts. The discussions on three priority areas were decided to be taken forward at the 2nd ECSWG meeting, which was held on 27-29th March, 2023 at Gandhinagar.

The Second G20 ECSWG meeting held in Gandhinagar built on the discussions from the first ECSWG, constructive deliberations among the G20 countries took place on Arresting Land Degradation, Accelerating Ecosystem Restoration and Enriching Biodiversity; Promoting a Sustainable and Climate Resilient Blue Economy and Encouraging Resource Efficiency and Circular Economy. The G20 member countries reaffirmed their commitment towards combatting the environment and



climate crisis, but with a renewed sense of urgency. All the G20 countries agreed on the pressing need for concerted global efforts and the immediate action required, given the current scenario. After technical sessions delving deep on the outcomes of the three priority areas identified by ECSWG under the India Presidency, the countries highlighted several action points on how to bring about a meaningful change. The deliberations on biodiversity, land degradation and ecosystem restoration focused on identified priority landscapes under India's Presidency- they are forest fire and mining affected lands- India proposed establishment of the Gandhinagar Implementation Roadmap (GIR) during this meeting. During this meeting delegates visited the Dandi Kutir, which is the world's largest and only Museum built on one man's story - Mahatma Gandhi, Father of the Nation. The 2nd ECSWG meeting ended on a note of collaboration with a goal to refine the proposed outcomes under the G20 India Presidency by incorporating the feedback of the delegates and best practices shared during the sessions, and gather inputs on the outline of the Communique presented.

The third ECSWG meeting, held in Mumbai from 21st – 23rd May, 2023, took up the discussions from previous meeting. The deliberations were on three outlined priority areas for the ECSWG- arresting land degradation, promoting circular economy and giving impetus to blue economy. The major thrust was laid on Blue Economy during this meeting, two side events were organised- Mega Beach Clean Up Event and the Ocean 20 Dialogue on Day 1st of the meeting. The Mega Beach Clean Up Event at Juhu in Mumbai was a successful event which saw participation of 20 countries and 37 Indian beaches from the coastal states and Union Territories. The massive drive organized to sensitize people and create awareness was in alignment with the Prime

Minister's message on '*Swachhta*' and '*Jan Bhagidari*' and highlighted the significance of '*Lifestyle for Environment*' (LiFE) concept and the importance of individual actions in tackling the menace of marine pollution. The Ocean 20 Dialogue brought together international experts, innovators, community representatives, policymakers, and industry leaders, to facilitate discussions on aspects related to emerging science-technology-innovation driven solutions, challenges associated with effective and inclusive policy and governance, and avenues for establishing finance mechanisms to support national and regional Blue Economy endeavours. The primary agenda of the 3rd ECSWG meeting was the detailed discussions on the draft Ministerial Communique and entailed constructive discussions and deliberations on priority areas. Picking up the thread from the Focus Group Discussions which had been conducted by the Indian Presidency over the previous meetings across all the three thematic priorities, the discussions were conducted with a steadfast resolve of being collaborative and inclusive. The outcome documents were discussed line-by-line and the member countries presented their respective viewpoints. The 3rd ECSWG meeting ended with a discussion and negotiation on the Communique, to be further deliberated upon and refined in the virtual meetings held before the 4th and final ECSWG meeting held in Chennai from 26th to 27th July, with the Minister's meet on 28th July, 2023. Virtual negotiations over 300+ hours were held among the G20 nations chaired by India on all the thematic priorities and components of the draft outcome document.

During the fourth ECSWG meeting, further discussion on the outcome documents took place under the two broad tracks of Environment and Climate on 26th and 27th July. This was followed by the Environment and Climate Ministers Meeting

held on 28th July. During this meeting, further discussion on the outcome documents took place under the two broad tracks of Environment and Climate. The discussions on the same concluded in the Environment and Climate Ministers meeting to be held on 28th July. The three-day meeting brought together around 300 delegates from G20 member countries, invitee countries, and several International Organisations, with an objective to finalise the Ministerial Outcome and the Presidency Documents. The highlight of the 4th ECSWG and Environment and Climate Ministers meeting was the launch of the Resource Efficiency Circular Economy Industry Coalition (RECEIC) by Hon'ble Minister of Environment, Forest & Climate Change Shri Bhupender Yadav and joined by close to 40 companies across the globe as founding members. The coalition's objective is to unite nations, industries, and experts in their endeavour to propel the global

circularity agenda forward. The fourth meeting concluded with adoption of the ECMM Outcome Document and Chair's Summary including the High Level Principles on Sustainable and Resilient Blue/ Ocean based Economy and launch of 10 Presidency documents.

Under the G20 India Presidency, the, ECSWG has demonstrated an unwavering commitment towards ensuring environmental sustainability, which resonates with the vision of the Indian government to tackle the interconnected issues of climate and environment in an ambitious and decisive manner. The outcomes of the ECSWG were inculcated in the New Delhi Leaders' Declaration, Green Development Pact. The deliberations during the four scheduled meetings reached at concrete, implementable action points to foster the sustainable development, climate action and protection of the environment.





ECSWG meetings



CHAPTER - 3

ENVIRONMENT - ABATEMENT OF POLLUTION, POLICY AND LAW



3.1 Control of Pollution:

The Ministry of Environment, Forest & Climate Change administers the Central Sector Scheme- 'Control of Pollution' to curb environmental pollution. For the FY 2023-24, the total budget (under RE) of the scheme is ₹ 847.50 Cr. The CP Division releases a major part of the funds to CPCB and some parts to other agencies as per the EFC/guidelines of the scheme. The CPCB further releases the funds to SPCBs and other agencies according to the approved proposals. The main objective of the Control of Pollution scheme is to monitor air quality across the country and take appropriate air pollution mitigation measures, besides monitoring water quality and noise levels in the country. The Control of Pollution scheme has been operational since 2018, the component under the scheme is as mentioned below:

- a. Assistance for Abatement of Pollution to weaker SPCBs/PCCs-** Under this component State Pollution Control Boards (SPCBs) / Pollution Control Committee (PCCs) are supported to meet the expenditure requirements for taking pollution abatement activity including pollution assessment (Source monitoring, monitoring of ambient air, water and noise), technical studies for R&D, survey, and documentation for creation of environmental database and consultation in the area of pollution abatement of air, water & noise, scientific research and studies on issues of waste management, inventorisation of wastes, training and mass awareness, education, seminars/workshops/ conference, lab-upgradation/ procurement of equipment, E-Governance and IT applications including online consent management, online emission/ effluent monitoring systems, development

of IT infrastructure. Under this component, in the CFY 2023-24, funds of ₹68.00Cr have been sanctioned and out of this ₹ 19.64 Cr have been released till 30th November, 2023.

I. National Clean Air Programme (NCAP)

1. The National Clean Air Programme (NCAP) was launched by the Ministry of Environment, Forest and Climate Change (MoEF&CC) in January 2019 with an aim to improve air quality in 131 cities by engaging all stakeholders.
2. NCAP envisages a reduction by 20-30% in PM 10 concentration over baseline in the year 2017 by 2024.
3. The target has been revised to achieve upto the 40% National Ambient Air Quality Standards (NAAQS) in terms PM10 concentrations by 2025-26 with respect to the base year 2019-20.

II. Progress - Action Plan

1. NCAP focuses on the preparation and implementation of the national-level action plans, state-level action plans & city-level action plans of the targeted 131 cities.
2. The national level plan will include the action plans of different Ministries/ Departments of the Government of India. This includes convergence of schemes/programs of different Ministries/ Departments, received action plans from 7-line Ministries (MoP, MoRTH, MoHUA, MNRE, MHI, DoAFW&MoPNG)
3. State Action Plans have been prepared by 23 States/UTs.
4. City-level action plans have been prepared in 131 cities.



III. Progress – Air quality improvement

1. 90 cities have shown improvement in air quality in FY 2022-23 compared to base levels of 2017 and 15 cities conforming to national ambient air quality standards in comparison to 6 cities in 2017.

IV. Financial Arrangement

1. Central Government has earmarked an amount of ₹19,711.00 Cr. to 131 cities during the period FY 2019-20 to FY 2025-26. Out of above an amount of Rs. 3172.00 Cr. is allocated through CP Scheme of MoEF&CC for 82 non-attainment cities and ₹16539.00 Cr. is allocated for FY 2020-21 to 2025-26 under 15th Finance Commission (XV-FC) for improvement in air quality of 42 million plus Cities/Urban Agglomerations under the Million-Plus Cities Challenge Fund (MPCCF).
2. An amount of ₹ 1436.25 Cr has been released to 82 non-attainment cities funded by MoEF&CC under NCAP till December, 2023 for initiating measures to improve air quality such as construction and demolition waste management facilities, non-motorized transport infrastructure, green buffers, laying of pavements, mechanical street sweepers, composting units etc. Further based on the performance assessment of the million-plus cities an amount of ₹8357.63 Cr has been released till December, 2023 under Fifteenth Finance Commission (XVFC) air quality grant. MoEF&CC is the nodal agency for monitoring ambient air quality and recommending DoE for disbursing grants to 42 million-plus cities.
3. An amount of Rs. 3131 crore has been allocated in the FY 2023-24 for 131 cities.

V. Monitoring, Evaluation, and Reporting (MER)

1. Air quality monitoring is carried out in 885 stations (338 continuous and 547 manual) in 131 cities and the data is transmitted to CPCB through concerned SPCB/PCCs throughout the year. Performance of cities is assessed based on annual average of PM10 concentrations and Air Quality Index (AQI) computed from the air quality data collected annually through these stations.
2. Committees have been set up at national, state, and city levels for coordination, monitoring, and evaluation of progress on action plans by various stakeholder agencies/Departments/Ministries: -
 - a. **National Level**
 - i. Apex Committee under Chairmanship of Hon'ble Minister, EFCC
 - ii. Steering Committee under the Chairmanship of Secretary, EFCC
 - iii. Monitoring Committee under the Chairmanship of Additional Secretary, MoEF&CC
 - iv. Implementation Committee under the Chairmanship of Chairman, CPCB
 - b. **State Level**
 - i. Steering Committee under the Chairmanship of Chief Secretary
 - ii. Implementation Committee under the Chairmanship of Additional Chief Secretary/Principal Secretary, Environment
 - a. **City Level**
 - i. City-level Implementation and Monitoring Committee under the Chairmanship of District Collector/Municipal Commissioner.
 - d. Periodical review meetings are held to oversee the progress of



implementation of NCAP at various levels. During the year 2023, **01 Apex Committee meeting** under the chairmanship of Hon'ble Minister EFCC, **01 Steering Committee meetings** under the chairpersonship of Secretary, MoEF&CC, **03 Monitoring Committee Meetings** under the chairmanship of Additional secretary, MoEF&CC and **04 Implementation Committee meetings** under the Chairmanship of Chairman, CPCB, have been convened.

- e. MoUs have been signed with NCAP cities between CPCB, SPCB, and ULB and 42 MPCs between the MoEF&CC, State government, and urban local bodies under XVFC.
- f. 63 Institutes of Repute (IoRs) are assigned to 131 cities for capacity building and for effective implementation of City action plans. The Ministry has designated IIT Kanpur as the nodal academic institution to coordinate with other IoRs.

VI. Guidelines under NCAP

Guidelines have been prepared for the following:

1. Guidelines for Release and Utilisation of Funds under National Clean Air Program
2. Ranking of Cities – “Swachh Vayu Survekshan”
3. Guidelines for Capacity Building Public Outreach under NCAP
4. Guidelines for NKN & IoRs under NCAP
5. Guidelines for Mission LIFE

VII. Knowledge Support, Capacity Building & Public Awareness

1. A National Knowledge Network (NKN) with IIT, Kanpur as coordinator and experts from fields, NGOs, and academia, has been established and is also operational, to provide technical and knowledge support to the program at the national/state/city level. NKN primarily provides knowledge-based scientific support and prepares guidelines on various aspects of the program and will be an advisory entity to CPCB for all air quality-associated matters.
2. Air quality management requires scientific evidence-based planning and execution of activities. To extend scientific support for various activities identified in the city action plan, Institute of Repute (IoR), - an institute working in or nearby, preferably IITs or NITs or local Institutes working or having expertise in air quality management, has been made knowledge partner to each city through an MoU in March 2021. Role and responsibilities of the ULBs, SPCB and IoR have been defined to undertake the approved activities of the Program in a systemic, scientific and time bound manner.
3. MoEF&CC has conducted 04 regional workshops/Interaction Meets (i.e. Northern, Western, Southern and Eastern) involving Member Secretaries of SPCB/ PCCs and Municipal Commissioners of ULBs for sensitization, knowledge sharing and capacity building of the stakeholders in the States/UTs. The following such workshops were organized:
 - a. International Clean Air Day for Blue Skies (“Together for Clean Air”) – on 7th September, 2023 in Bhopal organized to focus on the need



- for stronger partnerships, increased investment and shared responsibility to overcome air pollution. Compendium of best practices adopted by cities has been released. On this occasion 9 better performing cities have been awarded a total of Rs. 5.25 crore under “Swachh Vayu Survekshan” for encouraging the cities to improve air quality in respective cities. Cities include **Category-1:** Indore, Agra, Thane, **Category-2:** Amravati, Moradabad, Guntur, **Category-3:** Parwanoo, Kala Amb, Angul. This Categorization is made based on the population.
- b. 24 SPCBs/PCCs and 131 ULBs have organised CBPO programmes and Mission LIFE activities at respective places.
 - c. Further, 24 SPCBs/PCCs and 131 ULBs have observed Swachh Vayu Diwas International Clean Air Day for Blue Skies on 7th September, 2023.
 - d. Ministry has conducted a Workshop on **Airshed Approach for Air Quality Management and Regional Cooperation in the Indo-Gangetic Plain (IGP)** with 08 States/UTs along with relevant stakeholder on 1st May, 2023 in New Delhi to prepare a roadmap and for AQM in the IGP airshed, with an emphasis on institutional and interstate coordination.
 - e. Southern region: on 19th October 2023, in Bengaluru for the States of Andhra Pradesh, Karnataka, Telangana, Tamil Nadu, Kerala and UTs of Lakshadweep, Pondicherry and Daman & Diu.
 - f. Western region: on 20th October 2023, in Mumbai for the States of Maharashtra, Gujarat, Madhya Pradesh, Goa and UT of Daman, Diu & Dadra Nagar Haveli were sensitized about the NCAP and XV-FC grant for improvement in air quality.
 - g. Northern region: on 30th October 2023, in Delhi for the Delhi and NCR region (Delhi, Haryana, U.P, Rajasthan and Punjab)
 - h. Eastern region on 20th October 2023, in Kolkata for the States of Chhattisgarh, Madhya Pradesh, Rajasthan (RD Bhopal Jurisdiction), Bihar, Jharkhand, Odisha, West Bengal, Andaman and Nicobar Island (RD Kolkata Jurisdiction) and Arunachal Pradesh, Assam, Nagaland, Meghalaya, Mizoram, Manipur, Sikkim and Tripura (RD Shillong Jurisdiction).
4. **Physical and Financial Modules** have been developed in the **PRANA-portal**. In this portal, action plans of cities, states and line ministries will be reflected and monitored for their implementation status. It will provide all information related to various policies / programs /schemes/ activities of the stakeholders along with the progress made towards improvement in air quality across the country. This portal will be a platform for monitoring and feedback on all efforts made for air quality improvement.
- Environmental Monitoring Network Programme**
- i. Operation and Maintenance of Continuous Ambient Air Quality Monitoring Stations (CAAQMS)



- ii. National Ambient Noise Monitoring Network (NANMN) – strengthening and establishment of New Stations in Million Plus Cities
- iii. National Water Monitoring Programme (NWMP)
- iv. Operation and Maintenance of National Air Quality Monitoring Programme (NAMP) stations Under this component, funds of ₹ 60Cr have been sanctioned and released till 30th November, 2023.

Research and Outreach Programmes-

The Ministry is providing funds to the projects which have impact for prevention and control of pollution. The proposals received under Research and Outreach Programme are placed before the Project Appraisal Committee (PAC) constituted under NCAP for recommendations. Project Appraisal Committee includes members from DST, CSIR and Ministry of Earth Sciences for synergy and understanding advancement in technology and sciences and other related stakeholder Ministries/organizations.

Under this component, funds of ₹ 21Cr have been sanctioned and released till 30th November, 2023.

Achievements and Progress are as follows:

A total of 81 standards across various industries have been notified/ revised so far. The major sectors include: Thermal Power Plants, Common Effluent Treatment Plants, Sugar Industry, Cement Plants, Textile Industry, Slaughter House, Sewage Treatment Plants, Fertilizer Industry, Airport Noise Standards, Diesel/Petrol/ LPG/CNG Gensets, Dust Mitigation Measures for Construction and Demolition Activities, Boilers using industries, Man-made Fibre Industry, Paint Industry, Coffee Processing Industry, Tannery

Industry, Kerosene, and Emissions Standards for SO₂ and NO_x for five industrial sectors – Lime Kiln, Ceramic, Glass, Foundry and Reheating Furnaces, Pharmaceutical Industry, PVC Pipes and Fittings, and Membrane based water purification system etc. The final notifications published in year 2023 on Emission and Discharge Standards under Environment (Protection) Act 1986 are as follows:

1. Revision of emission standards for particulate matter for Industrial Boilers vide Gazette Notification G.S.R. 373 (E) dated 16.05.2023
2. Environmental Standards for Hot Mix Plants vide Gazette Notification G.S.R. 376 (E) dated 18.05.2023
3. Environmental Standards for Calcined Petroleum Coke (CPC) Units vide Gazette Notification G.S.R. 414 (E) dated 05.06.2023
4. Amendment Notification for Revised Emission Standards for Generator Set (Genset) vide Gazette Notification G.S.R. 436 (E) dated 14.06.2023
5. Use of Reverse Osmosis (RO) Based Point of Use (PoU) Water Treatment System vide Gazette Notification G.S.R. 833 (E) dated 10.11.2023

The draft notification published in year 2023 for stakeholders' consultation on Emission and Discharge Standards under Environment (Protection) Act 1986 are as follows:

- I. "Regulations for Common Effluent Treatment Plants" vide G.S.R. 07(E) dated 04.01.2023
- II. Environmental Standards for Pesticides Manufacturing Industries vide G.S.R. 753(E) dated 17.10.2023
- III. Environmental Standards for Caustic Soda

Manufacturing Industries vide G.S.R. 754(E) dated 17.10.2023

- IV. Environmental Standards for Pulp & Paper Industry vide G.S.R. 825(E) dated 08.11.2023

Development and Promotion of Clean Technology and Waste Minimization Scheme

Clean Technology deals with Scheme Development and Promotion of Clean Technologies and Waste Minimization Strategies. A grant-in-aid scheme on Development and Promotion of Clean Technologies was initiated in 1994. Clean Technologies are distinct and different from “end-of-pipe” abatement technologies, minimizing the generation of waste streams in the production processes and utilizing the wastes from other consumption goods and production processes, rather than treating the wastes after generation. The Ministry has been providing financial assistance under the Central Sector Plan Scheme for those projects whose primary research has already been completed and is ready for pilot scale demonstration research on innovative technologies in the areas of highly polluting categories of industries. The main objective of the demonstration research projects was to standardize the data obtained after primary research to develop and demonstrate the suitability of the prototype and to study the feasibility of the technology in the Indian environmental conditions both from economic and scientific points of view.

The purpose of the scheme was to assist primarily the Small and Medium Scale units which do not have access to the requisite technical expertise to achieve waste minimization with the following objectives: -

- i. Identification of priority areas and development of appropriate economically viable clean technologies and waste

minimization strategies for small scale and medium scale industries through interface with industry, R&D establishments and academic institutions.

- ii. Promotion and adoption of clean technologies and waste minimization strategies by the industry/industrial clusters through setting up of pilot/demonstration projects on prototype development,
- iii. (iii) Absorption and up-gradation of imported clean technologies and their demonstration through pilot projects

The Scheme will be **discontinued after funding the existing and ongoing sanctioned projects.**

Presently there are 5 ongoing projects under the Scheme and the budget allocation of ₹ 1.5 Crore has been allocated in Centre Sector Scheme of the Division.

COMMISSION FOR AIR QUALITY MANAGEMENT IN NATIONAL CAPITAL REGION AND ADJOINING AREAS (CAQM)

- i. The Commission has been constituted under the Commission for Air Quality Management in NCR and Adjoining Areas Act, 2021 up in accordance with the notification dated 23rd April, 2021 towards better coordination, research, identification and resolution of problems surrounding the air quality index in NCR and adjoining areas and for matters connected therewith or incidental thereto.
- ii. As per the Act, three statutory Sub-Committees (i). Monitoring and Identification, (ii). Safeguarding and Enforcement and (iii). Research and Development have been constituted towards prevention, control and mitigation of air pollution. The Commission has also



constituted other Sub-Committees on Graded Response Action Plan (GRAP) for specific purposes besides constitution of Expert Groups for certain tasks towards abatement of air pollution in the region.

- iii. Since its inception, the Commission has been rigorously taking up the issue of air pollution in NCR and adjoining areas and has identified various sectors contributing to air pollution with core focus Industrial Pollution, Pollution from Diesel Generator (DG) sets, Vehicles and Transport sector, Agricultural Stubble Burning, Municipal Solid Waste/Biomass Burning, Fires in Sanitary Landfills sites, Dust from Construction and Demolition Project activities, Road and Open Areas dust and pollution from dispersed sources etc.
- iv. To guide and direct various actions towards abatement of air pollution in the region, the Commission in the year 2023 has issued 8 Statutory Directions, 4 Advisories and executive orders to Govt. of NCR States/GNCTD and various agencies concerned in the region for improving of air quality in the region.
- v. A brief of the measures that were initiated / progressed by the Commission in the intervening period, towards abatement of air pollution in the region across various contributory sectors, are as detailed under:

1) INDUSTRIAL POLLUTION

Running of industrial operations on cleaner fuels

has been an area of priority for the Commission since its inception. The Commission is working in close coordination with various stakeholders (NCR States, GNCT of Delhi, CPCB, SPCBs of NCR States and Delhi Pollution Control Committee etc) to ensure regular audit and inspection of the Industries and press industries operating in NCR districts to shift to PNG/cleaner fuels.

A standard list of approved clean fuels was formulated by the Commission and statutory directions were issued for its implementation in the NCR, targeting transition of all industries in the NCR to the approved fuels latest by 31.12.2022. Pursuant to a concerted drive for shifting more and more industries to approved fuels, the current status of running of industries on approved fuels is as under:

Towards adoption of standard approved fuels for NCR, PNG infrastructure and supply is extremely critical, targeting as many industries to switch over to cleaner fuels like PNG for their fuel requirements for boilers, furnaces, heaters etc. Up till now, out of total 240 areas in the NCR, 211 industrial areas have been provided PNG infrastructure and connectivity and the work is in progress in balance 29 industrial areas (7 in UP, 14 in HR and 8 in RAJ).

2. ABATING AIR POLLUTION CAUSED BY DIESEL GENERATOR SETS

Owing to not so reliable power supply arrangements, particularly in the industrial areas, rampant use of highly polluting Diesel Generator sets was observed by the

	Haryana (NCR)	UP (NCR)	Rajasthan (NCR)	NCT of Delhi	Total in NCR
No. of fuel-based industries	3,141	2,273	522	1,823	7,759
No. of industries shifted to approved fuels	2,954	2,188	484	1,823	7,449
Balance	187	85	38	-	310*

*units reported self-closure or through directions of the state authorities.



Commission. Accordingly, to improve upon the power availability and reliability, particularly to abate air pollution in the winter months, review meetings were held with all the DISCOMs operating in Delhi-NCR to ensure uninterrupted reliable power supply in Delhi-NCR to minimize use of DG Sets.

Further, the Commission also issued detailed Statutory Direction No. 76 dated 29.09.2023 for retro-fitment of various emission control system / devices in existing DG sets for regulated operations of DG sets across all sectors in the NCR including Industrial, Commercial, Residential and Office establishments etc. to be implemented from 01.10.2023. The Commission, as a one-time exception, permitted DG Sets for all capacity ranges to be run only for emergency services in the NCR, even under periods of restrictions under the GRAP, only up to 31.12.2023 and strictly subject to adherence to the above noted schedule / measures for emission control thereafter.

3. POLLUTION CAUSED BY VEHICULAR SECTOR

Towards controlling vehicular pollution caused by older vehicles and to strictly ensure that Petrol/Diesel vehicles more than 10/15 years old do not ply in NCR, in consonance with the Hon'ble NGT directions, also upheld by the Hon'ble Supreme Court, the Commission has pursued with the States concerned and GNCTD to conduct drive against such vehicles. Also, towards regular certification of vehicles and compliance of emission standards under new

“Pollution under Control” (PUC) Certificate regime and for ascertaining the compliance of PUC norms, details of the vehicles challaned during 2023 in the NCR are as under:

Towards an effective long-term strategy of controlling vehicular emissions, transition to e-mobility has been identified as an important tool by the Commission. With all the NCR States and GNCTD coming up with their respective medium / long term targeted EV Policies, the Commission has also issued an advisory for “Mandating procurement of zero emission and e-vehicles” in identified sectors like Govt. procurement, e-commerce platforms etc.

Nos. of electric vehicles currently registered in NCR upto September 30th, 2023, as reported by the State Govts. / GNCT of Delhi are as under:

Delhi – 2,38,056	Haryana – 75,837
UP – 84,716	Rajasthan – 13,784

As per the available data (upto September 30th, 2023), total 3,100 battery charging stations and 4,793 charging points are already in place in the territory of Delhi and 467 charging stations are available in other areas in NCR.

Auto rickshaws are a preferred economical mode of transport, these are also major contributors of particulate matter emissions, the Commission accordingly issued a Statutory Direction dated 30.11.2022, mandating that only CNG / electric autos would be registered across NCR w.e.f. 01.01.2023 and State Governments of Haryana, Uttar Pradesh and Rajasthan shall also ensure

NCR States	No. of Centers issuing PUC	No. of PUC issued	No. of Challan issued	Overaged 10/15 years old petrol /diesel vehicle
Delhi	947	36,29,139	164000	14687
Haryana	1776	29,03,277	11135	220
Rajasthan	197	97193	6154	148
Uttar Pradesh	589	14,58,093	22579	3058



to phase out all diesel auto rickshaws in a staggered but time bound manner completely by 31.12.2026.

Towards efficient and cleaner public transport services particularly intra-city and inter-city bus services within NCR, the Commission took up the matter with the NCR States to endeavour running of bus services between any NCR city / town and Delhi only through EV/CNG/BS-VI Diesel buses in the immediate term and only through CNG / EV buses in the medium / long-term. To this effect, in due consultation with and in agreement by the NCR States, the Commission through Statutory Direction No. 78 dated 19.10.2023 directed that all bus services between any NCR city / town in the State of Rajasthan / Uttar Pradesh and Delhi and all bus services between any city of Haryana and Delhi shall be operated only through EV/CNG/BS-VI Diesel buses w.e.f. 01.11.2023.

4. DUST FROM CONSTRUCTION AND DEMOLITION PROJECT ACTIVITIES

Commission is ensuring compliances related to various rules and guidelines related to effective dust mitigation measures at C&D sites through inspections. Besides monitoring by the Commission, the State PCBs in NCR and DPCC have also been directed to conduct regular physical inspections of different construction and demolition projects in their respective jurisdiction. Details of the inspections conducted from 01.01.2023 to 30.09.2023 are as under:

5. DUST FROM ROADS AND OPEN AREAS

Pursuant to the directions of the Commission, NCR states and GNCTD have set-up 60 number

“Dust Control and Management Cells” for monitoring and implementation of various dust control measures in various road projects/ activities with focus on proper maintenance of roads and regular monitoring to keep the roads pot hole free, laying and repairing of roads in a manner which fully supports mechanized sweeping, conversion of non-paved road sides into paved one or into green areas, greening of central verges, cemented roads over the bituminous roads especially in industrial areas and identification of hotspots of road dust and implement in the target specific road dust control measures.

6. AGRICULTURAL STUBBLE BURNING

Based on the Framework advised by the Commission through direction dated 10.06.2021 to the concerned State Governments of Punjab, Haryana, Uttar Pradesh, Rajasthan and Government of NCT of Delhi to prepare state specific detailed, monitorable action plans and learnings from the years 2021 and 2022, action Plans were reviewed, updated and finalised by the State Governments of Punjab, Haryana and Uttar Pradesh for the year 2023. Accordingly, a statutory direction for strict implementation of the updated revised plan of action for prevention and control of paddy stubble burning including achieving the targets for reduction of stubble burning events as in the respective plans was issued on 25.07.2023.

In-situ Crop Residue Management:

- Availability and allocation of CRM machinery

S. No.	Status of inspection of C&D sites	Delhi	Haryana	Uttar Pradesh	Rajasthan
1	No. of C&D sites physically inspected	43674	2612	1026	582
2	Total no. of sites against which EC was levied for non-conformities.	2557	96	71	30
3	No. of sites ordered for closure/stoppage of work.	206	74	5	21

- b. High yield and short duration paddy varieties, as substitute of PUSA- 44.
- c. Harvesting schedule staggered to improve machine utilization
- d. Super SMS mandated with Combine harvester
- e. Extensive use of Bio-decomposer developed by IARI

Ex-situ Crop Residue Management

The Commission has issued advisories to the State Governments of Punjab, Haryana and Uttar Pradesh on “Ex-Situ Stubble Management” and to establish an ecosystem and robust supply chain mechanism to boost ex-situ utilisation of straw for tackling the problem of Stubble Burning.

In view of the compelling need to also control air pollution from coal based Captive Thermal Power Plants in the NCR, the Commission also issued Direction No. 72 dated 17.03.2023 to all the coal based Captive Thermal Power plants including co-generating Captive Thermal Power Plants situated in NCR, on the same lines as in

coal based thermal power plants, targeting at least 5% co-firing of biomass pellets/torrefied pellets (with focus on paddy straw), latest by 30th, September, 2023 and at least 10% co-firing by 31st December, 2023.

Major alternate usage of paddy straw as economic resource are:

- i. Biomass Power Projects
- ii. Co-firing in Thermal Power plants
- iii. Feed stock for 2G Ethanol plants
- iv. Feed stock in Compressed Biogas plants
- v. Fuel in Industrial Boilers, WTE plants, Brick Kilns etc.
- vi. Packaging materials, Agri-panels etc.

The paddy residue burning events, through ISRO developed standard protocol for estimation of Crop Residue Burning Events using Satellite Data, in the NCR recorded during 2021 and 2022 are as under:

IEC Activities

Extensive IEC activities /Awareness programs

Paddy Residue Burning events (Period: 15th September- 30th November)

Punjab		Haryana		Uttar Pradesh (NCR)		Total (including Delhi and NCR Districts of Rajasthan)	
2021	2022	2021	2022	2021	2022	2021	2022
71,304	49,922 -30%	6,987	3,661 -48%	252	198 -21%	78,550	53,792 -32%

Cumulative Paddy Residue Burning events for the Period: 15th September–19th November during the current year and in previous years

Punjab			Haryana			Uttar Pradesh (NCR)			Total (including Delhi and NCR Districts of Rajasthan)		
2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023
70573	48915	34459 (-30% over 2022)	6337	3459	2085 (-40% over 2022)	115	86	118 (+37% over 2022)	77032	52470	36670 (-30% over 2022)



have been undertaken by the concerned state governments/GNCTD through electronic media, social media, print media, Fixing of hoardings, Audio- visual clips on TV, Broadcast of radio jingles, PA system mounted vans, District and state level 'kharifgosthi', 'Nyay panchayat level kharifgosthi', Demonstration camps etc.

Paddy straw management strategies were further deliberated upon in the workshops and seminars organized during 2023 as under:

- i. CAQM in collaboration with MoEF&CC and Punjab Pollution Control Board organized a one-day workshop on "पराली- एकपूँजी" (Parali - Ek Punji)" on 20th February, 2023 at Mohali (Chandigarh) to deliberate upon the utilization of 'पराली' (stubble) as 'एकपूँजी' (resource). The Workshop was also benefitted by the gracious presence of Hon'ble Minister of Environment, Forest and Climate Change, Govt. of India, besides Hon'ble Chief Ministers of the States of Punjab and Haryana, other dignitaries and stakeholders.
- ii. Workshop on paddy straw management strategies held at PAU Ludhiana on 09.06.2023.

7. GRADED RESPONSE ACTION PLAN

The Commission has comprehensively revisited the contours of the GRAP in vogue, towards an effective implementation mechanism and control on the adverse air quality scenario that generally persists in the entire NCR during the peak winter months. The schedule for GRAP was further reviewed by the Commission in 2023 and Direction No. 77 was issued on 06.10.2023.

The Sub-Committee for Operationalization of GRAP has been reconstituted with Member Technical, CAQM as its Chairman and Member Secretary, CAQM, and Senior representatives

from CPCB, DPCC, HSPCB, RSPCB, UPPCB, IMD, IITM, Pune and Maulana Azad Medical College as its members. Regular review meetings are being conducted by the Sub-Committee to monitor the GRAP.

8. GREENING & PLANTATION

The Commission sought comprehensive action plans for Plantation/ Greening to abate air pollution. Major components of the action plans are Greening of Central verges, Greening of open areas along road side/ right of ways, Greening of hotspot areas and other high polluted areas, Afforestation and sustainability of green areas/ saplings. The plantation targets in the NCR States and GNCTD and the achievement are given below:

Targets and achievement for Greening/ Plantation (No of saplings) (including trees, shrubs, bamboo, etc.)

States	Target 2023-24	Plantation till 30.09.2023
Delhi	95,04,390	62,95,077
Haryana (NCR Districts)	98,93,797	70,26,065
Rajasthan (NCR Districts)	25,89,892	15,19,436
Uttar Pradesh (NCR Districts)	1,64,63,497	1,64,63,497
Total	3,84,51,576	3,13,04,075

To effectively use increased green cover as a dust mitigation and air pollution control measure the following has been envisaged:

- a. Expanding the net of "Nagar Van" and "Nagar Vatika", wherever feasible, in urban agglomerations and cities in NCR, including adoption of Miyawaki technique for dense plantation in limited urban spaces.
- b. Mass plantation drives focusing on proper nurturing and better survival rate,

- prioritizing native species and protection of all categories of forest areas.
- c. Target oriented action plans for Greening/ paving of central verges and sidewalks along the entire road network.
 - d. State governments and other institutions were advised to lay emphasis on dense forestation using various techniques including Miyawaki technique, keeping in view small areas available in NCR Delhi. They have been advised to use STP/ ETP treated water for irrigation purpose.
 - e. While interacting with the State governments concerned and major institution of higher education, academic and research institutions in the NCR Region, they have been advised to lay Special emphasis on involving students, faculty members, staff and residents in the plantation drives.

9. ABATEMENT OF NON-POINT DISPERSED POLLUTION

For the abatement of Air Pollution from “Non – Point” dispersed sources, public complaints, dispersed / local sources causing air pollution are flagged to the concerned agency electronically through a mobile application (311 App of MCD) as per the Standard Operating Procedure (SoP). Issues are categorized as short term / long term with focus on expeditious resolution of short-term issues and planning for the long-term issues. A total of 1,67,608 issues have been flagged so far, of which 1,34,875 issues (approx. 80.5%) have since been resolved fruitfully as on 10.10.2023.

10. INTENSIFIED ACTIONS FOR DETERIORATED AIR QUALITY DURING WINTER

The Commission has been continually and closely studying the Air Quality parameters and associated meteorological conditions and necessary directions / orders are being issued by the Commission from time to time taking due cognizance of the prevailing adverse climatic and meteorological conditions advised and projections by IMD. In exercise of the powers conferred under section 11(5) of the CAQM Act, 2021 and in exercise of the enabling provisions made thereunder, the Commission constituted a five –Member “Enforcement Task Force” (ETF), which meets frequently to review and take stock of the ground situation to closely monitor the field level implementation and compliances of the various directions and orders issued by the Commission. Non-conformities / non-compliance in respect of various directions and orders identified by the Flying Squads and are presented before the Enforcement Task Force for detailed deliberations and deciding action against serious violations.

A total of 40 Inspection Teams/ Flying Squads have been constituted for incognito inspections/ surprise checks in various sites across different sectors viz. industry, construction & demolition sites, DG Set operations in commercial/ residential complexes, open waste burning and miscellaneous sources across all the NCR districts of Haryana, Uttar Pradesh, Rajasthan and the NCT of Delhi.

The status of Closure Directions approved by the Commission across different sectors and geographical jurisdictions in the NCR, as on 06.11.2023 from December 2021 is as under:

Total sites inspected	No. of closures direction issued				State-wise closure cases			
	Industry	C&D Sites	DG Sets	Total	Delhi	Har	UP	Raj
15,933	560	296	41	897	141	267	392	97



Such units / activities were later permitted to resume operations by the Commission following due corrective and preventive measures by such units and the details of resumptions as on 06.11.2023 are as under:

Sector-wise Resumption Cases			Total	State-wise Resumption Cases			
Industry	C&D Sites	DG Sets		Delhi	Har	UP	Raj
452	208	37	697	111	195	308	83

R&D PROJECTS:

The Commission for Air Quality Management in NCR and Adjoining Areas with a view to monitor, prevent, control and abate air pollution in Delhi-NCR invited research and development proposals, pilot projects for field demonstration and evaluation of various technology interventions from Scientists/Researchers/ Non-Government Organisations (NGOs)/CBOs/ Consortia/Individuals for improvement of air quality in NCR to be coordinated and proposed by an Academic/Research/ Scientific Institution of repute.

Total 07 proposals were approved for financial assistance by the Commission during the financial year 2022-23. All these projects are underway at various stages.

QUARTERLY REPORTING:

The Commission has developed a reporting mechanism for Quarterly monitoring, to ensure effective enforcement of the air pollution control measures by GNCTD and concerned states in the NCR.

13. GRIEVANCE REDRESSAL AND FACILITATION

The Commission has set up a grievance redressal mechanism for dealing with the complaints/ grievances received. These are examined for

expeditious redress and reply. Regarding, grievances related to the Closure directions issued by the Commission and also for facilitating the resumption of operations, affected entity or general public can meet the officers of the Commission during the designated hours. In addition, public may also meet these officers on any working day as well, with prior appointment.

14. BUDGET ALLOCATION FOR THE FINANCIAL YEAR 2023-24

Budget Allocation made as per the Budget Estimates of MoEF&CC for the Financial year 2023-24 is Rs 17.00 Crore as per details below:

- General: Rs. 13.90 Crore
- Capital: Rs. 0.10 Crore
- Salary: Rs. 03.00 crore

3.2 Central Pollution Control Board (CPCB)

1 Introduction

Under the provisions of The Water (Prevention & Control of Pollution) Act, 1974, the Central Government constituted the 'Central Board for the Prevention and Control of Water Pollution' on September 23, 1974. The name of the Board was amended to Central Pollution Control Board (CPCB) under the Water (Prevention & Control of Pollution) Amendment Act, 1988 (No. 53 of 1988). The Central Pollution Control Board (CPCB) has been entrusted with the added responsibilities of Air Pollution Control since May, 1981 under the provisions of the Air (Prevention and Control of Pollution) Act, 1981. The enactment of the Environment (Protection) Act, 1986, which is the umbrella legislation for enforcement of measures for protection of environment, and several notifications of Rules under the Act widened the scope of activities of the Central Board.

1.2 Important Activities of CPCB

1.2.1 Air Quality Monitoring Network



The following steps have been taken to monitor and improvement of air quality:

1. CPCB has started National Ambient Air Quality Monitoring Programme (NAMP) in 1984. At present, Ambient air quality monitoring network has 1429 stations, covering 511 cities in 28 States and 7 UTs. Out of these total 1429 stations, 931 stations are manual monitoring stations and 498 stations Continuous Ambient Air Quality Monitoring Stations (CAAQMS).
2. CAAQMS is a specialized system that is housed in a temperature-controlled container/room and is equipped for monitoring of ambient air pollutants using different analyzers. The real time data generated through this system is transferred to Central Server and also to digital display board for public viewing. The data of these CAAQMS are being used for generating the daily National Air Quality Index (NAQI) of the cities.
3. Under CAAQMS the Particulate Matter (PM_{10} & $PM_{2.5}$), Sulphur Dioxide (SO_2), Nitrogen Dioxide (NO_2), Ammonia (NH_3), Carbon Monoxide (CO), Ozone (O_3) and Benzene (C_6H_6) are being monitored at all locations. The CAAQM stations are also equipped with sensors to measure meteorological parameters such as Wind Speed, Wind Direction, Ambient Temperature, Relative Humidity, Solar Radiation and Rainfall.
4. Air Quality Index (AQI) is being generated on hourly basis through continuous monitoring stations and displayed on CPCB website. Daily AQI bulletin is released where AQI of 272 cities is available as on date. Out of 131 Non-attainment Cities, AQI is generated for 98 cities with the data generated through CAAQMS.

2 Water Quality Monitoring Network

The following steps have been taken to monitor and improvement of Water quality:

1. CPCB in association with State Pollution Control Boards (SPCBs) and Pollution Control Committees (PCCs) has established water quality monitoring network under National Water Quality Monitoring Programme (NWMP). Network strength has been enhanced to 4484 locations. Total 64 Parameters are monitored under NWMP, including Physico-Chemical & Bacteriological parameters (31), Metals (15) and Pesticides (18)
2. The network comprises of monitoring locations in 28 States and 7 Union Territories (UTs). Monitoring network covers 47% locations on rivers (2108 locations on 642 Rivers), 16% locations on Stagnant water bodies (713 locations on 604 water bodies), 27% locations on Ground Water (1235 locations) and 10% locations on Coastal & Others water bodies (428 locations).
3. Real Time Water Quality Monitoring of River Ganga is carried out at 76 stations (Main stem – 35; Tributary – 32 and drain – 9) for 12 parameters including pH, BOD, DO, Temperature, EC, Chloride, COD, Turbidity, Nitrate, TOC, water level and dept.

2.1 National Mission for Clean Ganga (NMCG) – NamamiGange Programme

1. Three Projects were sanctioned to CPCB under NamamiGange Programme, with a primary emphasis on enhancing the water quality of the Ganga River and improving overall public health. The details are:
 - i Pollution Inventorization, Assessment and Surveillance (PIAS) sanctioned in year 2011 and



- subsequently extended till 2023. The project sanctioned on 24.05.2023 with an amount of Rs 113.85 Crore for three years w.e.f. 01.04.2023.
- ii. Water Quality Monitoring (WQM) Project for River Ganga was sanctioned in year 2013 and extended on 20.06.2020 for six years till 19.06.2026 with an amount of Rs 126.17 Crore.
 - iii. Strengthening of Environmental Regulators (SER) was first sanctioned on 19.06.2013 with an amount of Rs 69.26 Crore and next phase of SER project was sanctioned on 18.02.2022 for 3 years with an amount of Rs 66.21 Crore.
2. Charters have been developed with the objective to facilitate industries to adopt cleaner technology waste minimization practices as well as upgradation of effluent treatment facility in the five major industrial sectors like Pulp & paper, Distillery, Sugar, Textile and Tannery which together contribute effluent discharge of about 70% and BOD load of 90% of total Industrial pollution discharge by GPIs in Ganga Basin.
3. Charter implementation has yielded remarkable reductions in specific freshwater consumption and effluent discharge across various sectors:
- i. KL/MT in 2016-17 to 9.84 KL/MT in 2022-23, marking a 41.8% reduction. Chemical Recovery Plant (CRP) has been installed in Pulp & Paper mills and Zero Black Liquor discharge achieved in Pulp & Paper sector.
 - ii. In Sugar sector, specific freshwater consumption decreased from 299 KL/MT in 2016-17 to 79.58 KL/MT in 2022-23, a 73.38% reduction.
 - iii. In Textile sector, specific freshwater consumption went down from 141 KL/MT in 2019-20 to 33.47 KL/MT in 2022-23, resulting in a 76.26% reduction.
 - iv. In Distilleries, in the Ganga Basin achieved Zero Liquid Discharge. Specific freshwater consumption reduced from 15 KL/KL in 2016-17 to 5.14 KL/KL in 2022-23, marking a 65.73% reduction.
 - v. In Distilleries, in the Ganga Basin achieved Zero Liquid Discharge. Specific freshwater consumption reduced from 13 KL/KL in 2016-17 to 5.59 KL/KL in 2021-22, marking a 57% reduction.
4. Water Quality of river Ganga is monitored manually at 97 locations and it is observed that:
- i. No incidence of coloured water discharge and fish mortality since 2017 in river Ganga.
 - ii. Entire stretch is meeting bathing criteria for pH (6.5-8.5), DO (≥ 5 mg/l), BOD (≤ 3 mg/l) except marginal exceedance in terms of BOD (3.2-4.5 mg/l) in two stretches in Uttar Pradesh (a) Farrukhabad to Dalmau, Rai Bareilly & (b) D/s Mirzapur to Tarighat, Ghazipur (except U/s Varanasi, Vishwa Sundari Bridge).
 - iii. Stretch from Gangotri (Uttarakhand) to Kachhlaghat, Aligarh (Uttar Pradesh) is meeting the bathing water quality criteria.
 - iv. River Ganga is not meeting bathing water quality criteria in terms of Fecal Coliform (≤ 2500 mg/l) in two



stretches in Uttar Pradesh (a) U/s Kanpur to Kanpur D/s (except Bathing Ghat, Gola Ghat) & (b) D/s Mirzapur to Tarighat, Ghazipur (except U/s Varanasi, Vishwa Sundari Bridge), entire stretch of Bihar except Arrah Chapra Road Bridge, U/s Doriganj and entire stretch of West Bengal except three locations namely Khagra, Behrampur, Nabadip ghoshpara near monipurghat and Tribeni near burning ghat.

3 National Ambient Noise Monitoring Network

The following steps have been taken to monitor and improvement of noise pollution:

1. The Central Pollution Control Board in association with State Pollution Control Boards has established National Ambient Noise Monitoring Network (NANMN) in 7 Metro-cities (Bengaluru, Chennai, Delhi, Hyderabad, Kolkata, Lucknow and Mumbai).
2. A total of 70 Noise Monitoring Stations are operational in these Metro-cities (10 Stations in each metro-city).

4 Important steps taken for industrial pollution control

1. To promote self-regulation among highly polluting industries (17 categories), Grossly Polluting Industries and Common facilities i.e. Incinerators of Common Hazardous Waste Treatment Storage and Disposal Facilities (TSDFs), Incinerators of Common Bio-medical Waste Treatment and Disposal Facilities (CBWTFs), Common Effluent Treatment Plants (ETPs) and Sewage Treatment Plants (STPs), CPCB initiated Online Continuous Emission & Effluent Monitoring System (OCEMS). Currently about 6000 Industries have

installed OCEMS & providing online data through 39000 devices on 15-minute basis to CPCB, SPCBs & PCCs

2. Based on the Pollution Index (PI), industries have been categorized into red, orange, green & white category. PI is a function of water pollution, air pollution, hazardous waste generation, fuel consumption and amount of waste water generation. So far, 256 industrial / non-industrial sectors (Red: 62, Orange: 91, Green: 65 & White: 38) have been categorized based on revised criteria of Pollution Index.
3. Based on Polluter pay Principle, CPCB / SPCBs started imposing Environmental Compensation against the industries, common facilities which are violating the norms/ standards for strict compliances.

5 Environmental Quality Monitoring of Polluted Industrial Areas (PIAs) for Evaluation of Comprehensive Environmental Pollution Index (CEPI)

1. Comprehensive Environmental Pollution Index (CEPI) is used to characterize quality of environment at a given location following the algorithm of source, pathway and receptor. CEPI relates to evaluation of environmental quality in industrial area based on air, surface water and groundwater pollution as well as based on industries and health statistics. The industrial areas have been categorised as given below:
 - i Areas having CEPI scores 70 and above are considered as Critically Polluted Area (CPA)
 - ii Areas having CEPI scores between 60 and 70 are considered as Severely Polluted Area (SPA)
 - iii Areas having CEPI scores less than



60 are considered as Other Polluted Area (OPA).

2. Using the CEPI score, CPCB has graded the 88 identified industrial clusters across the country (in 2009) and 43 industrial clusters in 17 states with CEPI score of 70 and above were identified as critically polluted areas (CPAs).
3. Following the revised CEPI-2016 methodology, an assessment of 100 Industrial Areas was carried out during 2018 and based on the assessment, 38 Industrial Areas were identified as critically polluted areas (CPAs) and 31 Industrial Areas as severely polluted areas SPAs.
4. The concerned SPCBs/PCCs prepared the Action Plans for improvement of environmental quality in these 69 identified areas to bring down CEPI scores and the same are at different stages of implementation.

6 Status of Court / Tribunal Cases

7. The Court/Tribunal cases filed by the individuals, entity, organizations, etc. before all courts of India where CPCB is a party Respondent has been increasing over a period of time for protection of the Environmental Pollution. The number of cases handled by Law Division during Financial Year 2022-23 are as under:

Particulars	Supreme Court	High Courts	NGT Principal Bench	NGT Zonal Benches
As on March, 2022	178	315	156	256
New cases during 2022-23	82	55	127	132

Disposed of during 2022-23	41	25	66	92
As on March 2023	219	345	217	296

7 Budget Allocation for Financial Year 2023-24

Budget allocation as per Budget Estimate of MoEF&CC for Financial Year 2023-24 is **Rs.105.00 Crore, as per RE 2023-24**, the details are:

- a. General : Rs. 30.00 Crore
- b. Capital : Rs. 03.00 Crore
- c. Salary : Rs. 72.00 Crore

8 Waste Management

E-Waste: There are 569 authorized dismantlers/recyclers of E-Waste in the country having annual processing capacity of 17,90,348 TPA. There are 3430 Producers and 124 Recyclers, who have been granted registration at E-Waste EPR portal under E-Waste (Management) Rules, 2022

Hazardous Waste: As per the inventory, about 12.35 Million MT of hazardous waste is generated, out of which about 7.59 Million MT i.e. 61.4% of overall hazardous waste generated has been either recycled or utilized. Out of 7.59 Million MT, about 1.64 Million MT of hazardous waste has been recycled, 2.45 Million MT of HW has been Co-processed and about 3.51 Million MT of hazardous waste was utilized.

CPCB has issued 84 Nos of Standard Operating Procedure (SOP) for utilization of about 55 types of hazardous waste under Rule 9 of HOWM Rules, 2016. During the year the CPCB has prepared 07 new SoPs for wastes namely Spent Aluminum Chloride, Calcium Hypochloride, Ammonia Liquor, Spent Sulphuric acid, Caffeine Liquor, ETP sludge of Ceramic industry & Galvanizing units) and revised 05 existing SoPs.



Apart from the above, CPCB has also prepared the following 02 guidelines during the year 2022-23:

1. Guidelines for Handling and Management of Flue Gas Desulphurisation (FGD) Gypsum
2. Guidelines for Environmentally Sound Facilities for Handling and Scrapping of End-of-life (ELVs) (Revised)

Plastic Waste: There are 2232 Brand-Owners (BO), 3639 Producers and 25472 Importers have been issued registration having Extended Producer's Responsibility (EPR) target of 32.84 Lakh Tons for FY 2022-23. CPCB has framed the Standard Operating Procedure (SOP) and developed the online portal for certification of compostable Manufacturers/Sellers.

As per provision 4 (h) of PWM Rules, 2016, certificates have been issued to 305 compostable Manufacturers / Sellers. The certified capacity has increased substantially, from nil in 2016 to approx. 3.6 Lakhs.

Bio Medical: There are 215 no. of CBWTFs used for treatment and disposal of biomedical waste in addition to this 35 CBWTFs are under construction which may be utilised at later stage for treatment of biomedical waste. At present, cumulative treatment and disposal capacity of 1205 MT/day that includes Incineration capacity of 771 MT/day and autoclave capacity of 434 MT/day that shows that available capacity is more than the generation of biomedical waste that is 764 MT/day.

Ash Management: Ash generated by the coal and lignite based thermal power plants is mainly utilized in cement plants, brick manufacturing units, road and flyover embankments, reclamation of low lying areas, and back filling of abandoned mine voids. Accordingly, the

percentage of utilization of ash generated by the coal and lignite based thermal power plants has increased from 59.81% in 2015-16 to 94.97% in 2022-23, against the total ash generation of 285.62 million tons corresponding to a total installed capacity of 2,11,830.5 Mega Watts.

CPCB has developed an Ash Portal for uploading of ash generation, utilization and storage data periodically by the coal and lignite based thermal power plants. The SPCBs/PCCs, being enforcement and monitoring authority, also have access to the Ash Portal for effective enforcement and monitoring of compliance of the provisions of the Ash Notification.

Battery Waste: Battery Waste Management (Amendment) Rules, 2023 has been notified on 25th Oct., 2023. Accordingly, CPCB has developed Registration Modules for Producers & Recyclers of waste batteries. CPCB has granted registration to 1,635 producers and 10 Recyclers till date.

Tyre Waste: CPCB has developed Registration Modules for Producers & Recyclers of waste tyres. Accordingly, there are 96 producers and 27 recyclers, who have been granted registration under Waste Tyre EPR portal.

8.1 Industrial CAAQMS Portal

Sameer App was created by CPCB to create public awareness about air quality and provide a platform for grievances redressal. Since its launch, it has been downloaded by 2,13,700 users on Android and iOS platforms.

This App provides hourly updated information on AQI for more than 270 cities using real time data from 520+ stations in 31 States/UTs. It can be readily accessed using the interactive map format. It provides real-time AQI, pollutant-wise sub-index and monthly calendar depicting overview of AQI for each monitoring location. Daily AQI bulletin published by CPCB is uploaded

on the App at 4 PM. The App also issues advisories through push notifications to the public as per prevailing air quality levels. This CAAQMS data is made available to public and various agencies through the CPCB CCR Portal (<https://airquality.cpcb.gov.in>).

Sameer App provides a facility for lodging grievances related to air pollution. The complainant can upload photographs along with complaint, and geo-coordinates are automatically captured for pinpointing exact location of source of air pollution for facilitating prompt action by concerned agencies. The complaints are automatically forwarded to implementing agencies depending on the location of the complaint. For Delhi-NCR, more than 40 agencies responsible for mitigation of air pollution are configured on the App which is well integrated with complaint management system of implementing agencies.

Since November 2018, so far around 40K+ public complaints were received on Sameer App. Out of these about 80% complaints (32K+) were resolved through coordination with more than 42 implementing agencies which also have Zonal or Regional offices sums up to more than 100 agencies in Delhi NCR

As social media is now the dominant digital avenue for two-way communication hence, CPCB has created Social Media Handles on different Social Media Platforms to use them for dissemination of information on pollution related issues, creating awareness on functions, schemes and activities of CPCB and giving citizens the facility to reach out to CPCB for raising air pollution related queries. Presently, CPCB is reachable at Twitter, Facebook, Instagram, Koo and YouTube.

Social Media Accounts are also being used to redress public complaints on air pollution in

Delhi NCR, wherein public grievances received on CPCB account are being forwarded to the handles of concerned local agencies. The outcome of redressal is also monitored.

9 Industrial CAAQMS Portal

Industrial Air Quality Management Portal has been developed to collect, store, and analyse data from Automatic Ambient Air Quality Monitoring System installed in industrial premises. The portal supports visualization of ambient air quality data in graphical as well as tabular formats.



Awarding Indore City under Swachh Vayu Sarvekshan on Swachh Vayu Diwas held on 7th September, 2023 in Bhopal



Secretary, EF&CC addressing 08 State Govt/UTs located in Indo-Gangetic Plain in Workshop in held on 1st May, 2023



3.3 Hazardous Substances Management

Hazardous Substances Management (HSM) Division is the nodal point in the Ministry for management and safe use of chemicals and wastes. The HSM Division is involved in formulation and administration of rules pertaining to wastes and chemicals. The Division is also the nodal point for multilateral conventions related to wastes and chemicals representing Government of India.

Major programmes/activities are as follows:

Solid Waste Management Rules, 2016:

Solid Waste Management Rules, 2016 were notified on 8th April, 2016 and its applicability has been extended beyond municipal areas to urban agglomerations, census towns, notified industrial townships, etc. The source segregation, door to door collection of waste has been mandated to channelize the waste for useful purposes such as recovery, reuse and recycle.

E-Waste (Management) Rules, 2022:

E-Waste (Management) Rules, 2022 has been notified on 2nd November, 2022 which covers 106 Electrical and Electronic Equipment (EEE) including Solar PV waste. The Rules are a transformative step towards implementation of the announcement made by Hon'ble Prime Minister to promote Circular Economy. New rules provide Extended Producer Responsibility (EPR) regime for e-waste recycling according to the needs of the current scenario.

Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016:

The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 were notified on 4th April, 2016 incorporating waste management hierarchy in the sequence of priority i.e. prevention, minimization, reuse, recycling, recovery, co-processing

and safe disposal. These rules shall apply to every occupier of the facility who is engaged in handling, generation, collection, storage, packaging, transportation, use, treatment, processing, recycling, recovery, pre-processing, utilization, offering for sale, transfer or disposal of hazardous and other wastes.

Bio-Medical Waste Management Rules, 2016:

Bio-Medical Waste Management Rules, 2016 were notified with the objectives to improve segregation, collection, processing, treatment and disposal of infectious bio-medical waste in an environmentally sound and safe manner. These rules are applicable to all persons who generate, collect, receive, store, transport, treat, dispose, or handle bio medical waste in any form including hospitals, nursing homes, clinics, dispensaries, veterinary institutions, animal houses, pathological laboratories, blood banks, AYUSH hospitals, clinical establishments, research or educational institutions, health camps, medical or surgical camps, vaccination camps, blood donation camps, first aid rooms of schools, forensic laboratories and research labs.

Plastic Waste Management Rules, 2016:

Plastic Waste Management Rules, 2016 were notified on 18th March, 2016. These rules apply to the manufacture, import stocking, distribution, sale and use of carry bags, plastic sheets or multi-layered packaging etc. The jurisdiction of applicability of the rules have been expanded from municipal area to rural areas as well. For the first time, responsibility of waste generators has been prescribed. Individual and bulk generators like offices, commercial establishments, industries are to segregate the plastic waste at source, handover segregated waste, pay user fee as per bye-laws of the local bodies.

Construction & Demolition (C&D) Waste

**Management Rules, 2016:**

For the first time the Government notified Construction & Demolition Waste Management Rules, 2016. The rules apply to everyone who generates construction and demolition waste such as building materials, debris, and rubble waste resulting from construction, re-modelling, repair and demolition of any civil structure of individual or organization or authority. The rules mandate for collection, transportation, storage and re-processing of C&D waste. Emphasis was given on recycling/ recovery of valuable materials and C&D waste as 'RESOURCE'. Scope of the rules includes construction & demolition/ renovation of buildings, excavation, road/ flyover/ underpass/ bridge construction, laying utility pipelines etc. Timeline were prescribed for creation of physical reprocessing facility at all places for recycling C&D waste.

Battery Waste Management Rules, 2022:

Ministry of Environment, Forest and Climate Change, Government of India published the Battery Waste Management Rules, 2022 on 24th August, 2022 to ensure environmentally sound management of waste batteries. New rules replace Batteries (Management and Handling) Rules, 2001. The rules cover all types of batteries, viz. Electric Vehicle batteries, portable batteries, automotive batteries and industrial batteries. The rules function based on the concept of Extended Producer Responsibility (EPR) where the producers (including importers) of batteries are responsible for collection and recycling/refurbishment of waste batteries and use of recycled materials from wastes into new batteries.

Ash utilisation notification, 2021:

The Ministry of Environment, Forest and Climate Change has reviewed the existing fly ash notification, 1999 and issued new notification on 31st December, 2021 with an aim to achieve 100%

ash utilisation generated from coal and lignite based thermal power plants. The notification mandates thermal power plants to achieve 100% utilisation of current generation of ash in 3-5 year cycle and legacy ash in 10 years. The eco-friendly purposes for utilisation of ash have been prescribed. Environmental compensation is to be imposed on thermal power plants and other user agencies for non-compliance of provisions. Users agencies involved in road construction, roads and flyover embankments laying, construction of dams, mining, manufacture of ash based products, building construction have been mandated to use ash or ash based products located within 300 km radius of thermal power plants.

Mission Circular Economy

- Hon'ble Prime Minister, Shri Narendra Modi, in his address to the nation on the occasion of 75th Independence Day on 15th August, 2021 had highlighted India's action on 'Mission Circular Economy'.
- Circular Economy Action Plans for 10 waste categories (Lithium ion batteries; E-waste; Toxic and hazardous industrial waste; Scrap metal (ferrous and non-ferrous); Tyre and Rubber; End of Life Vehicles; Gypsum, Used Oil, Solar Panels and Municipal Solid Waste have been finalized, and are under implementation.

Ecomark:

The Ecomark Scheme was launched by the Ministry of Environment and Forest in G.S.R. 85(E) dated 21.02.1991, as a tool for the consumers to pursue sustainable consumption patterns as well as for the industry to implement an environment-friendly processes or production methods. Under this Scheme, Ecomark criteria for 17 product categories have been notified viz. Soaps and Detergents; Paper; Food Items; Lubricating oils; Packaging materials/ Package;

Architectural Paints and Powder Coatings; Batteries; Electrical and electronic goods; Food Additives; Wood Substitutes; Cosmetics; Aerosols and Propellants; Plastic Products; Textiles; Fire-extinguisher; Leather; and Coir & Coir Products.

Central Sector Scheme 'Creation of Management Structure for Hazardous Substances':

HSM Division promotes environmentally sound management of wastes and chemicals through innovative solutions and pilot projects, capacity building, awareness and training for sustainable management of wastes and Hazardous Substances. Various projects were sanctioned by HSM Division under the earlier central sector scheme.

S. No.	Organisation	Purpose	Amount released
1.	M/s Climate Collective Foundation	India Plastic Challenge-Hackathon, creating awareness on plastic pollution and its solutions.	Rs.14,04,000/- out of sanctioned amount Rs.17,55,000/-
2.	M/s Kerala Enviro Infrastructure Ltd.	Setting up of Common Bio-Medical Waste Treatment And Disposal Facility (CBWTF), District Kochi, Kerala.	Rs. 90,00,000/- out of sanctioned amount Rs.90,00,000/-
3.	Bamdev Smart Solutions Pvt. Ltd.	Setting up of CBWTF in Banda, Uttar Pradesh	Rs. 20,00,000/- out of sanctioned amount Rs. 50,00,000/-
4.	Manipur Pollution Control Board	Setting up of TSDF and CBWTF, West Imphal District, manipur	Rs. 2,01,00,000/- out of sanctioned amount Rs. 3,35,00,000/-
5.	Mizoram Pollution Control Board	Setting up of CBWTF, Aizwal, Mizoram	Rs. 80,00,000 out of sanctioned amount Rs. 2,00,00,000/-
6.	Goa State Pollution Control Board	Setting up of TSDF of Hazardous waste	Rs. 82,50,000/- out of sanctioned amount Rs. 3,00,00,000/-
7.	M/s Manav Rachna University	"Wastes to Resources"- An awareness campaign for Waste Management, in Haryana, Faridabad	Rs. 8,00,000/- out of sanctioned amount Rs. 10,00,000/-
8.	M/s Inclusive Recycling Foundation	Innovative awareness and training program to promote safe and circular e-waste management	Rs. 4,00,000/- out of sanctioned amount Rs. 10,00,000/-
9.	M/s Pt. Deen Dayal Upadhyay Smriti Sansthan	Plastic waste management awareness campaign in Jaipur and Dausa, Rajasthan	Rs. 6,42,800/- out of sanctioned amount Rs. 16,07,000/-
10.	M/s Sri Venkateshwara University	Awareness programmes on solid waste management in rural areas (10 villages) of Tirupati, AP	Rs. 10,00,000 out of sanctioned amount Rs. 10,00,000/-



S. No.	Organisation	Purpose	Amount released
11.	M/s Chintan M/s Environmental Research and Action Group	Enabling ULBs to use social media to implement PWM Rules 2021, New Delhi	Rs. 5,99,896/- out of sanctioned amount Rs. 14,99,74,000/-
12.	M/s Vibhavari foundation	Creating awareness regarding SUP ban and zero waste in 15 villages of district Dewas, M.P.	Rs. 4,00,000/- out of sanctioned amount Rs. 10,00,000/-
13.	MyGov	Setting up and engaging Social Media team with MoEF&CC on creating awareness on environmentally sound management	Rs. 38,00,000/- out of sanctioned amount Rs. 95,00,000/-
14.	Centre for Development of Advanced Computing (CDAC), Delhi	Online e-waste material balance system for handling of e-waste management cycle	82,54,500/- out of sanctioned amount Rs. 5, 87,74,000
15.	M/s Mother Earth Environ Tech Pvt. Ltd.	Setting up of Treatment, Storage and Disposal Facility (TSDF) of Hazardous Waste in District Ramanagara, Karnataka.	Rs.1,32,49,300/- out of sanctioned amount Rs.3,97,48,000/-

The following grant-in-aid released to institutions and organisations including NGOs:

Multilateral Agreements: The Division is also the nodal point for the following multilateral agreements

Basel Convention

The Convention regulates transboundary movement of hazardous wastes and disposal (import and export) and prescribes environmentally sound management of wastes domestically. The Convention also restricts trade on plastic waste. India ratified the Convention in June, 1992. To implement the provisions of transboundary movement of hazardous waste, the Ministry has established a Prior Informed Consent (PIC) mechanism for regulating import and export of hazardous waste under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016.

Stockholm Convention

Stockholm Convention is a global treaty to

protect human health and the environment from Persistent Organic Pollutants (POPs). The Convention obligates all parties to eliminate production and use of intentionally produced POPs, eliminate unintentionally produced POPs where feasible, and manage and dispose of POPs wastes in an environmentally-sound manner. India banned 12 chemicals (dirty dozen) during its ratification of the Convention in January, 2006. Subsequently, 7 more chemicals have been ratified in October, 2020. These chemicals include pesticides, industrial chemicals and unintentionally produced POPs.

To implement the obligations, the Ministry notified the Regulation of Polychlorinated Biphenyls Order, 2016; and Regulation of Persistent Organic Pollutants Rules, 2018 to prohibit production, import and use of hazardous chemicals. The Ministry has prepared National Implementation Plan for 12 POPs.

Rotterdam Convention

The objective of the Rotterdam Convention is to



promote shared responsibility and cooperative efforts among parties in the international trade of chemicals to protect human health and the environment, and contribute to the environmentally sound use of chemicals. The Prior Informed Consent (PIC) procedure is a mechanism for formally obtaining and disseminating the decisions of importing Parties as to whether they wish to receive future shipments of those chemicals listed in Annex III of the Convention and for ensuring compliance with these decisions by exporting Parties.

India ratified the convention in May, 2005. A total of 52 chemicals are listed in Annex III includes pesticides and industrial chemicals. India has established the mechanism for Prior Informed Consent for import and export of hazardous chemicals. Designated National Authorities (DNA) viz. Ministry of Chemical Fertilizers and Ministry of Agriculture and Family Welfare have been nominated for grant of PIC for industrial chemical and pesticides, respectively.

Minamata Convention

The Minamata Convention is a global legally binding instrument with the objective to protect human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds. The Convention addresses the life cycle of mercury, including supply, trade, mercury-added products, industrial processes using mercury, artisanal and small-scale gold mining, emissions to air, releases to land and water, interim storage, waste and contaminated sites. India ratified the Convention in June, 2018.

The Convention provides timelines to phase out certain mercury added products and manufacturing processes involving mercury. India has registered extension of 5 years for meeting the timelines for phasing out mercury

added products and one manufacturing process. India's interests of use of mercury in Ayurveda, Siddha and Unani (ASU) medicines and traditional/religious practices have been protected under the Convention. India has established a mechanism for Prior Informed Consent for import and export of mercury to meet its obligations.

Strategic Approach to International Chemicals Management (SAICM):

SAICM is a global policy framework to promote sound management (production and use) of chemicals throughout their life-cycle to minimise significant adverse effects on human health and environment.

To promote safe use of chemicals, Ministry has notified a Regulation on lead content in Household and Decorative Paints Rules in November, 2016 to prohibit manufacture/ trade/ import/ export household and decorative paints with Lead or Lead compounds in excess of 90 parts per billion.

Externally funded projects:

HSM Division implements the following externally funded projects in collaboration with respective agencies in the field of chemicals and wastes:

- i. GEF-UNIDO: Environmentally Sound Management of Poly Chlorinated Biphenyls (PCBs) in India;
- ii. GEF-UNIDO: Development and promotion of non-POP alternatives to DDT;
- iii. UNEP: India-Norway Marine Pollution Initiative;
- iv. UNEP: Partnership for Action on Green Economy (PAGE);
- v. GIZ: Circular Economy Solutions (CES) preventing Marine Litter in Ecosystems;



- vi. EU: EU-Resource Efficiency Initiative (EU-REI), and SWITCH-Asia Programme;
- vii. Development of Institutional and Regulatory Framework for Implementation of Minamata Convention in India

Activities undertaken:

- i. The following amendments to Plastic Waste Management Rules, 2016 were notified during 2023-2024:
 - a) Notified Plastic Waste Management Amendment Rules, 2023 for effective implementation of EPR Guidelines and removal of difficulties, on 27.04.2023.
 - b) Plastic Waste Management (Second Amendment) Rules, 2023 notified on 30.10.2023
- ii. Fifth meeting of National Taskforce on elimination of single use plastic items and effective plastic waste management was held on 22nd August 2023.
- iii. Plastic packaging waste, which is not covered under the phase out of identified single use plastic items, is covered under Guidelines for Extended Producer Responsibility notified on 16th February 2022.
- iv. The following IT based tools are being used for effective monitoring:
 - a) National Dashboard on Elimination of SUP and PWM,
 - b) EPR Portal for Plastic Packaging,
 - c) Mobile App for SUP Grievance Redressal,
 - d) Compliance Monitoring module for banned SUP items.

- v. All modules of Centralized online portal for Extended Producer Responsibility for plastic packaging are operational. As on 5th January 2023 the number of registered obligated entities is given below (i) Registered PIBOs: 33530 (ii) Registered Plastic Waste Processors: 2327

- vi. The total plastic packaging of around 3.2 million tonnes been covered under EPR for the year 2022-23, till date. The quantum of plastic packaging waste covered under EPR is a significant proportion of plastic packaging waste being generated in the country. EPR certificates equivalent to 46.11 lakh tonnes of plastic packaging waste have been generated by registered Plastic Waste Processors, of which 33.49 lakh tonnes of EPR certificates have been transferred online to the registered PIBOs.
- vii. National Expo on Eco-Alternatives to single use plastic and start up conference 2022 held on 26th and 27th September 2022 in Chennai. More than 150 manufacturers of eco-alternatives from across the country participated in the Expo. The eco-alternatives included material made from sea-weed, bagasse, rice and wheat bran, rice stubble, plant and agricultural residue, banana and areca leaves, jute and cloth.
- viii. The Ministry has constituted technical committees for preparing draft proposals for incorporation in rules for Solid Waste Management, and liquid waste management for effective implementation, strengthen circularity in solid and liquid wastes, and strengthen monitoring through IT based tools.
- ix. Battery Waste Management (Amendment) Rules, 2022 was notified on 25th October, 2023 to ensure environmentally sound management of waste batteries.



- x. Import of approximately 117 MT of mercury has been permitted by providing 12 Prior Informed Consents under Minamata Convention.
- xi. Key achievements under GEF funded project 'Development of alternatives to DDT': Manufacturing facility for 5 million Long Lasting Insecticidal Nets (LLINs)/year constructed and commissioned at HIL; around 15.8 Lakh LLINs manufactured under the project sold to MoH&FW, Indian Airforce, CRPF, public sector organizations, State Governments; 5 neem based pesticide formulations developed, tested and requisite process technology standardized and scaled up to pilot plant level by IPFT; Bt based bio-pesticides technology transferred to HIL by ICMR-VCRC.
- xii. Key achievements under GEF funded project 'Environmentally sound management of PCBs in the country': Around 650 MT of PCB contaminated oil de-chlorinated in the mobile facility by CPRI, static facilities of Pure PCB destruction by PLASCON, and decontamination of equipment/porous material and PCB contaminated oil have been established.
- xiii. Project Cooperation Agreement signed for the Specific International Programme (SIP) project under Minamata Convention on Mercury 'Development of Institutional and Regulatory Framework for Implementation of Minamata Convention in India'.
- xiv. India has negotiated its position and protected interests in amendment of Minamata Convention on Mercury for phase-out date of Mercury Added Products such as compact and linear fluorescent lamps, switches and relays, cosmetics, dental amalgam and adoption of additional measures for phase-down of dental amalgam during the fifth meeting of the Conference of the Parties (COP-5) held on 30th October to 3rd November, 2023 in Geneva, Switzerland.
- xv. Ministry has notified amendment in HOWM Rules, 2016 on 12th July, 2023 to retain 5 % of unrepairable used electrical and electronic assemblies (Base No. B 1110), by weight in the country and the same shall be sent to authorised recyclers only in accordance with these rules and the E-Waste (Management) Rules, 2022
- xvi. Ministry has also issued notification w.r.t amendment in HOWM Rules, 2016 on 18th September, 2023 to notify Extended Producer Responsibility (EPR) for "Used Oil
- xvii. E-Waste (Management) Rules, 2022 vide notification dated 30th January, 2023 to exempt solar photo-voltaic modules or panels or cells and medical equipment from requirement of provisions of Rule 16 (1) being uses of cadmium & lead and lead respectively beyond prescribed limit.
- xviii. Jan Vishwas (Amendment of Provisions) Act, 2023 was amended on 18th October, 2023.
- xix. To take ahead the 'LiFE' - 'Lifestyle for Environment' movement announced by the Hon'ble Prime Minister in 2021:
 - Throughout the month of May 2023, over 2000 LiFE-related events focusing on action and awareness have been organized across India including offices and Companies and was uploaded by HSM in Meri LiFE Portal
 - HSM Division had actively participated in Mission Life events



focusing on plantation, awareness and the related details are uploaded in as a build up to June 5- World Environment Day, Ministry launched Portal/ mobile application called “Meri LiFE” to catalyze action for climate

xx. The Indian delegation participated in the sixteenth meeting of the Conference of the Parties to the Basel Convention (BC COP-16) held in Geneva, Switzerland (Geneva International Conference Centre (CICG)) from 1st -12th May 2023.

xxi. **Meeting of Intergovernmental Negotiations Committee (INC) for development of International legally binding instrument on plastic pollution, including in the marine environment:**

Second session of the Intergovernmental Negotiating Committee (INC-2): INC-2 took place from 29th May to 2nd June 2023 at the United Nations Educational, Scientific and Cultural Organization (UNESCO) Headquarters in Paris, France. The Indian delegation pushed for having decision-making at INC by consensus. The Indian delegation put forth the following major points during negotiations: (i) There should be no targets with respect to plastic production and focus should be on reduction of plastic pollution, (ii) Country driven approach needs to be followed for national action plans, (iii) Scope of international legally binding instrument should as per United Nations Environment Assembly resolution 5/14, (iv) Rio principles including Common but Differentiated Responsibility as well as national circumstances and capabilities need to be followed.

xxii. **Third session of the Intergovernmental Negotiating Committee (INC-3):** INC-3 took place from 13th to 19th November 2023 at the UN Environment Programme (UNEP) Headquarters in Nairobi, Kenya.

The Indian delegation provided textual submissions on different elements of Zero draft including on scope, objective, principles especially Common but Differentiated Responsibility as well as national circumstances and capabilities, having binding production caps on plastic polymers and binding targets concerns relating to trade restrictions and other related matters, means of implementation, availability, accessibility, affordability including cost implications of alternative technologies, country driven action plans and that obligations shall be directly linked with availability of adequate and predictable financial and technical resources for developing countries and this should be made part of substantive provisions. It was emphasized that the scope of the instrument should be circumscribed as per UNEA 5.2 resolution.

xxiii. The Green Credit Rules have been notified by the Government of India on 12th October 2023 under the Environment Protection Act, 1986, as mechanism to encourage voluntary plantation activity across the country, resulting in award of Green Credits and also to build an inventory of land which can be utilised for afforestation programmes.

xxiv. MoEF&CC has published Draft Ecomark Certification Rules, 2023 vide S.O. 4441(E) dated 11th October, 2023 for public consultation which aims to strengthen the institutional structure and implementation of the Ecomark Scheme. The ‘Ecomark

Certification Rules, 2023' will replace the existing Ecomark notification.

- xxv. Under the G20 India Presidency 2023, theme of 'Encouraging Resource Efficiency and Circular Economy' was one of the key tracks of the ECSWG.

RECE Theme had four sub-themes on the topics (1) Extended Producer Responsibility (EPR), (2) Circular Bioeconomy, (3) Circularity in Steel, and (4) Establishment of industry led Resource Efficiency Circular Economy Industry Coalition

Presidency documents on 03 sub-themes of (i) Circular Economy in Steel Sector, (ii) Circular Bioeconomy, (iii) EPR for CE were prepared.

- i. Presidency document 'Knowledge Exchange on Circular Economy in Steel Sector' highlights four key strategies to transition towards a sustainable steel sector through resource efficiency and circular economy viz. (i) improving material efficiency, (ii) steel scrap recycling, (iii) improving efficiency of the steel production process, and (iv) accelerating transition towards renewables based steel production.
- ii. Presidency document 'Knowledge Exchange on EPR for Circular Economy' reflects a compilation of the different EPR approaches adopted by various countries, which can be leveraged by policy makers in framing and implementing EPR policies in their respective countries.
- iii. Presidency document 'Knowledge Exchange on Circular Bioeconomy' identifies opportunities, policies, innovations, best practices, and

successful interventions, to promote utilization of biogenic waste streams including municipal and industrial waste, agricultural residue, and non-food crops from degraded lands.

The 03 (three) Presidency documents and the 'Resource Efficiency and Circular Economy Industry Coalition' were released/launched during the 4th ECSWG and Ministerial Meeting held on 26th – 28th July, 2023.

The 'Resource Efficiency and Circular Economy Industry Coalition' was launched by Hon'ble Minister Shri Bhupender Yadav. This industry-led coalition aims to foster greater company-to-company collaboration, build advanced capabilities across sectors and value chains, bring learnings from diverse and global experiences of the coalition members, and unlock on-ground private sector action to enhance resource efficiency and accelerate circular economy transition.

3.4 Policy and Law

Name of the Scheme/ Programme- No scheme is run by the Division. However, establishment and administrative issues of the National Green Tribunal are dealt in this Division.

Brief Introduction and Objective-

The Policy and Law (P&L) Division deals with the administration/ establishment matters of the NGT; framing of NGT Recruitment Rules/ Amendments in the NGT Act and NGT Recruitment Rules; coordination with the Ministry of Law & Justice and handling of court cases in the Supreme Court of India, various High Courts and NGTs.

The P&L Division handles the administrative issues of NGT while the ESZ and CP Divisions are administrative-in-charge of Dahanu Taluka Environment Protection Authority and Loss of



Ecology Authority, respectively. The Division is allocated funds under the Budget Head “National Green Tribunal” and the budget under this is further allocated to –

- National Green Tribunal;
- Grants-in-Aid to Loss of Ecology Authority, Chennai, and
- Grants-in-Aid to Dahanu Taluka Environment Protection Authority, Ahmedabad.

3.5 National Green Tribunal (NGT)

The National Green Tribunal (NGT) was set up on 18th October, 2010 under the NGT Act, 2010 for the purpose of effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources including enforcement of any legal right relating to environment and giving relief and compensation for damages to persons and property and for matters connected therewith or incidental thereto.

The Tribunal has five places of sitting i.e., the Principal Bench at New Delhi and Zonal Benches at Pune, Kolkata, Bhopal and Chennai. As per Section 4 (1) of NGT Act, 2010 the Tribunal shall consist of (a) one full time Chairperson, (b) not less than ten but subject to maximum of twenty full time Judicial Members as the Central Government may, from time to time, notify and (c) not less than ten but subject to maximum of twenty full time Expert Members, as the Central Government may, from time to time, notify. Hon’ble Mr. Justice Prakash Shrivastava, former Chief Justice, Calcutta High Court is appointed as Chairperson, NGT w.e.f. 21.8.2023.

Legal Monitoring Cell (LMC)-

A Legal Monitoring Cell set up in the Policy & Law Division monitors the progress of court cases and also acts as an effective coordinator with various Divisions of the Ministry regarding court cases. The total no. of court cases in which the Ministry is a Party, as on 2.11.2023, are 2,971 in matters pending before the Supreme Court of India, High Courts, National Green Tribunal (all Benches), Central Administrative Tribunal, etc.

3.6 Eco-labelling:

1. The Ecomark Scheme was launched by the Ministry of Environment and Forest in G.S.R. 85(E) dated 21.02.1991, as a tool for the consumers to pursue sustainable consumption patterns as well as for the industry to implement an environment-friendly processes or production methods. Under this Scheme, Ecomark criteria for 17 product categories have been notified viz. Soaps and Detergents; Paper; Food Items; Lubricating oils; Packaging materials/ Package; Architectural Paints and Powder Coatings; Batteries; Electrical and electronic goods; Food Additives; Wood Substitutes; Cosmetics; Aerosols and Propellants; Plastic Products; Textiles; Fire-extinguisher; Leather; and Coir & Coir Products.
2. MoEF&CC has published Draft Ecomark Certification Rules, 2023 vide S.O. 4441(E) dated 11th October, 2023 for public consultation which aims to strengthen the institutional structure and implementation of the Ecomark Scheme. The ‘Ecomark Certification Rules, 2023’ will replace the existing Ecomark notification.



CHAPTER - 4

ENVIRONMENTAL IMPACT ASSESSMENT AND CLEARANCE



4.1 Environmental Impact Assessment

EIA is a planning tool to integrate environmental concerns into the developmental process from the initial stage of planning. It was first used in India as early as 1978 with river valley projects, and was subsequently extended to large public sector projects requiring Public Investment Board (PIB) clearance. These practices were formally codified for the first time in the EIA Notification, 1994, which came into effect from 27th January 1994. The notification initially mandated environmental clearance for 29 categories of projects, later expanded to 32, based on investment criteria. In 2006, a revised EIA Notification emerged, aiming for a transparent, efficient, and decentralized approach. This revision introduced environmental safeguards from the planning stage and emphasized public participation. The updated policy shifted focus from investment to impact potential, making environmental clearance compulsory for 39 project categories.

EIA Notification, 2006 and CRZ Notification, 2011 have been amended from time to time to further streamline the clearance process. The amendments have also been done to address

emerging concerns stemming from the need to integrate environmental concerns into the developmental process for achieving the goal of sustainable development. While according EC to development project(s), necessary conditions, environmental safeguards and measures are stipulated for their effective implementation during the construction and operation of the project. The safeguard measures are intended to minimize adverse impacts, inter alia, on (1) air quality, (ii) water quality, (iii) land degradation, (iv) bio-diversity, and (v) wildlife habitat. In addition, measures like rainwater harvesting, water conservation, greenbelt and plantation; wildlife conservation plan, etc. are also required to be implemented in the project.

Environmental Clearance to Developmental Projects

As per the provisions of the EIA Notification 2006, meetings of various sectoral Expert Appraisal Committees (EAC) were convened during the year for appraisal of category “A” projects for sectors of Industry, Thermal, River valley and Hydroelectric Projects, Coal Mining, Non-Coal Mining, Infrastructure, Construction & CRZ and Nuclear, Defence & related Projects. As a part of

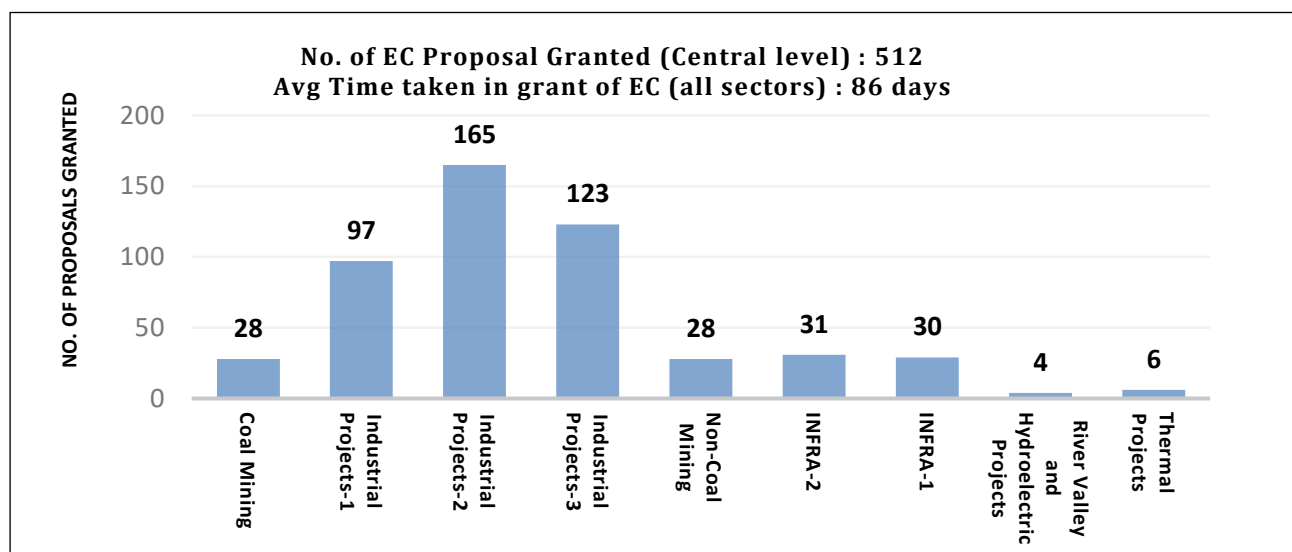


Fig 1: No. of EC Proposal Granted (Central level)



appraisal process, wherever required, the Expert Appraisal Committees also visited project sites for obtaining first-hand information about the ground level realities and response of people / stakeholders living in the vicinity.

Environmental Clearance (EC) has been accorded to 512 projects (between 1st January, 2023 to 27th December, 2023). The sector-wise environmental clearances issued to projects by the Ministry during the year 2023 (up to December 27th, 2023) is given in the *Fig.1*. The average time taken for grant of EC, from all sectors, at the Central level was 86 days against the stipulated timeline of 105 days.

Constitution of State Environment Impact Assessment Authorities (SEIAA)

Ministry has constituted thirty-four State/UT level Environment Impact Assessment Authorities (SEIAA) under sub section (3) of section 3 of the Environment (Protection) Act 1986 for approval of EC of category B projects and activities which have been appraised by SEACs.

Implementation of Single-Window Integrated Environmental Management System

In the year 2018, as a step towards the vision of the Government in improving e-Governance and enhancing ease of doing business, the PARIVESH Portal was launched by Hon'ble Prime Minister, with an emphasis and vision to provide a single-window portal for Environment, Forest, Wildlife and Coastal Regulation Zone Clearances. Subsequently, in the Year 2019, PARIVESH was rolled out across all States/UTs. The portal is being used across 36 States and UTs, 19 Regional Offices, and at MoEF&CC.

Over the years, the existing system of 'PARIVESH' has undergone numerous modifications and customization in alignment with statutory provisions and it has successfully met its objectives of achieving "single window solution"

and facilitated uninterrupted services to the industries even during the COVID times.

To further enhance users experience on PARIVESH with modern day web application, Ministry has expanded the scope of existing PARIVESH (2.0) leveraging on emerging technology such as GIS, Advance Data Analytics, etc. for providing faster decisions on Green Clearances and robust compliance monitoring by end-to-end online appraisal and grant of clearances.

To provide seamless experience and in alignment with the 'Digital India' initiative, PARIVESH 2.0, an upgraded version of existing PARIVESH is supplemented with unique modules (Know Your Approval, Know Your Customer, Decision Support System etc).

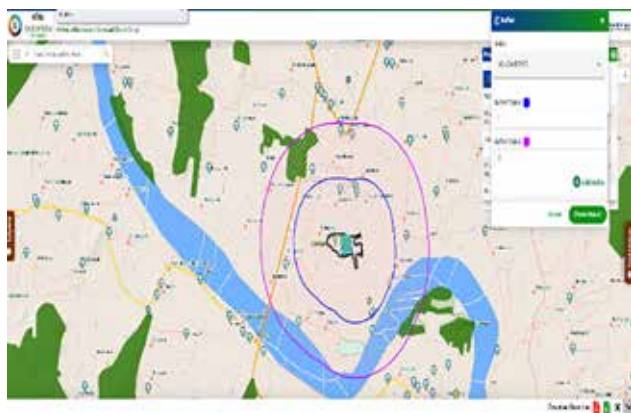
Major modules in PARIVESH 2.0 viz: end to end online processing of Category A and B environmental clearance proposals was developed and rolled out at Central and SEIAA level, respectively. In addition, in 2023, all major functionalities of other major clearances (FC/ WL&CRZ) have been developed and rolled out. In CRZ clearance, all nine State Coastal Zonal Management Authority were onboarded, for the first time, on PARIVESH 2.0 for online submission and processing of applications. Furthermore, PARIVESH 2.0 was also integrated with Gatishakti and National Single window portal.

Entire clearance management in paperless mode in PARIVESH 2.0 not only ensures effective e-governance with ease of doing business but also helps in reduction of carbon foot print. Tangible outcome during 2023 are summarized as below:

- (i) **Prior Planning of Project:** Know Your Approval (KYA) module in PARIVESH 2.0 has been appreciated at different forum/capacity building programme

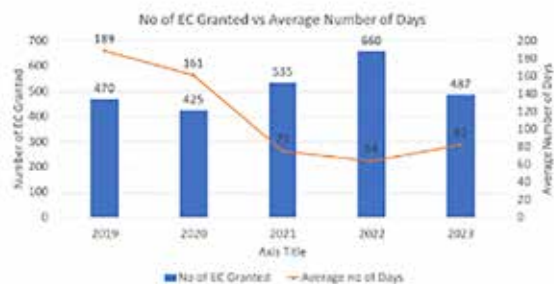
for facilitating the project proponent in assessing the environmental sensitivity of the project before its execution helping in better planning and ultimately helping in conservation of natural resources at one hand and reduction in time and cost of the project on the other hand.

- (ii) **Informed Decision Making:** Over the past one year, more than 500 Category A EC proposals were evaluated with the help of GIS enabled Decision Support System (DSS) in PARIVESH 2.0 and helped the technical committees and regulatory authorities in making the informed decision.



- (iii) **Expeditious Clearance Processing.**

Automated various clearance processes coupled with various systemic reforms in Parivesh has resulted in reduction of average time for grant of EC at Central Level to ~75 days (Stipulated timeline =105 days). Target to bring down the average days to double digit achieved 3 years in advance.



- (iv) **Robust Compliances Monitoring:** Augmentation in compliance monitoring of EC conditions by integration of module in PARIVESH 2.0 for online submission of six-monthly compliance reports by the Project Proponents and submission of observations on the compliances by the IROs ensures implementation of an environmental management plan in more effective and transparent manner.

Compliance and Monitoring Division (C&MD)-Post Environment Clearance (EC) Monitoring of EC Conditions

Clearances under EIA Notification, 2006 are granted by MoEF&CC for Category 'A' projects and by State Level Impact Assessment Authorities (SEIAAs) / UTIAAs for Category 'B' projects. Similarly, clearances under CRZ Notification, 2011/2019 are also granted by MoEF&CC or the respective SEIAAs as the case may be after the project has been recommended by the concerned Coastal Zone Management Authority. While granting clearances under both these Notifications, various conditions and environmental safeguards are stipulated which are required to be implemented by the project proponent during various stages of project cycle.

The objectives of Post EC Monitoring of the projects are:

- to ensure that actions have been taken to incorporate the environmental safeguards during the project cycle in accordance with the conditions stipulated in the Environmental Clearance letter; and
- to take appropriate corrective measures to check adverse impact on environment during operation of the respective projects.

Monitoring of projects with respect to conditions stipulated in the environmental clearance issued under EIA Notification, 2006 and Coastal



Regulation Zone (CRZ), 2011/2019 is carried out through the Eleven (11) Regional Offices (ROs) and Nine (9) Sub Regional Offices.

As a step towards strengthening the Environmental Compliance and Monitoring for effective implementation of provisions of Environment (Protection) Act, 1986; the Ministry has created a dedicated and separate “Compliance and Monitoring Division” (C&MD) vide Office Order dated 13.07.2023. The major responsibilities of CMD are:

- Monitoring of EC granted under the EIA Notification, 2006,
- Functional auditing of SEIAA/CZMA and post EC monitoring in relation to Court cases.
- Parliament Matter, VIP reference, PG, RTI etc.

C&M Division examines the monitoring reports submitted by Regional Offices. In cases of non-compliance, further follow up action is taken for effective compliance including issuance of show cause notice followed by directions under Environment (Protection) Act, 1986 on case-to-case basis.

Accreditation of the EIA consultants with Quality Council of India (QCI / National Accreditation Board of Education and Training (NABET)

The environmental appraisal of developmental projects is undertaken as per the provisions of EIA Notification 2006 based on EIA/EMP reports prepared by the accredited consultants with the assistance of project proponents. Good quality EIA reports are a pre-requisite for appropriate decision making. As of now, only consultants accredited with QCI/ NABET are allowed to prepare EIA/EMP reports and present the cases before EACs/SEAC. As per the NABET website as on 20.12.2023, there are 210 accredited EIA Consultant Organizations.

Achievements

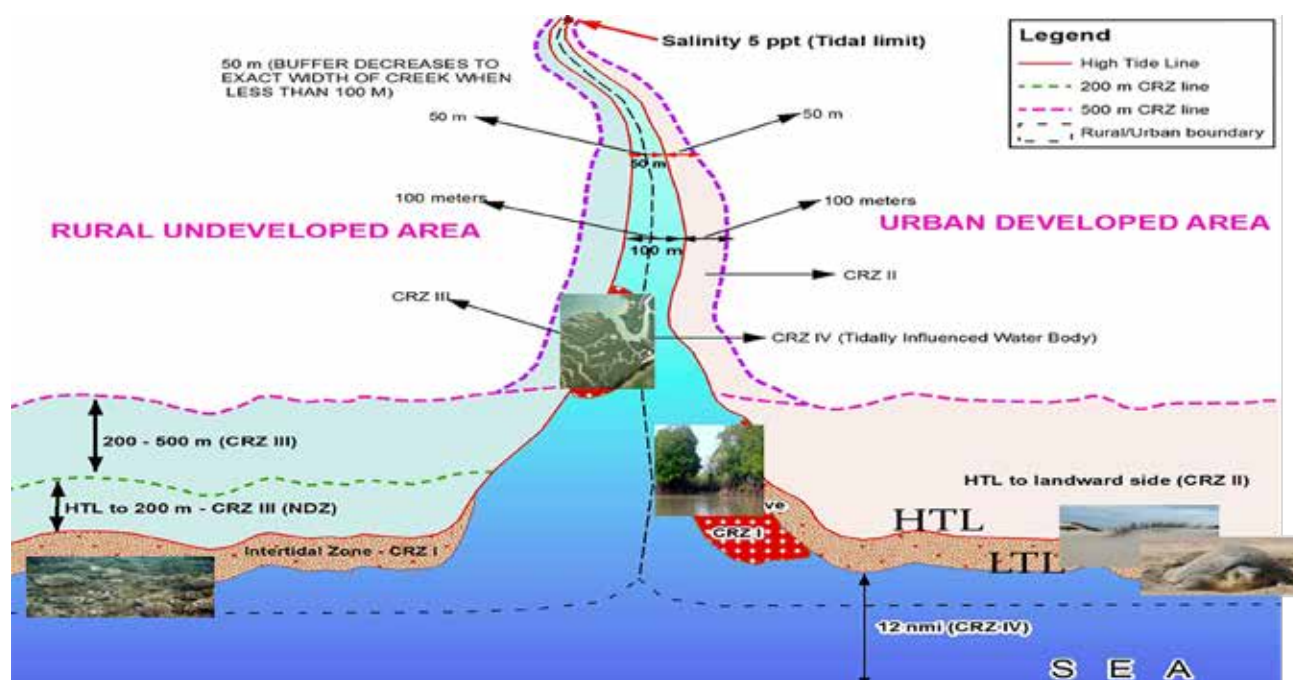
As part of systemic reforms, the IA Division has issued two major amendments to the EIA Notification, 2006 and 11 Office Memorandums during 2023 for streamlining the EC process. The notifications issued are as under:-

- Notification S.O. 1832(E) dated 21.04.2023- Provision for split and part transfer of the prior-Environmental Clearance, on recommendation of the concerned Expert Appraisal Committee to the other legal persons for the respective projects.

Notification S.O. 2226(E) dated 18.05.2023, Rationalized Environmental Clearance process for Pump Storage Projects.

4.2 Coastal Regulation Zone (CRZ)

With the prime objective of ensuring livelihood security to fishing and other local communities living in coastal areas, and to conserve/ protect coastal stretches while also promoting development based on scientific principles, the CRZ Notification was issued *vide* S.O. 114(E), dated 19/02/1991. This notification was superseded by the CRZ Notification, 2011 and issued *vide* S.O. 19(E), dated 06/01/2011. The said notification covers categorization of CRZ areas, permissible and prohibited activities, regulation of permissible activities in CRZ areas, procedure for clearance, preparation of Coastal Zone Management Plans, mapping and areas requiring special consideration etc. The notification was amended from time to time based on representations received from the coastal state Governments, Union Territory administrations and other stakeholders, and a need was felt overtime to undertake a comprehensive revision of the notification. The Ministry of Environment, Forest and Climate Change had accordingly constituted a Committee in June 2014 under the Chairmanship of Dr. Shailesh Nayak (Secretary,



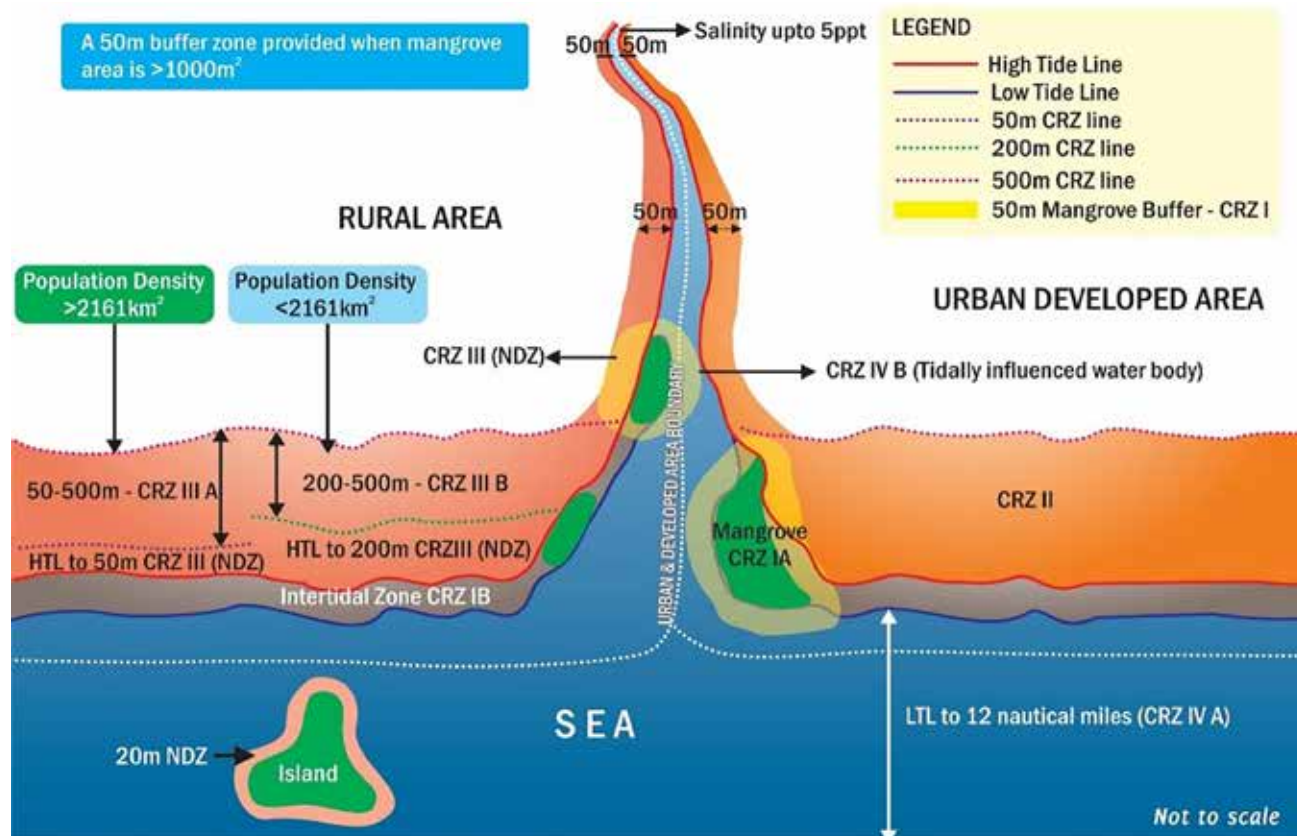
CRZ Classification as per 2011 Notification

Ministry of Earth Sciences) to examine the various issues and concerns of Coastal States/UTs and other stakeholders for recommending appropriate changes in the CRZ Notification, 2011.

The Shailesh Nayak Committee held wide ranging consultations with State Governments and other stakeholders and submitted its recommendations in 2015. The recommendations were further examined in consultation with Members of Parliament of Coastal States and Union Territories besides other concerned Ministries of Government of India and a draft notification viz. CRZ Notification, 2018 in supersession of CRZ Notification, 2011 was issued in April, 2018 for inviting comments from public at large. A number of suggestions and comments were received by the Central Government and based on overall imperative of sustainable development of coastal areas and need for conserving the coastal environment, the Union Cabinet has approved the new Coastal Regulation Zone Notification on 31/12/2018 and finally issued

vide G.S.R 37(E), dated 18/01/2019. This new CRZ Notification is expected to go a long way in meeting the aspirations of coastal communities besides ensuring welfare of poor and vulnerable populations. Overall, this new CRZ Notification will result in greater economic growth while conserving the coastal eco-systems, thereby creating greater livelihood opportunities and better quality of life of coastal communities.

The new CRZ Notification, 2019 issued vide G.S.R 37(E), dated 18/01/2019, will however become effective only after the Coastal Zone Management Plans (CZMPs) of the respective coastal states are aligned and updated based on the provisions of the new notification. To this effect the Ministry of Environment, Forest and Climate Change have issued 'Guidelines for updation of Coastal Zone Management Plan prepared as per CRZ Notification, 2011 to align it with CRZ Notification, 2019' to all coastal states for immediate action. The CZMP as per CRZ Notification, 2019, has been approved for State of Odisha, Karnataka and Maharashtra.



CRZ Classification as per 2019 Notification (to be effective once revised/updated CZMPs are approved)

Island Regulations:

The islands located along the mainland (offshore and inshore within tidally influenced water bodies) are covered under the Coastal Zone Regulation (CRZ) regulations, whereas Andaman and Nicobar and Lakshadweep group of islands are covered under the Island Protection Zone (IPZ) Notification, 2011, issued on 6th January 2011 under the Environment (Protection) Act, 1986. Akin to CRZ Notification, the Island Coastal Regulation Zone (ICRZ) Notification, 2019 was issued in supersession of IPZ Notification, 2011 vide S.O.1242 (E), dated 08/03/2019. This new notification will however become effective only after the ICRZ/IIMPs of the islands are revised and updated as per the provision of the new notification. The ICRZP as per ICRZ Notification, 2019 has been approved for Great Nicobar Island and Little Andaman Island.

Progress/Achievements

A. Policy Decisions: -

- S.O.2903(E) dated 03/07/2023 regarding amendment in CRZ Notification, 2011 regarding extension of Validity of Environment Clearance and CRZ Clearance and transfer/splitting and name change.
- Amendment in Reconstitution of Goa Coastal Zone Management Authority issued vide notification S.O.3581 (E) dated 10/08/2023
- Reconstitution of Daman and Diu Coastal Zone Management Authority issued vide notification S.O.4571 (E) dated 31/10/2023.
- Reconstitution of Andhra Pradesh Coastal Zone Management Authority issued vide



notification S.O.4798 (E) dated 03/11/2023

B. Implementation of CRZ Notification 2019:-

- One NCZMA meetings was held under the Chairmanship of Secretary MoEFCC during the period.
- Approval of Coastal Zone Management Plan (CZMP) as per CRZ Notification, 2019 of 5 district of Maharashtra namely Raigad, Ratnagiri, Sindhudurg, Thane and Palghar issued *vide* letter No.12/10/2021-IA.III dated 25/08/2023.

- Approval of rectification of CRZ Classification on CZMP Map No. OD 90, Sheet No.F45-P6/SW covering areas of Subarnarekha Port-amendment in CZMP of Odisha as per CRZ Notification, 2019 issued *vide* letter No. 12/9/2021-IA.III dated 25/08/2023

C. EAC (CRZ) / CRZ Clearances: -

- Total of **33 CRZ clearances (from 1/1/2023 to 07/11/2023)** have been issued by this Ministry for various developmental activities/projects permissible in the CRZ areas.



CHAPTER - 5

CONSERVATION – BIODIVERSITY



5.1 Biodiversity

a Brief introduction, objectives and functions of the Division

Convention on Biological Diversity (CBD)

- CBD is one of the key agreements adopted during the Earth Summit held in Rio de Janeiro in 1992. The three objectives of the CBD are: conservation of biological diversity, sustainable use of its components, and fair and equitable sharing of benefits arising out of the use of genetic resources. Pursuant to ratification of the CBD by India on 18 February 1994, several steps were initiated to meet the commitments under the Convention, and to realize the opportunities offered by the Convention. India enacted the Biological Diversity Act in 2002 to give effect to the provision of this Convention. India has also prepared a National Biodiversity Action Plan (NBAP) in 2008, and an Addendum to NBAP was prepared in 2014 with 12 National Biodiversity Targets, developed in line with the 20 global Aichi biodiversity targets. India also submits a National Report to CBD providing an update on progress in National Biodiversity Targets.
- Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity. India signed the Protocol on 11 May 2011, and ratified it on 9 October 2012. The Nagoya Protocol on ABS entered into force on 12 October 2014. The Nagoya Protocol is being implemented at national level *inter alia* through the Biological Diversity Act.
- Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) was established by the Governments of various

countries in April 2012 as the biodiversity counterpart of Intergovernmental Panel on Climate Change, for strengthening the science-policy interface on biodiversity so as to provide policy makers with reliable, independent and credible information on biodiversity, thus promoting human well-being and sustainable development through sustainable use of biodiversity.

- **National Legislation:** Biological Diversity (Amendment) Act, 2023
- In pursuance to CBD, India enacted the Biological Diversity Act in 2002, and notified the Biological Diversity Rules in 2004. The Act provides for conservation of biological diversity, sustainable use of its components and fair and equitable sharing of the benefits arising out of the use of biological resources, knowledge and for matters connected therewith or incidental thereto. It primarily aims at giving effect to the provisions of the CBD suiting to our national needs and requirements. The provisions of the Nagoya Protocol on Access and Benefit Sharing, to which India is a Party, are also being implemented through the Biological Diversity Act.
- The Biological Diversity Act is implemented through a three-tier institutional mechanism: National Biodiversity Authority (NBA), State Biodiversity Boards (SBBs) and Biodiversity Management Committees (BMCs). NBA is a statutory body that performs facilitative, regulatory and advisory functions for the Government on biodiversity related issues.

b Important activities undertaken during the reference period (i.e. 1/1/2023-up-to 23.11.2023).

Convention on Biological Diversity:

- The Ministry celebrated the “International Day on Biological Diversity (IDB)” on 22nd



of May 2023. The theme of IDB 2023 celebrations was “From agreement to action: build back biodiversity”. During the celebrations, a Biodiversity Exhibition with a special focus on Millets in conjunction with Mission LiFE (Lifestyle for Environment) was inaugurated. Further, a brochure on “Biodiversity Heritage Sites of India” and “Other Effective Area based conservation measures” was also released.

- The Ministry of Environment, Forest and Climate Change, along with the National Biodiversity Authority, Govt. of Goa and the Goa State Biodiversity Board flagged off the National Campaign for updating cum verification of Peoples’ Biodiversity Registers on 23rd of May 2023 in Neura Village, Tiswadi District, Goa. The campaign achieved the target of updating and verifying more than 10,000 Peoples’ Biodiversity Registers prepared across the country for the purpose of documenting the natural wealth and associated traditional knowledge available in the respective local bodies.

c Progress/Innovations for the reference period especially can be highlighted prominently

Internationally Recognized Certificate of Compliance (IRCC) issued under Nagoya Protocol

Nagoya Protocol on ABS requires Parties to issue a permit or its equivalent at the time of access as evidence that access to genetic resources was based on prior informed consent and that mutually agreed terms were established. The Protocol further requires that Parties make information on the permit or its equivalent available to the ABS Clearing House for it to constitute an Internationally Recognized Certificate of Compliance (IRCC). Since October 2015, 3496 approvals granted by India to users

of biological resources in the ABSCH website for generating IRCCs, of which 800 IRCCs generated during the reporting period.

d Important Cumulative achievements.

- So far, 277688 BMCs have been established in 28 States and 8 Union Territories across India. So far, 268031 PBRs have been prepared by recording the local biodiversity and associated traditional knowledge.
- Out of 44 Biodiversity Heritage sites declared so far in 16 States, 13 sites have been notified in this reporting period

e. Promulgation of new Acts/ Rules, along with the details with major amendment/deletions.

The Biological Diversity (Amendment) Act, 2023 was passed in the Lok Sabha on 25th of July 2023 and Rajya Sabha on 01st August 2023 respectively, and received the assent of the President on 03rd of August 2023. The Biological Diversity (Amendment) Act, 2023 shall come into force from 1st April 2024. The amendments sought to:

- Reduce the pressure on wild medicinal plants by encouraging cultivation of medicinal plants
- Encourage Indian system of medicine
- Facilitate fast-tracking of research, patent application process, transfer of research results while utilizing the biological resources available in India without compromising the objectives of United Nation Convention on Biological Diversity and its Nagoya Protocol
- Decriminalize certain provisions
- Bring more foreign investments in the chain of biological resources, including research, patent and commercial utilization, without compromising the national interest.

**f. Conferences organized in India/**

- The Ministry of Environment, Forest and Climate Change along with the National Biodiversity Authority organized the National Consultation Meeting on the updation of National Biodiversity Strategy and Action Plan (NBSAP) and the adoption of National Biodiversity Targets (NBTs) in alignment with the Kunming-Montreal Global Biodiversity Framework (KMGBF) on 28-29 November, 2023 at the Indian National Science Academy, New Delhi
- The consultation meeting was attended by representatives of line Ministries/ Departments, Member Secretaries of State Biodiversity Boards and Union Territory Biodiversity Councils, Members of Working Group on NBSAP, Special Invitees, Subject Matter Specialists, Observers, Supra-national and National Organizations, Community-led organizations, Members of the Authority, Private sector and finance experts, Young Professionals and UN Volunteers.

2. Autonomous bodies- appraisal of the functioning of each of the autonomous bodies/institutions in relations to their objectives.

- The National Biodiversity Authority is a body corporate established in accordance with the provisions of Section 8 of the Biological Diversity Act, 2002, at Chennai w.e.f. 1st October 2003. It is an autonomous, statutory and regulatory organization which is intended to implement the provisions of Biological Diversity Act, 2002. The Biological Diversity Act 2002 came into force in 2003. The Act extends to the whole of India. The objectives of the Act are conservation, sustainable utilization and fair and equitable sharing of benefits arising out of the use of biological resources and associated knowledge. The Act is being implemented through three-

tiered institutional structures (NBA at National level, State Biodiversity Boards at State level and Biodiversity Management Committees at local level). The main objectives of NBA are:

- To regulate access to biological resources of the country to conserve and sustainable use of biological diversity;
- To respect and protect the knowledge of local communities related to biodiversity.
- To secure sharing of benefits with the local people as conservers of biological resources and holders of knowledge and information relating to the use of biological resources.
- Conservation and development of area of importance from the view point of biological diversity by declaring them as biological diversity heritage sites.
- Protection and rehabilitation of threatened species; involvement of institutions of State Government in the broad scheme of implementation of the Biological Diversity Act through constitution of committees.

3. Grant-in-aid

Name of Organization	Purpose	Total Amount Released	Status of third-party evaluation	Re-marks
National Biodiversity Authority	As per the provisions in the Biological Diversity Act, 2002	Rs.14.1 crores in the current financial year	Conducted by CAG	

5.2 Biosafety:**a Brief introduction, objectives and functions of the Division**

- The Division handles the activities related to Cartagena Protocol on Biosafety



- (CPB) to the Convention on Biological Diversity (CBD), Nagoya Kuala Lumpur Supplementary Protocol on Liability and Redress (NKLSPRL), and the Genetic Engineering Appraisal Committee (GEAC).
 - CPB to CBD is an international agreement which aims to ensure the safe handling, transport and use of living modified organisms (LMOs) resulting from modern biotechnology that may have adverse effects on biological diversity, taking also into account risks to human health. It was adopted on 29th January 2000 and entered into force on 11th September 2003.
 - NKLSPRL aims to contribute to conservation and sustainable use of biodiversity by providing international rules and procedures in the field of liability and redress relating to living modified organisms. The Supplementary Protocol was adopted on 15th October 2010 at the CoP-MoP-5 held in Nagoya, Japan, and entered into force on 5th March 2018 as a supplementary agreement to CPB. The tenth meeting of the Conference of the Parties serving as the meeting of the Parties (COP-MOP) to the Cartagena Protocol on Biosafety was convened in December 2022 in Montreal, Canada.
 - In accordance with the Rules for the Manufacture, Use Import, Export and Storage of Hazardous Micro Organisms/ Genetically Engineered Organisms or Cells notified in 1989 (Rules, 1989) under the Environmental (Protection) Act, 1986; the Genetic Engineering Appraisal Committee (GEAC) functions under the Ministry of Environment, Forest and Climate Change (MoEF&CC) for appraisal of activities involving large scale use of hazardous microorganisms and recombinants in research and industrial production from the environmental angle. The Committee is responsible for approval of proposals relating to release of genetically engineered organisms and products into the environment including experimental field trials.
- b **Important activities undertaken during the reference period (i.e. 1/1/2023-23-11-2023):**
- From 01.01.2023 to 23.11.2023, GEAC has given following recommendations, which have been approved by the Competent Authority:
 - Environmental approval to genetically modified (GM) organisms for commercial production-01; Import of GM products-04; Permissions to conduct BRL-I/BRL-II Trials-01; Permissions to conduct Event Selection Trials (EST)-04; Permission to conduct clinical trials of recombinant vaccine-01; Other items-01.
 - Consultative workshop was held on April 19, 2023 at MoEF&CC towards preparation of project documents for below mentioned national and multilateral biosafety capacity building projects supported by GEF:
 - (1) National GEF UNEP project: "Mainstreaming of Biosafety and Institutional Capacity Building to strengthen effective implementation of Cartagena Protocol on Biosafety".
 - (2) Multilateral GEF-UNEP project: "Promoting the safe application of biotechnology through Multi country Cooperation in the implementation of National Biosafety Frameworks in Asia".
- Genetic Engineering Appraisal Committee (GEAC)**
- The Genetic Engineering Appraisal Committee (GEAC) was reconstituted on 13.07.2022 for a



period of three years. For the period 01.01.2023 to 23.11.2023, three meetings of GEAC had been held quarterly, wherein the Committee has recommended following key proposals in respect of genetically modified (GM) organisms:

- Confined field trials of GM cotton, GM brinjal, GM pigeon pea, GM rubber
- Clinical trial of recombinant dengue tetravalent vaccine
- Import of three strains of GM yeast for commercial production of ethanol
- Import of two recombinant veterinary vaccines for use in chickens and dogs
- Import of GM product for use in pharmaceuticals dosage formulation

c **Conferences** Officials of the division participated in the online discussions of the Open-Ended Online Forum on Risk Assessment from 21 to 25 August 2023 to review the draft of the detailed outline with a view to facilitate the work of the Ad Hoc Technical Expert Group on Risk Assessment

d **MEAs, Agreement with Countries, International Organizations, Compliance:**

- A multilateral project “Promoting the safe application of biotechnology through Multi country Cooperation in the implementation of National Biosafety Frameworks in Asia” to support the implementation of the Cartagena Protocol on Biosafety South Asia has been approved by GEF through UNEP.
- A national project on “Mainstreaming of Biosafety and Institutional Capacity Building to strengthen effective implementation of Cartagena Protocol on Biosafety” project has been approved by GEF through UNEP.

5.3 Zoological Survey of India (ZSI):

a **Brief introduction, objectives and functions:**

Zoological Survey of India (ZSI) is a 108-year-old organization functioning under MoEF&CC and dedicated for surveys, exploration and taxonomical studies of faunal communities since its inception in the year 1916. ZSI Headquarters is located in Kolkata and has 16 Regional Centres spread across the country. The primary and secondary objectives are as follows:

Primary Objectives

- Exploration, Survey, Inventorisation and Monitoring of faunal diversity in various states, some selected ecosystems and protected areas of India.
- Taxonomic studies of all faunal components
- Status survey of Threatened and Endemic species.
- Preparation of Red Data Book, Fauna of India and Fauna of States.
- Bio-ecological studies on some important communities/species.
- Preparation of database for the recorded species of the country.
- Maintenance and Development of National Zoological Collections.
- Training, Capacity Building and Human Resource Development.
- Faunal Identification, Advisory services and Library Services.
- Publication of study-results, including documentation of Fauna of India and Fauna of States



Secondary objectives

- GIS and Remote Sensing studies for recorded animal diversity as well as for selected threatened species.
- Chromosomal Mapping and DNA finger printing.
- Environmental Impact Studies.
- Maintenance of Museums at Headquarters and Regional Centres.
- Development of ENVIS and CITES Centres.
- Research Fellowship, Associate ship and Emeritus Scientist Programme.
- Collaborative research programmes on Biodiversity with other Organizations.
- All India Coordinated Project on Taxonomy (AICOPTAX)

Functions/ Strength of ZSI:

- Maintaining National Faunal Repository: One of the largest repositories of the world with 6.3 million faunal specimens.
- Scientific Expertise: Robust taxonomic expertise from Protozoa to Mammalia.
- Database: Holding up to date database on faunal Diversity of India.
- New Discoveries: Updating the data on new species from different ecosystems of the country.
- Museums at HQ & RCs: ZSI is maintaining faunal museums of different ecosystems of the country
- Taxonomy trainings: Only organization in the country providing training on taxonomy of all groups of fauna.
- Maintain DNA, Forensic studies & GIS

laboratories

- Library: Holding Asia's largest library dealing books on Zoology.
- Digital Archives of Publication.
- Digitization of Types
- Outreach activities
- Inter-ministerial services
- International & National Collaborations
- Contribution of ZSI in the activities pertaining to Conservation of Biodiversity including CBD, ABS, IWPA, CITES, DGQI etc.

b. Important activities undertaken during the reference period (i.e.1/1/2023-up to 23.11.2023)

- **Faunal Surveys, Collections and Identifications:** A total of 103 surveys have been completed during the period, of which 33 surveys were undertaken to different Protected Areas; 6 surveys of States and Union Territories; 22 to different ecosystems; 15 status surveys of endangered species; 15 surveys for Taxonomic studies; 4 to Deccan Peninsula; 3 surveys for behavioural studies and 5 surveys for miscellaneous studies. Altogether 1,41,752 specimens belonging to 6150 species have been identified under different faunal groups from Protozoa to Mammalia.
- **New Discoveries:** A total of 178 new discoveries have been published of which 97 are new species whereas 81 are new record to Indian fauna.
 - **Digital Sequence Information (DSI) on Indian Fauna:** A total of 1521 DNA barcodes of 353 species have been submitted on BOLD and GenBank



Malabar Grey Hornbill, *Ocyrceros griseus* (Latham, 1790)



Greater One- Horned Rhino, *Rhinoceros unicornis*
Linnaeus, 1758

which includes 1042 barcodes for Mammals, 1 for Birds, 34 for Reptiles, 55 for Amphibia, 147 for Fishes, 81 for Lepidoptera, 77 for Arachnida, 22 for Odonata, 16 for Coleoptera, 15 for Diptera, 10 for Brachiopoda, 9 for Crustacea, 6 for Cnidaria, 3 for Hymenoptera, 2 for Mollusca and 1 for Hemiptera,

- **Publications:** A total of 454 publications were completed during the period and it includes 17 Books, 4 books in Hindi, 102 papers published in SCI journals, 174 papers in peer-reviewed National and International journals, 114 Book chapters, 14 popular articles, 16 popular articles in Hindi, 3 online checklists and 10 issues of E-Newsletter.
- **Capacity Building:** Outreach activities were conducted in both online as well as offline mode. This year about 79 webinars/ trainings/ workshops were conducted to disseminate knowledge on various topics of biodiversity and its conservation to more than 7060 students and researchers.
- **Identification and advisory services:**

Identification and Advisory Services on a regular basis is provided by ZSI and this year material received from 123 Institutes/colleges and identified 3769 specimens and 14 photographs belonging to 922 species.

- **Wildlife Forensics and Crime Control:** ZSI scientists also provide identification for wildlife forensics and crime control and this year, identification include 436 specimens and 13 photographs belonging to 65 species including many scheduled species received from 60 departments.
- **Role in Policy interventions**
 - ZSI has supported the Ministry in revising the list of faunal species listed among the various schedules of the draft WPA (1972) amendment bill.
 - Data on fauna provided for GIRG portal.
- **Mission LiFE Campaign**

A total of approximately 3000 events were organized by ZSI throughout the country covering all ecosystems from the



Himalayas to the Oceans and from Desert to the green grasslands.

- **Swachhata Campaign 3.0**

As part of Swachhata campaign, ZSI weeded 5766 files, disposed more than 200 numbers of obsolete office Furniture, 300 E-waste, 4547 sq. ft. space restored and Rs. 3,53,886/- has been generated.

- c. **Progress/innovations for the reference period:**

- 97 new species have been discovered by the scientists of ZSI.
- Translocation of over 15466 colonies of corals achieved.
- Tagging of 3143 and recapture of 183 Olive Ridley Turtles and 181 tagging of Leatherback Turtles.
- ISO certificate received by two Regional Centres, ANRC-Port Blair and CZRC-Jabalpur.

- d. **Achievements**

- **Species Identifications:** During the reference period a total of 6150 species have been identified by the scientists of ZSI Headquarters and Regional Centres.
- **Publications:** During the reference period, 454 publications have been made.
- **Digital Sequence Information (DSI) of important Taxa:** ZSI is playing major role in enriching the information on DNA barcodes and solving many taxonomic queries and generated 10,869 barcodes including 1521 barcodes generated during the reference period.
- **Training and Extension:** Outreach activities are being provided regularly and this year 79 webinars/ workshops /trainings were conducted to disseminate the knowledge on various topics.

- **Digital ZSI:** Achievements include Digital Archive of Publication of ZSI; ZSI Library Repository and ZSI Type Specimens Repository.

- **Identification and advisory services:** Identification and advisory services are provided to students, researchers and faculties from time to time. This year services were provided to 123 Institutes/ colleges and identified 3769 specimens and 14 photographs belonging to 930 species.

- e. **Continuing committees/commissions-their work during the year and present position:**

- Research Advisory and Monitoring Committee (RAMC) is the functioning committee to evaluate the progress of ZSI twice a year.
- Scientific Consultative Committee Meeting on monthly basis
- Half Yearly Scientific Progress Committee
- Annual Scientific Progress Committee

- f. **Important Conferences organized in India/International**

- Animal Taxonomy Summit (ATS) 2023 from 1st to 3rd July, 2023
- Protected Schedule Animals of India from 22nd to 25th August 2023
- Methods in Faunal Collection, Preservation and Identification from 2nd to 10th May, 2023
- Insect Diversity of Trans Himalaya 21st September 2023
- Marine Biodiversity and Conservation with special reference through DNA Bar-coding techniques on 26th February 2023



Release of the book "Animal Discoveries 2022" by Honorable Ministers on ZSI day (1st July 2023)



Swachhata hi Sewa by Honourable Minister at GPRC, ZSI-Patna on 2nd October 2023



As part of "Save the Glacier " an awareness program was organized at Mana Village in Uttarakhand at a height of 3200 metres

As part of "Save the Glacier " an awareness program was organized at Mana Village in Uttarakhand at a height of 3200 metres

g. MEA's agreement with countries, international organizations and compliance:

ZSI has signed MoU with seven Universities/ Institutes, namely,

- 1 National Museum of Natural History, New Delhi
- 2 Patna University, Patna

- 3 Vikram University, Ujjain, Madhya Pradesh
- 4 University of Burdwan, Burdwan
- 5 Indian Institute of Technology, Jodhpur
- 6 Department of Forests and Park Services, Royal Government of Bhutan
- 7 Banda University of Agricultural Technology (BUAT) Banda, Uttar Pradesh

h. List of major publications brought out-brief purpose of each:

- Fauna of Assam (Part II) Vertebrates



- Fauna of Assam (Part I) Invertebrates
- Faunal Diversity of Puducherry
- Faunal Ecology and Conservation of the Great Nicobar Biosphere Reserve
- 75 Endemic birds of India
- Animal Discoveries 2022: New Species and New Records
- Fauna of India: 108 Barcodes
- Soft Corals (Malacalcyonacea: Octocorallia) of Andaman and Nicobar Islands (Families Cladiellidae, Sarcophytidae and Sinulariidae)

5.4 BOTANICAL SURVEY OF INDIA (BSI)

a. Brief introduction, objectives and functions

Introduction

Botanical Survey of India (BSI) is the apex research organization under MoEF&CC. It carries out the taxonomic/floristic studies on wild plant resources of the country with an objective to explore the plant resources of the country. Established on 13th February 1890, Botanical Survey of India is serving the nation through its incessant survey and exploration of the plant wealth of the nation for last 130 years. Presently, BSI has 11 regional centres and 5 units, with its headquarters at Kolkata and actively engaged in inventorying the floral resources of wide array of ecosystems from coastal sea to high mountain ranges of Himalayas covering all the states and union territories.

Objectives and functions

Primary objectives

- Survey and exploration, inventorisation and documentation of phytodiversity; publication of National, State and District Floras.

- Identification of Red list Species and species rich areas needing conservation; *ex situ* conservation of critically threatened taxa in botanical gardens.
- Survey and documentation of traditional knowledge (ethnobotany) associated with plants.
- Develop a National Database of Indian plants including herbarium and live specimens, illustrations, botanical paintings, etc.

Secondary objectives

- Revisionary / Monographic studies on selected plant groups.
- Qualitative studies of nutritive value of ethno-food plants and other economically useful plants.
- Capacity building in plant taxonomy through refresher courses and post M.Sc. certificate course.
- Environmental Impact Assessment of areas assigned to BSI for study.
- Develop and maintain Botanical gardens.
- Preparation of Seed, Pollen and Spore Atlas of Indian Plants.

Mandate

Survey, collection, documentation (including the traditional knowledge associated with plants) and *ex situ* conservation of wild plant diversity.

b. Important activities undertaken during the reference period:

- **Survey and Exploration:** BSI scientists were involved in 66 Annual Research Projects under various thematic areas of plant resources of the country and undertook 105 field exploration tours and collected



about 4918 plant specimens.

- **Documentation of Phytodiversity:** Till date, BSI has documented 55,387 taxa of plants, belonging to 22108 taxa of angiosperms; 83 taxa of Gymnosperms; 1,319 taxa of Pteridophytes; 15,701 taxa of Fungi; 9035 taxa of Algae; 2,819 taxa of Bryophytes and 3,044 taxa of Lichens towards the complete inventory of floral resources of the country.
- **New Discoveries:** BSI published the Plant Discoveries, 2022 which enumerated 9 new genera, 170 new species and 16 infraspecific taxa as new to science from India. It also includes 4 new genera, 149 new species, 4 infraspecific taxa as new records for Indian Flora. 21 new taxa have been assessed as Critically Endangered (CR), 05 as Endangered (EN), 03 as Vulnerable (VU) category following the IUCN category and criteria.
- **Azadi ka Amrit Dharohar:** BSI has surveyed and documented the floristic wealth of 75 Ramsar Sites throughout India.
- **Research and Publication:** Scientists of BSI have published 201 research publications and 10 books and periodicals. (Plant Discoveries, Nelumbo, Vansapati Vaani, Annual Reports and Annual Research Programmes). The official journal of BSI i.e., *Nelumbo* (The Bulletin of Botanical Survey of India), has been included in the UGC Care-list of journal and also in NAAS scoring list journal.
- **Outreach activities:**
 - BSI has conducted 1191 awareness campaign, sensitized more than 1,36,330 people and installed 20 selfie stands across country covering different sections of society under

Mission LiFE campaign.

- An awareness campaign was conducted among the public on eco-friendly lifestyle to nudge individual and community action to protect and preserve the environment such as **Campaign to avoid the use of single use plastic** and introduced an eco-friendly re-usable drinking straw made up of bamboo.
- **Special lectures were organized for forest officers and staffs, school children, college and university.**
- **Swachhata 3.0:** Across the different regional centres of BSI, a total 1449 files were reviewed out of which 1257 files were identified for weeding and were subsequently shredded and sold to the local vendor for recycling. This led to the conversion of 12.5 ton of waste to wealth of 4.66 lakhs and it freed total space of 2341 sq. feet.
- Under DST-SERB funded scheme, BSI organized “SERB Vritika Research internship workshop from 6th December to 3rd January 2023 at BSI, CNH, Howrah which was participated by 60 students.
- BSI, NRC, Dehradun organized a “Botanical Nomenclature Course” at BSI, NRC, Dehradun from 6.02.2023 to 10.02.2023.

c. Progress/Innovations for the reference period:

- **New Discoveries:** BSI has discovered 10 angiosperm taxa and 4 fungal taxa as new to science. Besides, BSI has also reported 7 angiosperm taxa, 2 bryophyte taxa, 2 algae taxa and one Pteridophytes taxa as new



records for India.

- **Development of Nature Trail:** A 'NATURE TRAIL' spreading over an area of 15 acres with a trail span of nearly 2.2 km has been developed in AJCBIBG, which was inaugurated by Ms. Leena Nandan, IAS, Secretary, MoEF&CC on 10th August, 2023. The trail has the repository of 307 plant species and it provides a unique experience of tropical forest to the visitors, which is a rare sight of its own kind in a Metro life.
 - The Botanical Survey of India, Sikkim Himalayan Regional Centre, Gangtok, established and inaugurated a medicinal plants garden on 8th September, 2023. BSI maintains the national floral repository of the country and is the custodian of more than **3 million herbarium specimens** that forms the basic reference material for taxonomic/ floristic research worldwide.
 - BSI maintains the online digital platforms like "Indian Virtual Herbarium" (<https://ivh.bsi.gov.in/>), e-Plant Checklist of India and e-Flora of India (<https://efloraindia.bsi.gov.in/>), e-Archives (<https://archive.bsi.gov.in/>), Rare Books (<https://bsi.gov.in/page/en/rare-books>), Journal Nelumbo (<http://nelumbo-bsi.org>), Medicinal Plant Database (<https://bsi.gov.in/page/en/medicinal-plant-database>) etc. which serve as important online resources for the Botanical fraternity and promoting taxonomic research in the country. It has had more than 200000 visitors on average during the reference period.
- d. Important Cumulative achievements:**
- **Ex-situ Conservation:** A total of 429 species including 37 species of endemic, 16 species of vulnerable, 6 species of Endangered and 4 species of critically endangered are

introduced in the garden of which 233 are newly added to AJCBIBG. **24** cultivars of *Nelumbo*, **20** cultivars of *Nymphaea* and **25** different species of aquatic plants were maintained in the 12000 sq. ft. **Aquatic plant section** at AJCBIBG. The **Rosarium** with 300 cultivars, **Bougainvillea** with 16 cultivars and **Hibiscus** section with 75 varieties were also maintained. In addition, 23765 plants of 96 species were multiplied in various gardens of BSI.

• **Awards and Honours:**

Dr. A. A. Mao, Director, BSI received the Prof. V. Puri Medal Award 2023 by the Indian Botanical Society.

Dr. Kanad Das, Scientist – F, BSI-CNH, Howrah received the **Prof K. S. Thind Medal 2020** from the Association for Plant Taxonomy, Dehradun on 18.01.2023

Dr. S. S. Dash, Scientist – F & In charge, BSI-HQ received the prestigious **M.B. Raizada gold Medal 2022** by the Association of Plant taxonomy and **Dr. T.M. Hynniewta Biodiversity Gold Medal 2022** by East Himalayan Society for Spermatophyte Taxonomy (EHSST).

e. Continuing committees/commissions-their work during the year and present position

The following committees are functioning in BSI:

1. The Research Advisory & Monitoring Committee (RAMC) of Botanical Survey of India (BSI) convened the 12th meeting at BSI-Northern Regional Centre (NRC), Dehradun, Uttarakhand.
2. Expert committee of Assistance to Botanic Gardens convened the 5th review meeting of the expert group on the assistance to botanic garden (ABG) scheme.



3. Director, BSI continued as a member of the Research Advisory & Monitoring Committee (RAMC) of NBRI, BSIP, Lucknow, IBSD, Imphal, National Council for Science Museums and as a Chairman Regional Plant Resource Centre, Bhubaneswar
4. XXIV meeting of Joint Committee of Management (JCM) of A.J.C. Bose Indian Botanic Garden was held on 13th June, 2023 under the chairmanship of honourable Chief Secretary, Government of West Bengal, with Director/BSI as member secretary and H.o.O, AJCBIBG as member to discuss several agendas for development of AJCBIBG.
5. IN BGIR a steering committee constituted to oversee the development of Botanic Garden for its phase wise development.

f. Important Conferences organized in India or international conferences- nature of participation, subjects discussed, implementation-action taken.

1. 2nd International Symposium on Plant Taxonomy, Ethno-Botany and Botanic Gardens (BSI ISPTBEG-2023) organized on 13th and 14th, February, 2023 at the Bhasa Bhawan Auditorium of National Library, Kolkata.
2. BSI, ISIM organized two days International conference on 'Science, Humanism and making of Modern India: the role of E.K. Janaki Ammal' in hybrid mode on 9th & 10th January 2023 in collaboration with University of Sussex, UK.
3. Atwo days national workshop on Herbarium Techniques and Plant Nomenclature was organized on 11th & 12th April, 2023 by BSI-CNH by collaboration with Vedanta College, Kolkata.

4. Dr. A. A. Mao, Director, Botanical Survey of India attended and represented the Indian Flora in the 26th meeting of the CITES Plants Committee from 5th – 9th June 2023 at Centre International de Conference (CICG) at Geneva, Switzerland.
5. Northern Regional Centre, BSI along with FSI & ZSI conducted a four-days training program from 8th to 11th August, 2023 for the identification of Plant, Animal, and Hands-on Training for Zonal Staff of FSI under the NIRANTAR vertical of MoEF&CC, New Delhi.

g. MEAs, Agreement with countries, international organizations, compliance

BSI signed MoU with National Digital Library of India, IIT, Kharagpur, National Trust for Art and Cultural Heritage (INTACH), New Delhi and Atlanta Botanic Garden, Georgia, USA, University of Delhi and Roxburgh International Hub, UK towards collaborative research.

h. List of major publications brought out- brief purpose of each, wherever necessary:

BSI has published 10 books such as Flora of India Vol 17 and Vol 24; The genus *Calanthe* R.Br. (Orchidaceae) in India; The Flora of Buxa Tiger Reserve, West Bengal; Mangroves of India – A Pictorial Field Guide; Rhododendrons of Sikkim and Darjeeling Himalaya; Pteridophytes of Goa; Pteridophytes of Meghalaya – A Pictorial Guide; Flora of Manipur- A Pictorial Guide 2023; Russulales of Sikkim. Botanical Survey of India, Kolkata.

5.5 ASSISTANCE TO BOTANICAL GARDENS (ABG)

Introduction and Objective of ABG Program:

Assistance to Botanic Garden is a flagship programme of MoEF&CC initiated in 1992 which provides one-time financial assistance to



Hibiscus rosa-sinensis L. cv. *Krishna's radiance*
Chakraborty, J. Swamy, D. Singh



Impatiens laticornis C.E.C. Fisch. (Balsaminaceae)



Hibiscus rosa-sinensis L. cv. *Krishna's radiance*
Chakraborty, J. Swamy, D. Singh



Impatiens laticornis C.E.C. Fisch. (Balsaminaceae)

organizations/Universities maintaining Botanical Gardens for strengthening their infrastructural facilities, facilitating conservation, propagation of threatened and endemic plant species, and undertaking capacity building programmes. The programme envisages building referral model centers for ex-situ conservation in the different phyto-geographical regions through a network of lead botanic gardens and small botanic gardens. These botanic gardens are envisaged to serve as important nodal agencies and develop network among themselves in terms of exchanging knowledge, plant material of the identified species and also to ensure maintenance of plant population. Till now, more than 350 Small Botanic Gardens and 18 Lead Botanic Gardens have benefitted by this scheme.

In 2020, the programme was changed into a non-scheme and funding thereafter was provided from the budget of BSI directly. All the data pertaining to endangered, threatened and endemic species, standard herbarium information, population status, habitat characteristics and uses of plants etc., generated from the project shall be archived in a data bank of Botanical Survey of India and shall be made available to the public based on laid down terms and conditions of use.

The objectives of the scheme include;

1. Ex-situ conservation and multiplication of selected threatened and endemic plants of the region.



2. Ex-situ conservation of selected wild-relatives of crop plants.
3. Development of nurseries for mass multiplication and development of species-wise plant propagation techniques.
4. Improvement of identified infrastructure facilities, equipment for conservation, and manpower for maintenance of gardens.
5. Distribution/exchange of multiplied plant material to other Botanic Gardens/Institutes.
6. To promote education and public awareness on plant diversity, threatened and endemic species by means of organizing seasonal events and theme-based activities.

Progress/Achievements both cumulative and for the reference period.

- i. Funds worth 75 lakh approved by Ministry for ongoing botanic gardens already established in different phytogeographic region.
- ii. Expert Group Committee meeting on Assistance to Botanic Garden (ABG) program held on 28.01.2023 for preparing the road map for ABG program.
- iii. Revised Guidelines for Assistance to Botanic Garden program approved by Ministry, with emphasis on threatened plant species conservation with 70 % grant and expenditure of only 30% on infrastructure development in Botanic Garden.
- iv. A compendium (Vol 1) prepared for Threatened plant species conserved in various Botanic Gardens as per the target sps., approved by Expert Group Committee on Assistance to Botanic Garden Program.
- v. Fresh advertisement “Call for Proposal” for setting up new Botanic Garden advertised and 60 new project proposal received. One expert group committee meeting was convened on 29.11.2023 for preliminary scrutiny of the proposals.

Progress/Achievements made during 2023-24 along with photographs.

During the year 2022-23, an amount of 25,08,888/- was released in favour of six Organizations/Universities towards the different instalments under ABG programme. Seven projects namely Barapani Botanic Garden, ERC, Shillong; BSI, SRC Yercaud; Yogi Vemana Univeristy, Kadappa; BSI, NRC, Dehradun; Sylvan Botanic Garden, FEEDS, Manipur; Udayagiri Mahavidyalaya, Lattur Dt., Maharashtra; and Shivaji University, Kolhapur, Maharashtra have successfully completed their tenure. Under these programmes, many interesting sections such as Asparagaceae section, Tupistra Section, Rhododendron section were developed in Barapani; Medicinal Plant section, Cactarium, Ornamental section developed in Y.S. Parmar University, Solan. 3541 visitors visited the 87 outreach programmes wherein more than 5000 seedlings were distributed to different institutions. Udaygiri Mahavidyala, Maharashtra was able to develop self-reliant irrigation facilities under the program.

5.6 BIOSPHERE RESERVE

1. Introduction:

Biosphere Reserves (BRs) are internationally designated landscape/seascape units under UNESCO's flagship programme viz. “Man and the Biosphere (MAB)”. The Biosphere Reserves represent characteristic ecosystems in different biogeographic regions and consider human communities as their integral component. The broad objective of Biosphere Reserve include amongst others: (i) ensuring a holistic



approach for *in-situ* conservation (at all levels of biodiversity ranging from genes to ecosystems) in totality as part of wider ecosystem; (ii) widening the understanding (through research and monitoring) each of the components of ecosystems; and (iii) achieving integrated development (by improving quality of life for indigenous communities living in and around) of the area. The Biosphere Reserves are therefore, sites for experimenting with and learning about Sustainable Development. Over half-century of its existence the programme has contributed significantly towards building a harmonious balance between the human activities and ecosystem conservation.

The concept of Biosphere Reserves, especially its zonation, into Core Area(s) (dedicated to conservation), Buffer Area(s) (for sustainable use) and Transition Area(s) (for equitable sharing of benefits) were broadly adopted under the Convention on Biological Diversity (CBD) and entered into force on 29th December 1993. The Network of Biosphere Reserves comprising of a dynamic and interactive landscapes of excellence and has emerged as one of the international tools to develop and implement sustainable development approaches in a wide array of context. Over the years, with experience from different regions of the world, the Biosphere Reserve concept has been refined considerably.

India, with an area of 329 million hectares, is the seventh largest country in the world. The diverse topography marked by mountainous regions covering an area close to 100 million hectares, arid and semi-arid zones spreading over 30 million hectares and long coast line of over 7500 kms, coupled with varied precipitation provides a rich landscape diversity. All these features and many more, have resulted in diversity of habitats which harbour and sustain immense biological diversity at all levels. With only 2.4% of world's land area, India accounts for 11% of recorded species of the

world. In India, the National Biosphere Reserve Programme was initiated during 1986 under the aegis of Ministry of Environment, Forest & Climate Change. The Indian National Man and Biosphere (MAB) Committee identified and recommended potential sites for designation of Biosphere Reserves, following the UNESCO's guidelines and criteria.

Biosphere Reserves in India and their year of designation:

1) Nilgiri, Tamil Nadu-Kerala-Karnataka *; 1986	10) Dehang-Dbang, Arunachal Pradesh; 1998
2) Nanda Devi, Uttarakhand *; 1988	11) Pachmarhi, Madhya Pradesh *; 1999
3) Nokrek, Meghalaya *; 1988	12) Khangchendzonga, Sikkim *; 2000
4) Great Nicobar, Andaman & Nicobar Island *; 1989	13) Agasthyamala, Tamil Nadu-Kerala *; 2001
5) Gulf of Mannar, Tamil Nadu *; 1989	14) Achanakmar-Amarkantak, Madhya Pradesh-Chhattisgarh *; 2005
6) Manas, Assam; 1989	15) Kachchh, Gujarat; 2008
7) Sundarbans, West Bengal *; 1989	16) Cold Desert, Himachal Pradesh; 2009
8) Similipal, Odisha *; 1994	17) Panna, Madhya Pradesh *; 2011
9) Dibru-Saikhowa, Assam; 1997	18) Seshachalam, Andhra Pradesh; 2011

*included in the World Network of Biosphere Reserves (green coloured)

Objectives:

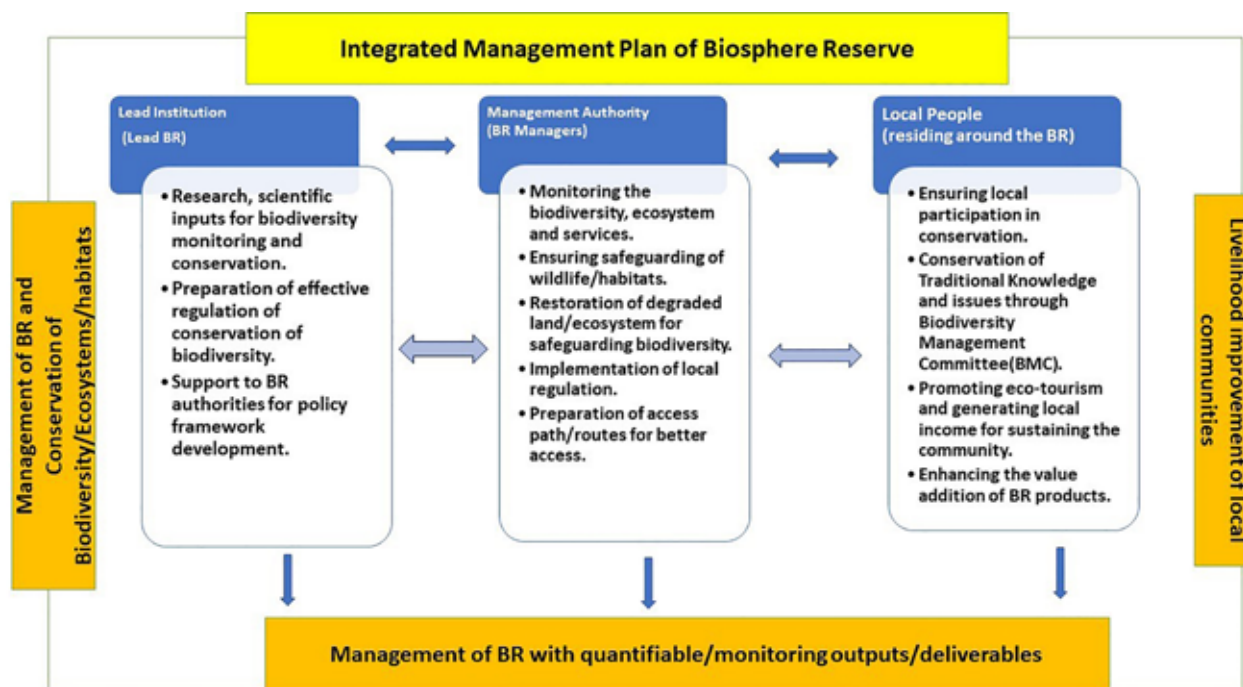
- Conservation of large landscapes, ecosystems and genetic diversity, including management and conservation of floral and faunal diversity and cultural diversity;
- Foster socio-culturally and ecologically sustainable economic and human development;
- Facilitate research, education, and training;

- Exploring livelihood options for local communities etc.

3. Five Year Period Integrated Management Plan: The Ministry of Environment, Forest & Climate Change administers the Biosphere Reserve (BR) scheme, which is a sub-scheme under the ongoing umbrella scheme “Conservation of Natural Resources and Ecosystems”. The Ministry has decided to continue with the Scheme with new changes and it was approved in the Standing Finance Committee meeting held for the financial years 2021-26 that “Biosphere Reserve Integrated Management Plan” for the five years’ period needs to be prepared for all the Biosphere Reserves in the country, in place of the Annual Plan of Operation, which has been the practice so far. The proposed Five Year Period Integrated Management Plan has three components namely, (i) Management authority, (ii) Lead institution, and (iii)

Local people with effective monitoring, sustainable utilization and conservation of bio resources (*diagram representation provided below*)

To begin with, the Integrated Management Plan is being implemented as pilot project in four identified Biosphere Reserves viz. (a) Dihang–Dibang Biosphere Reserve in Arunachal Pradesh, (b) Agsthyamalai Biosphere Reserve in Kerala and Tamil Nadu, (c) Nandadevi Biosphere Reserve in Uttarakhand; and (d) Pachmarhi Biosphere Reserve in Madhya Pradesh. For better co-ordination and effective implementation of the Integrated Management Plan, the Ministry in July, 2023 has issued State Level Steering Committees in the pilot States, which are headed by the concerned Addl. Chief Secretaries / Secretaries / Principal Secretaries of the States. In addition, District Level Committee have also been constituted, which are headed by the concerned Divisional Commissioner where the Biosphere Reserve is located. The executive Orders issued for the constitution of these Committees have



Biosphere reserve management plan

specifically defined the functions of these Committees. Based on the outcome of the pilot projects, the Integrated Management Plan will be improvised and replicated amongst the remaining Biosphere Reserves.

4. Work ahead:

Based on the proposals furnished by the State Government of Madhya Pradesh, the Indian National Man and Biosphere Reserve Committee have deliberated extensively and are in the process for recommendation of two new sites for designation as Biosphere Reserves viz. Pench and Kanha areas in Madhya Pradesh. The MAB Committee is also in the process to consider inclusion of Manas Biosphere Reserve in UNESCO's World Network of Biosphere Reserves. Identification of possible sites for designation as a Biosphere Reserves is also under process.

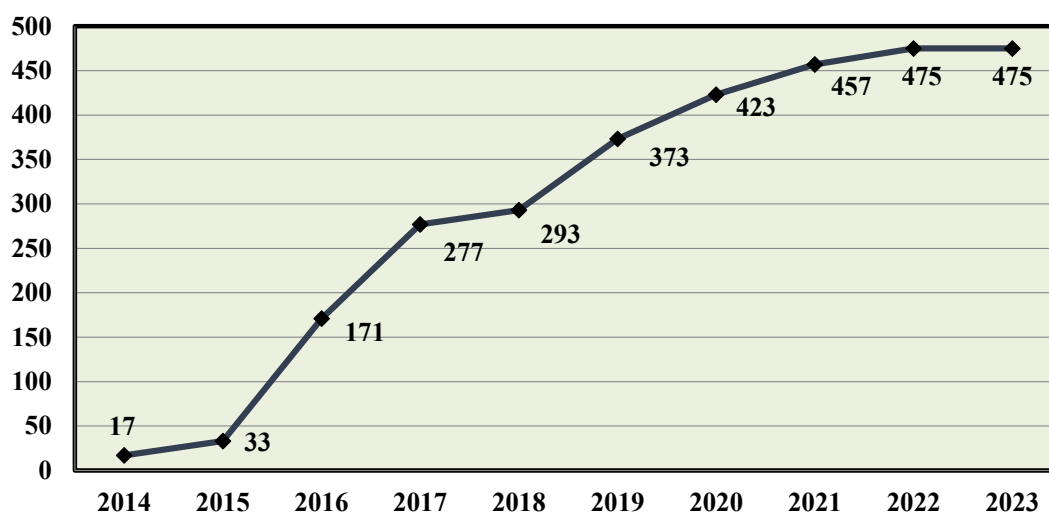
5.7 Eco-sensitive Zone:

1. The purpose of declaring Eco-Sensitive Zone (ESZ) is to create some kind of "Shock Absorber" for specialized ecosystems such as Protected Areas, which include National Parks and Wildlife Sanctuaries. The ESZs act

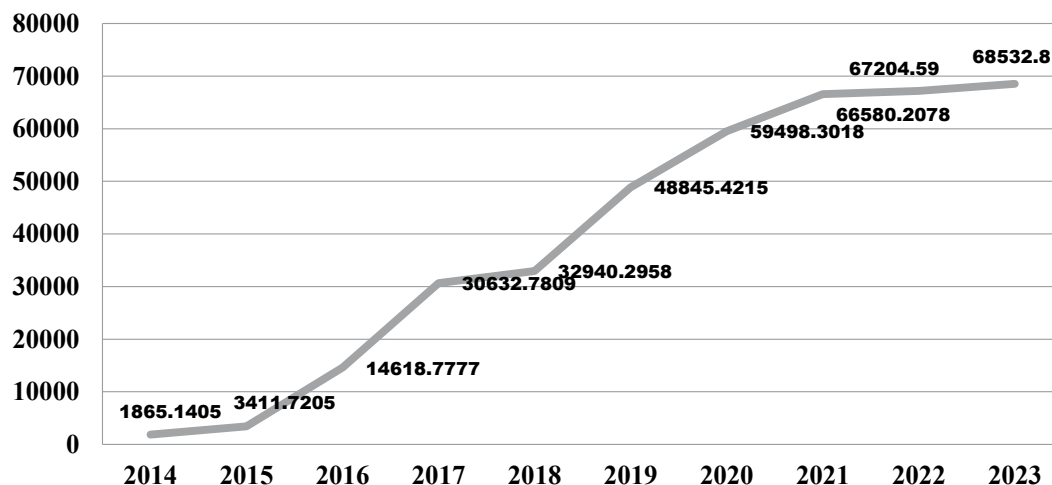
as a transition zone for areas requiring high protection to areas where development may be permitted. There are a total of 677 National Parks and Sanctuaries (Protected Areas) declared in the country.

2. Notifying Eco-Sensitive Zones around the Protected Areas is an important objective of the MoEF&CC for sustainable development and for conservation of Wildlife and Biodiversity around Protected Areas. As part of Wildlife Conservation Strategy, in the year 2002, it was decided that an area around each Protected Area (National Park, Wildlife Sanctuary, Tiger Reserve etc.) requires to be notified as Eco-Sensitive Zone with the purpose of creating a buffer as an added layer of protection around Protected Areas.
3. Whereas, on the other hand, Ecologically Sensitive Areas (ESA) are "areas with identified environmental resources having incomparable values which require special attention for their conservation". The ecologically sensitive areas notified by the Ministry are Doon Valley, Dahanu Taluka,

Progress in ESZ notification for the Protected Areas of India



Progress in ESZ Area of India (in sq km)



ESZ and their cumulative area around Protected Areas.

Aravalli Range, Mahabaleshwar-Panchgani, Matheran, Mount Abu and Bhagirathi.

A graphical representation on the progress of declaration of ESZs around Protected Areas since 2014 onwards and the areas in sq.kms covered under ESZ regulations are given below.

- Prior to 2016, the ESZ notifications prescribed that the State Government shall prepare a Zonal Master Plan (ZMP) within two years from the date of the publication of the notification and got it approved by the Central Government. Later, with the objective aimed at decentralisation of

powers, the Ministry has delegated the power of approval of the Zonal Master Plan to the State Government and have also made required amendments in a number of ESZ notifications published prior to 2016 by way of empowering the concerned State Governments, who is the custodian of the land in the state and its management, for approval of the Zonal Master Plan/ Regional Plan / Development Plan etc. for enforcement and implementation of the ESA notifications. Similar, delegation of powers has also been carried out in respect of Eco Sensitive Areas notifications.

- The ESZ Division in the Ministry also

Table 1: Final ESZ Notifications Published in the Year 2023

S. No.	State	Name of Protected Area for which final ESZ Notification published	Date of Publication
1.	Karnataka	Gudekote Sloth Bear Sanctuary	27.10.2023
2.	Madhya Pradesh	Ralamandal Sanctuary	02.11.2023
3.	Maharashtra	Nagzira , New Nagzira , Koka , Navegaon and Navegaon WLS, Maharashtra	20.09.2023
4.	Meghalaya	Nokrek National Park	03.07.2023

administers and handles matters related to providing Grants-in-Aid to Dahanu Taluka Environment Protection Authority, constituted under the Order of the

Hon'ble Supreme Court for protection and conservation of Dahanu Taluka. The financial assistance extended in the year 2023 as on 07.11.2023 is as follows:

Table 2: Financial assistance of Dahanu Taluka

S. No.	Name of Organization	Purpose	Total Amount Released as on 07.11.2023	Status of third-party evaluation	Remark
1.	Dahanu Taluka Environment Protection Authority (DTEPA)	Functioning of Authority	Rs. 53,00,000/- (Including carry forward of Rs. 13,84,121/- from last FY)	NIL	The funds were released from the scheme of Establishment Expenditure (EF&CC) (3493) Major Head '3435' Ecology and Environment, Grant in-aid- General (3435.01.001.04.04.31), under Demand No.28, Ministry of Environment, Forests and Climate Change during the Financial Year 2022-2023 (Plan) from the budget head of PL-Division.



CHAPTER - 6

WETLANDS & COASTAL ECOSYSTEM

6.1 National Plan for Conservation of Aquatic Eco-System (NPCA):

The Wetlands Division of MoEF&CC works towards sustainable management and conservation of wetlands in the country. The Division's objective of conservation and management of wetlands is divided under 4 broad categories i.e., Implementation of National Plan for Conservation of Aquatic Ecosystems (NPCA), Capacity building, Regulatory frameworks, and Implementation of Ramsar Convention in the country.

Major activities

1. World Wetlands Day was celebrated during 2nd to 4th February 2023 at Goa. On this occasion, the Hon'ble MEF&CC launched a year-long 'Save Wetlands Campaign' for spreading mass awareness about the conservation and management of wetlands in the country.
2. Three regional workshops were organised in Goa (for Western states), Kochi (for Southern states) and Imphal (for Northeastern states) under the *Sahbhagita* mission.
3. Faunal inventory of all the 75 Ramsar Sites has been completed and published by ZSI in collaboration with Wetlands division. Floral inventory for all the Ramsar Sites is currently under development by BSI.
4. *Amrit Dharohar* implementation strategy was launched during World Environment Day 2023.
5. "India Wetland Coalition (IWC): Workshop on Developing Partnership and Convergence for Wetlands Conservation with Special Reference to *Amrit Dharohar*" was held on 30.06.2023 at Mumbai in collaboration with CII and the Govt. of

Maharashtra for involving industries in wetlands management and conservation.

6. A national workshop was held for the Strategic Planning for 2-Step Integrated Management Planning of Wetlands & Implementation of *Amrit Dharohar* from 13th-15th July 2023 in Bhopal. During the workshop, the structure for a Framework Management Plan (FMP) was finalized in consultation with the representatives from the states.
7. Guidelines for strengthening nature tourism and developing interpretation centres at the Ramsar Sites have been prepared and shared with the Ministry of Tourism.
8. Training courses for nature guides for Ramsar Sites has been developed by EIACP. 5 sites have been identified for imparting training by MoEF&CC and MoT to forest officials and Wetland *Mitras*.
9. NBA is currently preparing PBRs for all the 75 Ramsar Sites.



Figure 1: The implementation approach of Amrit Dharohar



10. Under the 'Save Wetlands Campaign' a cleaning drive was conducted across Ramsar Sites of the country during the 'Swachhata Pakhwada' from October 2nd to October 30th, 2023.

Important cumulative achievements:

1. On the 75th Year of Independence, the division facilitated the designation of 26 more Ramsar Sites to take the total number of Ramsar Sites in the country to 75. NCSCM is assessing Carbon stocks and sequestration for 25 of the 75 Ramsar sites. A Standard Operating Procedure is developed for assessment of carbon stocks and sequestration in wetlands.
2. In 2022, Mission *Sahbhagita* was launched, and a standard operating procedure was developed for the same to initiate participatory management of wetlands across the country.
3. MoU signed between MoEF&CC and Confederation of Indian Industry (CII) for involvement of industrial communities in participatory management of wetlands including wise use.
4. 87 wetlands have been notified under the Wetlands (Conservation and Management) Rules, 2017.
5. 'Wetlands of India' portal is developed in collaboration with GIZ. The portal is an initiative to provide a single point access system that synthesizes information dissemination regarding wetland sites of the country, projects, initiatives and trainings. It also provides a platform for the people of the country to learn more about wetlands and get involved in their conservation and management.
6. Applied for Ramsar Wetland City Accreditation of three cities namely Indore, Bhopal, and Udaipur.

List of major publications:

India's 75 Amrit Dharohar: A factbook of the 75 Ramsar Sites of India was released by the Hon'ble Union Minister of EF&CC during the World Wetlands Day 2023 celebration. The factbook is a one-stop resource of information on our 75 Ramsar Sites, including their values, threats they face and management arrangements.

Managing Climate Risks in Wetlands - a Practitioner's Guide: It was launched by the Hon'ble Union Minister of EF&CC during the World Wetlands Day 2023 celebration. The practitioner's Guide on Climate Risk Assessment was developed under the MoEF&CC-ICI-BMUV project 'Wetlands Management for Biodiversity and Climate Protection' with GIZ. It provides stepwise guidance on assessing the site-level climate risks and integration of adaptation and mitigation responses into the wetland management plan.

Cultural Significance of Indian Wetlands: Hon'ble Union Minister of EF&CC released a book titled 'Cultural Significance of Indian Wetlands'. This book was prepared by the MoEF&CC in collaboration with the ICI-BMUV funded 'Wetlands Management for Biodiversity and Climate Protection' Project with GIZ. The book is a compilation of stories that are emanated from the centuries-old deep cultural connection of local communities with different wetlands across the country.

ANUP Newsletter: This half-yearly newsletter serves as a comprehensive report highlighting significant achievements and initiatives for the wise use of wetlands. The recently issued second edition serves as an update for wetland managers, wetland authorities, and stakeholders at various levels—providing a detailed account of initiatives carried out at the Central, State, and Local levels from June to December 2022.



Release of half-year newsletter by Honourable Minister.



Scheme under the Division:

Name of the Scheme: National Plan for Conservation of Aquatic Ecosystems

The Wetlands Division of MoEF&CC implements a centrally sponsored scheme namely, National Plan for Conservation of Aquatic Ecosystems (NPCA) for conservation and management of wetlands in the country on cost sharing basis between Central Government and respective State/UT Governments. The scheme aims at holistic conservation and restoration of wetlands for achieving the desired water quality enhancement, besides improvement in biodiversity and ecosystems. It aims to promote mainstreaming of wetlands in developmental programming with States by supporting formulation and implementation of integrated management plans, capacity development and research.

Various activities covered are interception, diversion and treatment of wastewater, shoreline protection, lake front development, in-situ cleaning i.e., de-silting & de-weeding,

storm water management, bioremediation, catchment area treatment, lake beautification, survey & demarcation, bio-fencing, fisheries development, weed control, biodiversity conservation education and awareness creation and community participation.

Progress/Achievements:

In the year 2023-24, funds earmarked for the conservation and management of wetlands (including lakes) from 01.01.2023 to 31.03.23 is **Rs. 15.16 cr** and from 01.04.2023 to 30.11.2023 is **Rs. 10.64 cr** released for 19 important wetlands namely **Wullar, Pushkar, Patna, Chandotaal, Saman, Sarsai nawar, Soor Sarovar, East Kolkata Wetlands, Gurudongmar, Chilika, Amrit Sagar, Lakh Bahosi, Nawabganj, Sandi, Sita Sagar, Samaspur, Tamdil, Yaral Pat and Pala**. A total of **Rs 25.80 cr** has been released for conservation of wetlands in 8 states and **60 Lakhs** for one externally aided project (EAP) with WISA (IMWBES Project) during 01.01.2023 to 30.11.2023.

Grant-in-aid released to Institutions/organisations including NGOs:

Name of Organisation	Purpose	Total Amount Released	Status of third-party evaluation	Remarks
NCSCM	Holistic Conservation and management of wetlands in India	3 cr	-	Project is ongoing

**Externally Aided Projects (EAP):****Project Progress of Integrated Management of Wetland Biodiversity and Ecosystem Services (IMWBES):****a) The following knowledge and outreach products were prepared**

- i. A Fact book on Ramsar Sites of India has been prepared for release during World Wetlands Day 2023. <https://indianwetlands.in/wp-content/uploads/library/1683182884.pdf>.
- ii. A Factsheet on Coastal Wetlands for dissemination during World Wetland Day (https://drive.google.com/file/d/1jiEykhSFHD_8nGMLinfyvytrvhCQjBYg/view?usp=drive_link)
- iii. The second and third issue of the six-monthly newsletter of MoEFCC have been developed and shared on the national wetlands portal (www.indianwetlands.in).
- iv. Brochure on Implementation Strategy of Amrit Dharohar, available at <https://indianwetlands.in/wp-content/uploads/library/1686133937.pdf>
- v. A poster on High Altitude Wetlands to showcase the uniqueness, values and threats. https://drive.google.com/file/d/1H_6ixnaHwXDpN8_X9_fTGYID4ryJCfs/view?usp=sharing
- vi. A video on Amrit Dharohar, presented during the launch of Amrit Dharohar by the Hon'ble Prime Minister, is prepared and available at <https://twitter.com/moefcc/status/1665659031795519489?s=20>

b) Demonstration of integrated wetland management

As part of Integrated and multi-sectoral wetland management approach, to

facilitate learning and develop best practices for up-scaling and broader implementation, Integrated Management Plan for the Gokul Jalashay wetland in the Buxar district of Bihar was prepared.

c) Second meeting of NPSC

The second meeting of NPSC of the IMWBES project, chaired by the Joint Secretary, was held on April 25, 2023, at the MoEF&CC, Indira Paryavaran Bhavan, New Delhi, to share the project progress and seek approval to the alignment of project activities with the Amrit Dharohar in the existing work plan.

GIZ-BMUV-IKI 'Wetlands Management Biodiversity and Climate Protection' project during 2023

- a) On the occasion of World Wetlands Day 2023 celebration in Curchorem, Goa, a project publication titled, 'Managing Climate Risks in Wetlands: A Practitioner's Guide' was launched by Shri Bhupender Yadav, Hon'ble Minister of EF&CC, GoI. The document is a stepwise guidance on assessing site-level climate risks and integration of adaptation and mitigation responses into the wetland management plan.
- b) An expert consultation on 'Developing a climate co-benefit assessment methodology for wetlands', was organised on 26th April 2023 in New Delhi under the chairmanship of Dr. Sujit Kumar Bajpayee, Joint Secretary, MoEF&CC focusing on the exchange and stock-taking of existing wetland carbon storage studies in India including mangroves, seagrasses and inland wetlands. Discussions also revolved around assessing and measuring climate change adaptation and disaster risk reduction benefits of wetland conservation.



- c) Hon'ble Minister EF&CC, released a project publication titled 'Cultural Significance of Indian Wetlands' during a regional workshop for the North-Eastern states at Imphal, Manipur organised by MoEF&CC. The book explores the stories of the deep socio-cultural connection of the local communities with different wetlands across the country.
- d) The project in collaboration with MoEF&CC organised a National Workshop on 'Strategic Planning for 2-Step Integrated Management Planning of Wetlands and Implementation of Amrit Dharohar'. The workshop was held in coordination with Environmental Planning and Coordination Organisation (EPCO) where a two-step approach was presented with introduction of Framework Management Plan (FMP) that provides basic framework for less resource- intensive prioritised actions and can lay the groundwork for IMP preparation. Additionally, it offers an opportunity to expedite the implementation of the *Amrit Dharohar* initiative in Ramsar Sites.
- e) Taking forward the *Amrit Dharohar* initiative of the Wetlands Division (MoEF&CC), the project organised Eco-Guide Training and Assessment in Bhitarkanika National Park in collaboration with the Mangrove Forest Division, Rajnagar and The Naturalist School. The training specifically targeted selected tourism facilitators from the region, including boat owners, forest personnel, boat drivers, and homestay owners primarily from villages around Bhitarkanika National Park.
- f) Under the ambit of Save Wetlands Campaign, GIZ has collaborated with Mangrove Forest Division, Rajnagar, Odisha and Action for Protection of Wild Animals (APOWA), to engage with around 900 school students and teachers in Kendrapara district to raise awareness on Bhitarkanika Ramsar Site as well as Human-Crocodile Conflict.
- g) From May to September 2023, the Tamil Nadu Forest Academy in collaboration with the Tamil Nadu State Wetland Authority and the GIZ wetlands project conducted a series of multistakeholder trainings with more than 400 participants for wetlands conservation, ecosystem services and integrated management of wetlands at site and state levels targeting towards saltpan workers, aquaculture farmers, fisher cooperatives, DFOs and Wildlife Wardens, Forest Rangers, and CBOs/NGOs.
- h) Integrated management plans for Pong Dam and Renuka Ji, which were prepared under the project for Govt of Himachal Pradesh and the same were under active consideration in the Ministry for financial assistance under NPCA scheme.
- i) As part of the Save Wetlands Campaign, the MoEF&CC-GIZ implemented project supported Himachal Pradesh government to host a Green Renuka Ji International Fair in November 2023 with technical support from Waste Warriors Society. In the runup to the fair over 500 people were sensitised as part of a pre-fair awareness campaign. The Renuka Fair culminated with a mass cleanup event on 4th December with overwhelming support of local stakeholders. By the end of the fair, over 4500 kgs of mixed dry waste was successfully collected and diverted from the Renuka wetland ecosystem to a *Swachhta Kendra* (Material Recovery Facility).
- j) The project organised a workshop in December 2023 on IMP Strategy of



Bihar and initiated the development of an integrated management plan for Debkhal Chaur, Samastipur. The workshop facilitated a knowledge exchange on wetland management, drawing on experiences from the Kabartal Ramsar Site and Gokul Jalashay. In an innovative move, panchayat members from Samastipur and local stakeholders, including fisherfolk and farmers, contributed grassroots perspectives on wetland use and conservation.

6.2 Sustainable Coastal Management (SCM):

Introduction:

Sustainable Coastal Management Division was created by MoEF&CC vide order dated 30th May 2022 with the following allocation of work:

- i. National Coastal Mission
- ii. Scheme on Coral and Mangroves
- iii. Matters related to Society of Integrated Coastal Management (SICOM) and National Centre for Sustainable Coastal Management (NCSCM)
- iv. Matters related to Marine Spatial Planning and Blue Economy.
- v. Marine litter
- vi. Potential Externally Aided Projects on Sustainable Coastal Management Division

The mandate for the Division is sustainable development and environment management of coastal regions such as conservation of coastal and marine resources, coastal pollution abatement measures and alternative livelihood of coastal communities, adaptation strategies for climate resilience in coastal States/Union Territories of India.

The main roles and responsibilities are as follows:

1. To take measures for conservation, protection and management of coastal ecosystem and marine environment such as the mangroves, coral reefs, etc.
2. To improve resilience of coastal and marine ecosystems and its services.
3. To address climate change challenges on coastal and marine ecosystems and communities through a combination of adaptation and mitigation measures which include strengthening natural shields against extreme weather conditions to protect shorelines, assets and communities.
4. Conservation and Management of Ecologically sensitive areas (Mangroves, Coral reefs, etc.)
5. To undertake research and development activities for coastal ecosystem and communities.
6. To prevent, abate and control pollution of coastal and marine waters from land-based sources and developing infrastructure for environment protection.
7. Development of Coastal Marine Spatial Planning and Integrated Coastal Zone Management works.
8. To enable climate resilient development of blue economy activity with adequate safeguard for coastal ecology and marine environment with demonstrative and pilot scale projects.
9. To create awareness among stakeholders on climate change challenges and promote adaptation and acceptance of mitigative measures.

Activities undertaken including celebrations for Azadi Ka Amrit Mahotsav.



- To promote “Jan Bhagidari” and to sensitize local communities about the importance of clean beaches and pollution free oceans, mass beach cleaning drive was organized on 21st May 2023 between 0700 – 0900 AM, across 9 coastal states and 4 Union Territories of India under India’s Presidency of G20. The event was participated by approximately 20,000 participants. The Beach Cleaning campaign was joined by fourteen G20 countries and six countries across the world.
- Upscaling of ongoing National Coastal Mission scheme for promotion of climate resilient Blue economy activities were prepared.
- Statutory Audit of Books of accounts of Society of Integrated Coastal Management (SICOM) has been completed. Application for de-register of SICOM from the Registrar of Societies, NCT has been submitted.
- First General Body Meeting of National Centre from Sustainable Coastal Management (NCSCM) was held in March, 2023.
- Draft Adaptative Management Plan for externally aided Enhancing Coastal Resilience of Indian Coastal Communities (ECRICC) project by Green Climate Fund prepared.

Scheme/Programme under the Division

Conservation and Management of Mangroves and Coral Reefs, a central sector scheme, has been implemented. Under the Scheme, 38 mangroves and 4 coral reef sites have been identified for on-ground intervention (Annexure I). During the financial year 2022-23, the Ministry has provided financial support in the ratio 60:40 to the Forest Departments of the Coastal States/UTs Govts.

Objectives

- Conservation and Management of Mangroves and Coral Reefs.
- Eco-restoration and afforestation in potential and also in degraded coastal areas.
- Maintenance of genetic diversity especially of threatened and endemic species.
- Creation of Awareness on importance of these ecosystems leading to their conservation.
- Livelihood improvement of people in coastal areas.

Progress/Achievements

- 17 proposals have been approved out of 20 received for grant of financial support under Conservation and Management of Mangroves and coral reefs for the year 2022-23.
- 10 Blue Flag beaches have applied for renewal of Blue Flag certification.
- Blue Flag certification for the environmentally sound beach infrastructure and operating measures.
- Beach Development work at Sonapur, Odisha is completed and is in progress at Tannirbhavi, Karnataka. Both these beaches have applied for Blue Flag Certification.

Autonomous bodies- appraisal of the functioning of each of the autonomous bodies/institutions in relations to their objectives.

National Centre for Sustainable Coastal Management (NCSCM) was established under the aegis of MoEF&CC in February 2010 with the objectives of developing into a leading institution for the management of coastal and marine areas

with adequate human resources and research infrastructure. It will support the management of coastal and marine areas in India in an integrated and sustainable manner and provide guidance to the national and State governments, and other relevant stakeholders, on matters of policy and science related to Integrated Coastal Zone Management (ICZM).

Vision: To promote sustainable coasts through increased partnerships, conservation practices, scientific research and knowledge management for the benefit and wellbeing of current and

future generations.

Mission: To support integrated management of the coastal and marine environment for livelihood security, sustainable development and hazard risk management by enhancing Knowledge, Partnerships and Network, Research and Advisory Support and Coastal Community Interfacing.

The first General Body meeting of NCSCM was held in March 2023.

4. Grants-in-aid released to Institutions/organisations including NGOs

S. No.	Name of Organization	Purpose	Total amount released (in lakhs)
1	Forest Department of Gujarat	Conservation & Management of Mangroves and Coral Reefs (2022-23)	23.3919
2	Forest Department of Kerala		19.6015
3	Forest Department of Odisha		56.4954
4	Forest Department Tamil Nadu		48.4387
5	Forest Department of West Bengal		88.51456
6	Forest Department of Karnataka		16.59225
8	National Centre for Sustainable Coastal Management	Preparation of Mangrove Zonation Community Atlas of India	39.06
		Beach cleaning activity under the ambit of G20 presidency for 29 beaches	39.87
		Study visit of Public Accounts Committee to Mahabalipuram	10.92
		For Beach infrastructure development	400

Annexure I

States/Union Territories	Mangrove and Coral Reefs Sites
West Bengal	1. Sunderbans
Orissa	2. Bhitarkanika
	3. Mahanadi
	4. Subarnarekha
	5. Devi River Mouth
	6. Dhamra
	7. Mangrove Genetic Resources Centre
	8. Chilika

States/Union Territories	Mangrove and Coral Reefs Sites
Andhra Pradesh	9. Coringa 10. East Godavari 11. Krishna
Tamil Nadu	12. Pichavaram 13. Muthupet 14. Ramnad 15. Pulicat 16. Kazhuveli
Andaman & Nicobar	17. North Andamans 18. Nicobar
Kerala	19. Vembanad 20. Kannur (Northern Kerala)
Karnataka	21. Coondapur 22. Dakshin Kannada/Honnar 23. Karwar 24. Mangalore Forest Division
Goa	25. Goa
Maharashtra	26. Achra-Ratnagiri 27. Devgarh-Vijay Durg 28. Veldur 29. Kundalika-Revdanda 30. Mumbra-Diva 31. Vikroli 32. Shreevardhan 33. Vaitarna 34. Vasai-Manori 35. Malvan 36. Thane Creek
Gujarat	37. Gulf of Kachchh 38. Gulf of Khambhat 39. Dumas-Ubhrat
Coral Reef Sites	
Gujarat	1. Gulf of Kachchh
Tamil Nadu	2. Gulf of Mannar
Andaman & Nicobar	3. Andaman and Nicobar Coral Reef
Lakshadweep	4. Lakshadweep



6.3 NCSCM:

Introduction

NCSCM is an institution established by the MoEF&CC to support the protection, conservation, rehabilitation, management, and policy advice of the coast. NCSCM provides knowledge support to the Government, stakeholders and General Public with reference to the coastal areas on HTL, LTL, ESA-CVCA, preparation of CRZ, CZMP, etc. as stipulated in the CRZ Notification, 2011 and 2019. NCSCM also undertakes R&D activities on sustainable coastal management, and holistic conservation of wetlands.

Important activities undertaken

- Prepared 2000+ Coastal Zone Management Plan (CZMP) maps and Coastal Regulation Zone (CRZ) maps for various states/ UTs and other stakeholders to support the implementation of CRZ Notification 2011 and 2019.
- NCSCM organized about 150 beach, coastal and wetland clean-up and sensitization activities along with the local communities and Governments to promote the principles of LiFE Mission. About 8000 people were sensitized on Mission LiFE.
- As a primary knowledge partner, NCSCM is developing knowledge networks and assessments of wetlands of India under the project “Holistic Conservation and Integrated Management Plan of Wetlands” funded by the Wetlands Division of the MoEF&CC.
- NCSCM conducted a Joint study along with CSIR-CMSRI and ICAR-CMFRI on “Seaweed Cultivation Potential and Ecological Safeguards in the Gulf of Mannar, Tamil Nadu” to enhance local livelihoods funded by the Ministry of Fisheries under the PMMSY Scheme.
- To reduce micro plastic pollution and

to limit litter in the ocean a project on “Circular Economy Solution Preventing Marine Litter in Coastal Ecosystems” is being executed.

- To protect, conserve, and manage the Bhitarkanika’s coastal environment, NCSCM is executing the OFSDP funded “Long Term Monitoring Plan for Ecosystem-based Conservation Management for Bhitarkanika Conservation Area - Phase II” for the Odisha Forestry Sector (OFSDP II) project.

Progress/Innovations

- Mangrove mapping at the community and species level enables the creation of a detailed inventory of mangrove forest biodiversity and supports coastal ecosystem management. Using Spectral Reflectance of various mangrove species in mangrove forests, NCSCM has prepared Mangrove Community Zonation Atlas of India which has been verified by Ground Truthing to support community and species-level management in the mangrove forests.
- NCSCM has conducted a carbon stock assessment study in Indian mangrove and seagrass ecosystems to demonstrate the carbon sequestration capacity.
- Ecosystem health report cards have become increasingly more important tools for communicating the environmental state and assessing progress towards management goals. NCSCM has prepared the third Ecosystem Health Report Card for the Bhitarkanika Conservation Area (BCA) for the year 2022-23.
- For the first time, a Coral Reef Health Report Card for Kadmat Island, Lakshadweep was prepared.

Important Cumulative achievements

NCSCM provides knowledge support for the restoration and enhancement of coastal mangrove cover, and demonstration of carbon sequestration to encourage an increase in mangrove cover as climate change mitigation. The Centre has developed methodologies and provided details on ecosystem health using health reports, monitoring, and development tools for sustainable management of coastal areas. NCSCM developed methodologies and made macro-level and a few site-specific assessments to estimate the equivalent economic benefits of eight ecologically sensitive areas such as mangroves, coral reefs, seagrass, salt marshes, sand dunes, turtle nesting grounds, nesting grounds of birds, sand dunes of India. NCSCM prepared the CZMP and CRZ maps to support the implementation of the CRZ Notification, 2011 and 2019.

Promulgation of new Acts/ Rules, if any, along with the details along with major amendments/deletions.

- NCSCM is the member to review, and amend, 'The Coastal Aquaculture Authority (Amendment) Act, 2023'.

Continuing committees/commissions- their work during the year and present position.

- NCSCM Scientists are the Members of several NGT technical committees to provide inputs for the NGT cases.

Important Conferences organized in India or international conferences- nature of participation, subjects discussed, implementation action taken.

1. NCSCM organised a meeting to discuss the highlights of Maan Ki Baat National Seminar on Marine Litter – Best Management Practices on 27th April 2023
2. NCSCM in association with MoEF&CC have organised G20 Mega Beach Clean Up in the Coastal States of India in Mumbai on 20th

& 21st May 2023. About 10000+ people and Officials of various departments in coastal States and UTs participated.

3. NCSCM conducted an awareness campaign in Pattinampakkam Beach, Chennai on "Say No to Single Use Plastics and Reduce Waste" on 21st June 2023. About 500+ persons participated or visited the campaign.
4. To reduce pollution and create awareness of the circular economy NCSCM organised the "Introducing Refillable Vehicle & Pay with your Plastics Campaign" was organised on 22nd June 2023.
5. Co-organised the Ridge to Reef - 10th South and Central Biosphere Reserve Network Meeting (SACAM) on 1st-3rd November 2023 along with the BR & ESZ Division, MoEF&CC and UNESCO.

List of major publications brought out- brief purpose of each, wherever necessary.

Published 12 research publications in peer reviewed journals (April to December 2023), with a cumulative impact factor of 65.062. The publications are the outputs from various scientific studies undertaken by the scientists of NCSCM in addition to the regular reports of the project activities.



Sample Map of Approved CZMP as per CRZ Notification 2019, Maharashtra



CHAPTER - 7

CONSERVATION-FOREST



7.1 Forest Conservation

Forest Conservation Division of the MoEF&CC implements the provisions of Forest (Conservation) Act, 1980 to ensure sustainable development in the country. Forest (Conservation) Act is a regulatory frame work which ensures development and ecological security to the citizens of the country.

The proposals seeking prior approval of the Central Govt. for using forest land for non-forestry purposes are analyzed with due diligence and every effort is made to avoid the use of forest land or to keep it at bare minimum. Wherever the use of forest land is unavoidable, the same is allowed to be used subject to raising of Compensatory Afforestation and payment of Net Present Value as per norms. Additional mitigation measures in the form of Catchment Area Treatment (CAT) Plan, Wildlife Management Plan, Soil and Moisture Conservation works and maintenance of Safety Zone etc. are stipulated on case-to-case basis

Progress/Innovations

- i. **Notification of the FC Amendment Act, 2023** : To remove the ambiguity of the applicability of the FC Act, the Ministry has notified the Forest (Conservation) Amendment Act, 2023 on 04.08.2023 which will be in force from 01.12.2023.
- ii. 27 number of guidelines/clarifications were issued to streamline process of approval under FC Act, 1980.
- iii. Stabilization of FC module of PARIVESH 2.0"

Important Cumulative achievements:

During the period from 01.01.2023 to 08.11.2023, the Ministry has accorded 'in-principal' in 22 proposals which accords to 4084.47 ha of forest land and has accorded Stage-II/final approval in

35 proposals which accords to 12191.60 ha of forest land. In lieu of the above mentioned Stage-I FC-11/1/2021-FC I/58728/2023 approvals the Ministry has stipulated an area of 6583.53 ha of land (degraded 5788.57 ha and non-forest land- 794.96 ha) for Compensatory Afforestation and 12489.29 ha of land (degraded -2692.42 ha and non-forest land- 9796.87 ha) for Compensatory Afforestation w.r.t to Stage-II/final approval.

Continuing committees

- i. In exercise of powers conferred under Section 3 of the Forest (Conservation) Act, 1980 read with Rule 3(1) of the Forest (Conservation) Rules 2003 and Forest (Conservation) Rules 2022, Advisory Committee (AC) was constituted by this Division.
- ii. From 01.01.2023 to 20.10.2023, eleven Advisory Committee meetings were held. 121 proposals were discussed in Advisory Committee meetings held in between 01.01.2023 to 20.11.2023.

7.2 Compensatory Afforestation Fund Management and Planning Authority (CAMPA)

Introduction

The Compensatory Afforestation Act, 2016 (CAF Act 2016) was enacted on 3rd August, 2016. The CAF Rules, 2018 were notified on 10th August, 2018 and the date of coming to effect of CAF Act and Rules is 30.09.2018 enabling the creation of the compensatory afforestation fund as a special fund under the Public Account of India. The monies deposited in the National fund are non-lapsable and interest-bearing. The CAF Act, 2016 also provides for State Compensatory Afforestation Fund under the Public Account of the respective State/Union Territory (UT). The CAF Act has brought transformational changes in forest and wildlife management in the country.



The CAMPA funds are being utilized by the States/UTs to carry out compensatory afforestation projects and improve the quality of forests, strengthen forest protection infrastructure and improve wildlife habitats. CAMPA Funds are utilized as per provision of CAF Act, 2016 and CAF Rules, 2018 for carrying out Compensatory Afforestation for compensating the loss of forests and trees during diversion of forest land, improvement of quality of forest, biodiversity and wildlife habitat, protection and conservation related activities including control of forest fire, soil and moisture conservation activities etc. The monitoring and evaluation of CAMPA activities is carried out both internally by the State Forest Department as well as external 3rd party monitoring and e-Greenwatch at national level by Forest Survey of India.

National Authority takes up schemes/pilot scientific research projects in areas of national and regional importance pertaining to conservation of forest, wildlife, biodiversity and enhancement of ecosystem services through its National Fund. Some of the important Schemes supported by National Authority are conservation of Endangered Species Recovery programme such as Great Indian Bustard, River Dolphin, Dugong, Manipur's brow antlered Deer (Sangai) by Wildlife Institute of India; National Tiger Conservation Authority (NTCA) for carrying out estimation of Tiger and introduction of Cheetah; Indian Council for Forestry Research and Education (ICFRE) for conservation and development of Genetic resources in forestry, estimation of economic loss of forest due to forest fire; Forest Survey of India (FSI) for Satellite survey of encroachment areas and e-Green Watch etc.

National Authority is contributing in large scale urban greening through Nagar Van and School Nursery Yojana in various cities across the

country. The Ministry has also recently launched Mission MISHTI for afforestation and restoration of mangroves in 540 sq. km area along the 7,500 km coastal belt of the country under the funding from the National Authority.

Objectives: To ensure the following activities are carried out in the States/UTs from the CAMPA funds to compensate the developmental activities in terms of compensatory afforestation using the monies deposited by the user agencies-

- (i) Assisted natural regeneration
- (ii) Artificial regeneration
- (iii) Silvicultural operations in forests
- (iv) Protection of plantations and forests
- (v) Pest and disease control in forest
- (vi) Forest fire prevention and control operations
- (vii) Soil and moisture conservation works in the forest
- (viii) Voluntary relocation of villages from protected areas
- (ix) Improvement of wildlife habitat



Mangrove Plantation at Rajnagar WL Division, ODISHA

- (x) Planting and rejuvenation of forest cover on non-forest land in wildlife corridors
- (xi) Wild animal rescue centre and veterinary treatment facilities
- (xii) Wood-saving cooking appliances in forest fringe villages
- (xiii) Management of biological diversity and biological resource



Development of sandalwood and rosewood estates and management of sandalwood reserves in Karnataka

Provisional Status of CAMPA activities in States/UTs for the year 2023-24 is as follows:

State/UT	Compensatory Afforestation (CA)				NPV				Interest Component				Remarks
	Target		Achievement		Target		Achievement		Target		Achievement		
	Physical (in Ha.)	Financial (in crores)	Physical (in Ha.)	Financial (in crores)	Physical (in Ha.)	Financial (in crores)	Physical (in Ha.)	Financial (in crores)	Physical (in Ha.)	Financial (in crores)	Physical (in Ha.)	Financial (in crores)	
Andaman & Nicobar	56.16	1.49	36.56	0.682	*	5.32	*	3.29	0	0	0	0	*32 lakhs fruit bearing seedlings raising and planting, Achievement-26,78,732 (seedlings)
Andhra Pradesh	2276.75	51.74	845.04	7.22	3960.00	50.04	3594.00	30.56	0	0	0	0	
Arunachal Pradesh	4459.20	25.36	4458.67	25.36	6215.63	37.996	6063.60	37.030	0	0	0	0	
Assam	467.452	13.86	0	8.90	1323	46.44	450	56.82	0	0	0	0	
Bihar	1321.09	21.797	1321.09	13.613	31.87	0	0	13.33	0	8.42	0	4.72	191.75 Km 19,27,634 Nos. CA Target 162.0 Km 18,63,794 Nos. CA achievement
Chandigarh	0.14	1.56	0.14	1.56	0	0	0	0	0	0	0	0	Maint. 89.49
Chhattisgarh	2634.357	50.95	485.912	0.80	2697.00	35.60	1475.00	8.30	0	0	0	0	
Delhi	71.95	14.60	70.58	5.53	0	0	0	0	0	0	0	0	
Goa	420	5.25	299.00	3.0891	385	2.88	385	2.7580	0	0	0	0	
Gujarat	4629.97	86.81	4629.97	86.81	4279.91	67.73	4279.91	67.73	0	0	0	0	Target:4986688 No. of Plants CA Achievement: 4986688 No. of Plants NPV Target: 4297532 No. of Plants NPV achieve- ment: 4297532 No. of Plants
Haryana	2306.12	100.63	1608.83	52.29	1200.00	35.00	1005.12	19.46	0	0	0	0	
Himachal Pradesh	1024.00	5.09	886.00	4.78	979.00	12.69	979.00	7.10	0	0	0	0	



State/UT	Compensatory Afforestation (CA)				NPV				Interest Component				Remarks
	Target		Achievement		Target		Achievement		Target		Achievement		
	Physical (in Ha.)	Financial (in crores)	Physical (in Ha.)	Financial (in crores)	Physical (in Ha.)	Financial (in crores)	Physical (in Ha.)	Financial (in crores)	Physical (in Ha.)	Financial (in crores)	Physical (in Ha.)	Financial (in crores)	
Jammu & Kashmir	1537	14.14	1288.00	9.58	16054.00	256.44	9160.35	161.27	0	0	0	0	
Jharkhand	6327.67	28.63	3202.83	11.91	15649.00	26.856	13988.00	19.13	0	0	0	0	
Karnataka	376.73	3.22	376.73	2.92	10940	38.86	10915	37.29	382.20	1.04	382.20	1.04	786511 No. of Plants achievement CA 3282000 No. of Plants Target NPV NPV achieved: 3274500 No. of Plants Interest target: 228690 No. of Plants Interest achieved: 228690 No. of Plants
Kerala	241.5	2.55	65	0.19	1243.5	13.68	130.90	7.56	Ls	0.81	Ls	0.48	NPV target: +27565MM NPV achieved: +3265MM
Madhya Pradesh	6364.61	106.81	6286.41	78.69	31058.00	203.67	32280.70	199.03	0	0	0	0	
Maharashtra	246.405	2.32	182.278	2.61	2694.00	25.95	2704.00	22.47	0	0	0	0	
Manipur	0	0	0	0	2540.00	5.9848	2540.00	5.9848	0	0	0	0	
Meghalaya	199.522	2.214	58.445	0.80	895.50	12.54	326.50	3.165	0	0	0	0	Maintenance: CA: Phy Target633.059 ha Phy. Achievement: 354.728 NPV: Phy. Target: 1592.68 Phy. Achievement: 195 ha
Mizoram	5146.8	7.26	0	0	0	0	0	0	0	0	0	0	
Odisha	6263.509	80.39	4665.5579	74.73	56411.00	554.92	55820.00	450.07	0	0	0	0	13250 Nos Phy. Achievement of CA
Punjab	864.127	14.91	800.383	11.50	5022	32.95	4574.00	24.84	0	0	0	0	
Rajasthan	700.35	3.83	444.79	18.11	10400.00	12.47	10267.00	11.98	0	0	0	0	CA target: 655264 No. of Plants CA achieved: 349867 No. of Plants NPV target: 2080000 No. of Plants NPV achieved: 1949050 No. of Plants

State/UT	Compensatory Afforestation (CA)				NPV				Interest Component				Remarks
	Target		Achievement		Target		Achievement		Target		Achievement		
	Physical (in Ha.)	Financial (in crores)	Physical (in Ha.)	Financial (in crores)	Physical (in Ha.)	Financial (in crores)	Physical (in Ha.)	Financial (in crores)	Physical (in Ha.)	Financial (in crores)	Physical (in Ha.)	Financial (in crores)	
Sikkim	94.67	6.06	94.67	6.06	565	2.84	564	2.62	0	0	0	0	
Tamil Nadu	146.38	4.93	82.57	4.031	0	0	0	0	0	0	0	0	
Telangana	2799.414	72.20	2052.71	39.56	11555.64	211.570	12399.02	156.807	0	0	0	0	
Tripura	685.14	6.85	566.40	1.41	23.50	0.16	23.50	0.14	0	0	0	0	
Uttar Pradesh	1559.35	17.74	1538.98	14.95	38212.00	105.54	38212.00	105.52	0	0	0	0	72138 Nos. of Phy target of CA & 65701 Nos. of Achievement
Uttara- khand	2415.00	49.73	2415.00	39.48	985.50	39.65	979.00	29.48	0	0	0	0	NPV target: 492750 Nos. NPV achieved: 489500 Nos.
West Bengal	397.54	4.15	130.3248	0.88	200.00	1.77	170.50	0.553	0	0	0	0	
Total	56032.91	807.07	38892.87	528.05	225520.05	1839.55	213286.10	1484.29	382.20	10.27	382.20	6.24	

Schemes supported under the CAMPA Fund for the year 2023-24.

As per the provision under the Compensatory Afforestation Fund Act 2016, under section 5 (b)(iii), the expenditure incurred on specific schemes approved by Governing body of the National Authority are supported by the CAMPA Fund. Following is the update on the schemes:

- 8 projects have been completed
- 15 schemes are approved by Hon'ble Minister during the year 2023-24
- 28 are ongoing schemes/ projects. The following table contains list of all ongoing schemes/projects:

ON-GOING SCHEMES/PROJECTS

(Rs. in crore)

S. No.	Scheme/Project name	Project Period	Project Cost	Fund Released	Implementing Agency	Programme Division	Starting Year
	Indian Council of Forestry Research (ICFRE), Dehradun						
1	Strengthening Forestry Research for Ecological Sustainability and Productivity Enhancement	6	313.67	131.357	ICFRE	RT Division	2019-20
2	Estimation of Economic Losses in Real Term Per Hectare Basis Due to Forest Fire in Uttarakhand and Madhya Pradesh.	2	3.79	3.4	ICFRE	FP Division	2020-21
3	Proposal for preparation of detailed project report for Rejuvenation of Damodar and Suvernalekha rivers through forestry Interventions	2	1.17	0.8795	ICFRE	NAEB	2021-2022



S. No.	Scheme/Project name	Project Period	Project Cost	Fund Released	Implementing Agency	Programme Division	Starting Year
4	Mapping monitoring and management of <i>Lantana camara</i> through utilization for improving livelihood of people in forest fringe villages of India	5	14.49	14.49	ICFRE	RT Division	2023-24
Forest Research Institute (FRI), Dehradun							
1	National Collaborative Scheme on Forest Fire Management	4	22.31	3.81	FRI	Forest Protection Division	2022-23
2	Renovation & Modernization of Xylarium of Forest Research Institute	2	1.25	1.25	FRI	RT Division	2023-24
3	Strengthening of National Forest Library and Information Centre for Education and Forestry Research-FRI	1	1.63	1.63	FRI	RT Division	2023-24
Wildlife Institute of India (WII), Dehradun							
1	Endangered Species Recovery Programme (ESRP)- Development of Conservation plan for Gangetic River Dolphin	5	23	20.60	WII	Wildlife Division	2015-16
2	Habitat improvement and conservation breeding of Great Indian Bustard –ESRP	5	33.85	31.16	WII	Wildlife Division	2015-16
3	Conservation of Manipur's Brow Antlered Deer (Sangai)-ESRP	5	19.95	10.31	WII	Wildlife Division	2015-16
4	Recovery of Dugongs and their Habitats in India-ESRP	5	23.58	13.05	WII	Wildlife Division	2015-16
5	UNESCO Category2 Centre (C2C) on Natural World Heritage Management and Training for the Asia-Pacific Region	3	18.66	15.01	WII	Wildlife Division	2018-19
6	Establishment of National Centre for wildlife forensics (NCWF)	4	82.83	-	WII	Wildlife Division	2022-23
7	PAN India assessment and monitoring of endangered species covered under the' Integrated Development of Wildlife Habitats (IDWH) scheme of MoEFCC Government of India	2	19.05	11.43	WII	Wildlife Division	2021-2022
8.	Range-wide enumeration of River Dolphin populations in India	1	10.15	10.15	WII	Wildlife Division	2021-22
Forest Survey of India (FSI), Dehradun							
1	Monitoring Protocol for Plantations and Assets created by State Forest Departments (SFDs)	6	13.14	1.30	FSI	SU Division	2019-20

S. No.	Scheme/Project name	Project Period	Project Cost	Fund Released	Implementing Agency	Programme Division	Starting Year
2	Establishment an FSI cell in Each State for Strengthening, Monitoring, and Forest Resource Assessment	1	4.33	-	FSI	SU Division	2021-2022
3	Satellite Survey of Encroachment position of Rejected claims as per Order of Hon'ble Supreme Court in Writ Petitions (civil) No(s) 109/2008 Wildlife First & Others vs. Ministry of Forest and Environment & others	6	48.00	5.66	FSI	SU Division	2021-2022
National Tiger Conservation Authority (NTCA), Delhi							
1	Assessment of Population Status of Tigers, Co-predators, Prey and their habitats in India	1	21.60	10.80	NTCA	NTCA	2022-23
State Forest Development Agency (SFDA)							
1	Nagar Van Yojana	5	415.00	234.74	SFDA	NAEB	2020-21
2	School Nursery Yojana	5	49.50	5.78	SFDA	NAEB	2020-21
Bombay Natural History Society (BNHS), Mumbai							
1	Implementing The Central Asian Flyway National Action Plan with Special Focus on Preparation of Site-Specific Activity Plan, Capacity Building, Developing Bird Sensitivity Map for Setting up of Wind Energy and Species Action Plans	3	3.754	1.61	BNHS	Wildlife Division	2019-20
International Union for Conservation of Nature (IUCN), Switzerland							
1	Enhanced Capacity Building of Stakeholders and State Government on Forest Landscape Restoration and Reporting Mechanism on Bonn Challenge	3.5	5.90	2.95	IUCN	NAEB	2020-21
Central Zoo Authority (CZA), Delhi							
1	Setting up national referral center for wildlife disease monitoring and prevention-CZA	5	3.00	2.08	CZA	Wildlife Division	2022-2025
IMPACT ASSESSMENT DIVISION, MoEF&CC, Delhi							
1	PARIVESH 2.0	5	95.59	24.26	Impact Assessment Division	Impact Assessment Division	2021-2022
National Informatics Centre Services Inc. (NICSI), Delhi							
1	Project proposal for the yearly maintenance, Up-gradation and FC module and Hand holding support of PARIVESH- NICSI	-	5.96	6.81	NICSI	FC Division	2016-17
Institute of Wood Science & Technology (IWST), Bangalore							

S. No.	Scheme/Project name	Project Period	Project Cost	Fund Released	Implementing Agency	Programme Division	Starting Year
1	Roll out and Preparedness of States for using National Transit Pass System	3	4.67	1.209	IWST	RT Division	2023-24
Karnataka State Authority							
1	Development of Sandalwood and Rosewood Estates and Management of Sandalwood Reserves in Karnataka	7	25.65	0.4750	Karnataka State Authority	-	2022-23

7.3 FOREST ESTABLISHMENT (FE):

Introduction:

The Forest Establishment Division (FE) is handling the establishment matters relating to various organizations under MoEF&CC and State Forest Colleges; general references relating to frontline staff of State Forest Departments including court cases, RTI requests and Parliament Matters concerning the above. The list of Organizations under FE are:

1. Indian Council of Forestry Research and Education (ICFRE), Dehradun an autonomous organization under the Ministry which oversees the functioning of the following Institutes/Centres;

- Forest Research Institute, Dehradun
- Tropical Forest Research Institute, Jabalpur
- Arid Forest Research Institute, Jodhpur
- Himalayan Forest Research Institute, Shimla
- Rain Forest Research Institute, Jorhat
- Institute of Forest Productivity, Ranchi
- Institute of Forest Biodiversity, Hyderabad
- Institute of Forest Genetics and Tree Breeding, Coimbatore
- Institute of Wood Science and Technology, Bengaluru

- Forest Research Centre for Skill Development, Chhindwara
 - Forest Research Centre for Bamboo & Rattan, Aizawl
 - Forest Research Centre for Eco-Rehabilitation, Prayagraj
 - Forest Research Centre for Livelihood Extension, Agartala
 - Forest Research Centre for Coastal Eco-System, Visakhapatnam
- #### 2. Forest Survey of India (FSI), Dehradun has following four Zonal Offices;
- Central Zone, Nagpur
 - Eastern Zone, Kolkata
 - Northern Zone, Shimla
 - Southern Zone, Bangalore
- #### 3. Wildlife Crime Control Bureau (WCCB) has 5 Regional offices and 3 sub-regional offices located at
- Southern Region, Chennai.
 - Eastern Region, Kolkata.
 - Western Region, Mumbai.
 - Central Region, Jabalpur.
 - Northern Region, New Delhi.
 - Sub-regional office – Guwahati



- Sub-regional office – Amritsar
- Sub-regional office - Cochin
- 4. **Director of Forest Education (DFE)**, Dehradun supervises the following Central Academies:
 - Central Academy for State Forest Service, Dehradun (Uttarakhand)
 - Central Academy for State Forest Service, Coimbatore (Tamil Nadu)
 - Central Academy for State Forest Service, Burnihat (Assam)
 - Central Academy of Forest Education, Kurseong (West Bengal)
- 5. **National Zoological Park (NZP)**, New Delhi
- 6. **Indira Gandhi National Forest Academy (IGNFA)**, Dehradun
- 6. Recruitment/Promotion/Deputation of Group A & B officers through UPSC.
- 7. Appeal against penalty in disciplinary cases of Group 'A' 'B' & 'C'.
- 8. Appeal against adverse entries in the ACR/APAR.
- 9. Framing policy regarding various establishment matters of ICFRE as per extant guidelines of Govt. of India.
- 10. Nodal for sending requisition to Staff Selection Commission for filling up Direct Recruitment posts in Attached and Subordinate Offices of this Ministry.

Important activities undertaken

Functions:

1. Framing & amendment of Recruitment Rules of technical and Ministerial posts.
2. Constitution of Screening Committee for appointment of Joint Secretary and above level post in ICFRE.
3. ACC approval for appointment of Director General, ICFRE.
4. Consideration of proposals regarding up-gradation of pay scales, creation of posts, merger of posts, cadre restructuring and other establishment matters in r/o frontline staff of Forest Deptt. of States and UTs in consultation with nodal Ministries/ Departments.
5. Consultation with nodal Ministries in various establishment/service matters of all Scientific/Technical/Ministerial officers/ staff.
- Appointment to the post of Director General in Indian Council of Forestry Research and Education (ICFRE), Dehradun with the approval of ACC, DoPT in November 2023.
- Appointment of 4 Directors in various offices of ICFRE was done in August 2023.
- Appointment of Assistant Director in WCCB was done in September 2023.
- Vide Notification No. **GSR 820(E) dated 3.11.2023** RRs for the post of Lower Division Clerk in WCCB under the Ministry were published.
- Vide Notification No. **GSR 821(E) dated 3.11.2023** RRs for the post of Technical Assistant in WCCB under the Ministry were published.
- Vide Notification No. **GSR 822(E) dated 3.11.2023** RRs for the post of MTS in WCCB under the Ministry were published.
- Two appointment in IGNFA & DFE on the post of Assistant Director (OL) in August, 2023.



- Forwarded dossiers of 28 Candidates nominated by SSC for the post of LDC – SSC, CHSL Exam 2022.
- Forwarded dossiers of 6 Candidates nominated by SSC for the post of SSC, Stenographer Grade 'C' & 'D' Exam 2022.
- As of 08.12.2023 FE Section has dealt with 75 RTI Requests, 9 RTI Appeal, 55 Public Grievances, 16 PG Appeals and 9 VIP/MP references.

7.4 FOREST POLICY

a Introduction:

Forest Policy Division deals with the National Forest Policy, 1988, the Indian Forest Act, 1927 and forest related policies and legislations of other Ministries and State Governments. The Division facilitates the promotion of agroforestry and implement the National Transit Pass System in the country. It is the National Focal Division for international cooperation on United Nations Forum on Forestry (UNFF), Asia Pacific Forestry Commission (APFC), Asia Pacific Forest Invasive Species Network (APFISN), Committee on Forestry of FAO (COFO), UN-REDD, Centre for International Forestry Research (CIFOR) and International Poplar Commission of FAO. The Division is mandated to deal with implementation of REDD+ programme in the country at the national level. Forest Policy Division is also the nodal Division for all matters related to India-USA partnership Agreement on Sustainable Forest and Climate Adaptation and coordinating implementation of USAID programmes in India. The Division is also nodal Division for India-UK Forest Partnerships. The Division deals with policy matter and bilateral negotiations on forest and sustainable development and forest and trade related multilateral and bilateral issues.

Important activities undertaken

I. Important Policy decisions:

- (i) A Note for the Cabinet on Draft National Forest Policy 2023 has been submitted to the Cabinet Secretariat and PMO on 16.06.2023 for consideration and approval.
- (ii) MoEF&CC has supported the Memorandum for Expenditure Finance Committee (EFC) for continuation of Sub Mission on Agroforestry (SMAF) under Rashtriya Krishi Vikas Yojana (RKVY) and Krishonnati Yojana over the 15th Finance Commission (2021-22 to 2025-26).
- (iii) MoEF&CC communicated its concurrence on the proposal of UT of Dadra and Nagar Havel and Daman and Diu to the Ministry of Home Affairs regarding the repeal of (i) The Goa, Daman and Diu Wild Animals and Wild Birds Protection Act, 1965 (Act 21 of 1965), (ii) Extension of the Gujarat Minor Forest Produce Trade Nationalization Act, 1979 (Act 7 of 1979) and (iii) Maharashtra State of Trees By Occupants Belonging to Scheduled Tribe (Regulation) Act, 1969 (Act 23 of 1969).
- (iv) Ministry supported the "The Puducherry Prevention of Anti-Social Activities (Amendment) Bill, 2023" received from Ministry of Home Affairs.
- (v) MoEF&CC concurred with the proposal of UT of Ladakh received through Ministry of Home Affairs regarding delegation of Powers to Lt. Governor of Ladakh under the Indian Forest Act, 1927.
- (vi) India hosted Country-led Initiative (CLI) Meeting of UNFF for the first time in Dehradun from 26th October to 28th October 2023. The meeting focused on the important issues of country and region along with global forest policy issues related to sustainable forest management, including Forest and wildfires and Forest Certification, for achieving the UN Strategic Plan on Forests 2030.



II. Implementation of National Transit Pass System (NTPS):

Ministry has developed a National Transit Pass System (NTPS) for seamless inter/ intra state transportation of timber and other forest produces across all states. Online portal on NTPS can be used for issuance, monitoring and maintaining records of transit permits. It promotes Single Pan India Permit for the transit of timber and other minor forest produce for ease of doing business. So far 24 States / UTs have adopted NTPS by amending the State Transit Rule or by agreeing to use NTPS where TP Rule is not in place for implementation of NTPS. These States are Madhya Pradesh, Jammu and Kashmir, West Bengal, Bihar, Jharkhand, Uttar Pradesh, Uttarakhand, Tripura, Karnataka, Andhra Pradesh, Andaman & Nicobar Islands, Rajasthan, Chhattisgarh, Delhi, Haryana, Punjab, Chandigarh, Tamil Nadu, Telangana, Gujarat, Dadra and Nagar Haveli and Daman & Diu, Maharashtra, Himachal Pradesh, Goa and Odisha.

III. Implementation of Tree outside Forests in India (TOFI) Programme:

TOFI programme aims at promoting quality planting material; ensuring better alignment of state-level policies; increasing access to finance and insurance; promoting tree-based enterprises/ value chains; establishing demonstration nurseries and plantations; and promoting widespread awareness to technical and market-related information. TOFI is being implemented in Andhra Pradesh, Assam, Haryana, Odisha, Rajasthan, Tamil Nadu, and Uttar Pradesh. Various meetings including review meeting were organized by Ministry for implementation of TOFI in

all seven States. Some of the important directions issued by the Ministry include:

- Issued an advisory to all seven TOFI States to constitute a State Level Advisory Committee for implementation of TOFI programme.
 - Issued an advisory dated 10.11.2023 to the Institute of Forest Genetic and Tree Breeding (IFGTB), Coimbatore for development and co-implementation of QPM accreditation system in TOFI States.
 - Issued an advisory to IIFM, Bhopal to work on Indian Forest and Wood Certification Scheme, covering all aspects of Forest Management Certification, TOF and Chain of Custody Certification especially for TOFI States.
- IV. Ministry actively engaged and directed all its subordinate bodies/ institutions along with the State Forest Departments for celebration of 3rd Janjatiye Gaurav Diwas 2023.

Promulgation of new Acts/Rules, MoEF&CC has notified the amendment made in the provisions relating to the Indian Forest Act, 1927 under the Jan Vishwas Act, 2023 to come into force from 15th November 2023. Under the Jan Vishwas Act 2023, certain provisions relating to the section 26 and section 33 of the Indian Forest Act 1927 have been decriminalized by removing the punishment of imprisonment for certain minor offences and restrict punishments for such offences to fines only.

Important conferences organized in India/ international

(I) International Day of Forests 2023:

- The Ministry has observed and celebrated



the International Day of Forest, 2023 on the theme “Healthy Forest and Healthy People”. On the occasion, the Ministry launched the Aravalli Green Wall programme, an initiative for restoring about 1.50 million hectares of lands in the Aravalli hill ranges in north western India for reducing desertification and to create a barrier from sand and dust being blown into agriculture and urban landscapes. The Ministry also launched a massive plantation drive for restoration of Yamuna floodplains to reduce run-off and soil erosion along the river banks.

- Further, India participated in a high-level session organized by Food and Agriculture Organization (FAO) on the occasion of International Day of Forest 2023, whereby, India highlighted the positive impacts of forests on mental and physical health, need for integrating forests into urban landscapes & planning and the importance of non-timber forest produce as source of forest-based livelihood. Further, India also highlighted the role played by the forest ecosystem in Ayurveda and other traditional medicinal systems.
 - The Ministry under various Centrally sponsored schemes including the Green India Mission and development of wildlife habitats have been undertaking awareness generation among public on the role of forests and the ecosystem services.
 - The Ministry released a booklet on agroforestry to guide farmers and tree growers on best practices regarding tree farming.
- (II) Ministry has organised a National Level Meeting of the PCCF&HoFF of all States/UTS under the chairmanship of HMEFCC on 19.08.2023 at IIFM, Bhopal on various

agenda like implementation of NTPS, cadre review of IFS, personnel issues of State Filed officials related to recruitment, promotion and post retirement, CAMPA plantation activities, MISTHI, status on CAMPA activities, notification of NFL, VAN system, adoption of 1000 acres to support conservation initiatives in the country etc.

(III) Participation at UN Forum on Forest meetings:

- Delegation from MoEFCC participated in the Expert Group Meeting of UN Forum on Forests from 11-13 January, 2023 at UNESCAP HQ, Bangkok, Thailand and reviewed the assessment report on UNFF contribution to 2023 agenda involvement of regional entities and major groups.
 - Delegation from MoEFCC participated in the CPF –Organisation led Initiative (OLI) Meeting organised by UNFFS and FAO from 22 to 23 February 2023 at FAO headquarters in Rome, Italy to take part in the OLI to review and discuss the assessment report on Section C- Actions related to the Collaborative Partnership on Forests (CPF).
 - Indian delegation led by DGF&SS participated in the 18th session of UNFF meeting at New York. MoEFCC announced hosting of Country Led Initiative Meeting in India.
 - Delegation also attended the Ad Hoc Expert Group Meeting of UNFF in Vienna from 10-13 October 2023 and made important interventions for mid-term review of international arrangement on forests.
- (IV) MoEFCC hosted a UNFF-Country led Initiative (CLI) meeting at FRI Dehradun from 26-28 October 2023 wherein the HMEFCC and Hon’ble Forest Minister of Uttarakhand



addressed the delegates participating from 40 countries and 20 international organizations. The meeting was chaired by DGF&SS and Co-chaired by Director, UNFF and ADG(WL).

- (V) An International training session to the delegates from 27 Countries was organised on 23.01.2023 by Forest Policy Division of the Ministry in collaboration with National Institute of Labour Economics Research and Development (NILERD), under the aegis of NITI Aayog.
- (VI) Indian delegation participated in the 30th Session of Asia Pacific Forestry Commission at Sydney, Australia from 2-6 October, 2023 to put forth the India's views on various agenda.
- (VII) A team of officers from Ministry and State Forest Departments undergone for the study tour to Costa Rica under Forest PLUS 2.0 Programme from 17-27 September 2023 on eco-restoration and PES.
- (VIII) The first Technical Workshop on "Traceability of Forest Products" under India-UK Forest Partnerships was organized in the Ministry of Environment, Forest and Climate Change on 6.12.2023 to discuss the step by step process followed in UK and India for ensuring sustainability and legality of forest products and to address barriers for traceability and certification.

7.5 FOREST PROTECTION

Introduction

The Forest Protection Division handles matters pertaining to forest protection, such as unlawful tree cutting, deforestation, encroachment into forest lands, and forest fires. The division also looks into matters pertaining to disaster management. The Division is responsible for overseeing the Centrally Sponsored Forest Fire

Prevention & Management Scheme (FPM).

Objective and Functions of the Division

- Nodal Division for issues pertaining to forest fires.
- Putting the National Action Plan on Forest Fires into implementation
- Concerns regarding protecting forests, such as stopping illegal tree-cutting, deforestation, and the encroachment of forest land.
- Using geo-spatial technology to manage forest fires, such as disseminating alerts, providing pre-fire warnings, and assisting the Forest Survey of India in assessing burned areas.
- Other matters concerning parliamentary matters, forest preservation, etc.
- Nodal Division for issues pertaining to disaster management.

Important activities undertaken

The Forest Survey of India, Dehradun has put in place a remote sensing-based system for the detection of forest fires throughout the Nation that allows for the quick detection and dissemination of information concerning forest fires. The early detection and control of forest fires across the Nation is significantly assisted by this technique.

1. The State Forest Departments and other registered cell phone users receive satellite-based forest fire notifications from Forest Survey of India, Dehradun, an organization within the Ministry, whenever a forest fire is detected. About 2.14 lakh people have registered to receive FSI forest fire notifications currently.
2. All State Nodal Officers and PCCFs



receive comprehensive analytical information along with the forest fire alerts.

3. As the Nodal Ministry responsible for managing issues related to forest fires and chemical accidents, the Ministry has set up a Disaster Management Cell for monitoring such disasters. Additionally, a 24-hour toll-free helpline (1800119334) has been installed to closely monitor incidents involving fires and chemical disasters that occur in the States and Union Territories.
4. Ministry of Environment, Forest and Climate Change has prepared a Disaster Management Plan with the collaboration of National Institute of Disaster Management (NIDM).
5. The study “Estimation of Economic losses in Real Term per Hectare Basis due to Forest Fire in Uttarakhand and Madhya Pradesh” was conducted by the Indian Council of Forestry Research & Education (ICFRE), Dehradun, in association with the Forest Survey of India, Wildlife Institute of India, National Institute of Hydrology, and GB Pant National Institute of Himalayan Environment & Sustainable Development.
6. A continuous advisory is being sent to all states and territories before to the start of the fire season, urging them to concentrate on being prepared to put out any forest fire as soon as possible in order to effectively avoid and manage it.
7. Advisory on removal of encroachment on Forest Land and to submit quarterly status report on area eviction carried out by the State Forest Department is issued to all State/ UTs,

Progress/Innovations:

1. The Forest Protection Division is using the FSI Van Agni Geo-Portal to monitor large forest fires in various States and UTs throughout the 2022–2023 forest fire season, which ran from November 1–June 30, 2023.
2. The Ministry and the Forest Survey of India (FSI) have been working well together to detect forest fires and notify the State and Union Territories of them. Research conducted by ICFRE and its partner institutes evaluated loss and damage in the states of Madhya Pradesh and Uttarakhand. The state governments are also encouraged to evaluate their own burnt areas.

Important Cumulative achievements

1. Forest Fire Mitigation Training Programme for National Disaster Response Force Functionaries (NDRF), has been undertaken by the Ministry to provide knowledge on prevention, control and response actions for handling forest fires. Three NDRF Battalions has been trained and deployed at Dehradun, Burnihat and Coimbatore.

Continuing committees

1. In total Six Screening Committee meeting has been conducted for the FY- 2023-2024.
2. In compliance of the direction of the Hon’ble National Green Tribunal, New Delhi the Forest Protection Division has constituted a Central Monitoring Committee (CMC) under the Chairmanship of Secretary (EF&CC) to monitor the implementation of the National Action Plan on Forest fire.

Scheme/ Programme

Name of the Scheme: - “Forest Fire Prevention and Management Scheme”



The division provides financial support for various forest fire prevention and management methods, the scheme aids in the efforts of State Governments and UT Administrations in the prevention and control of forest fires.

Long Term Objectives

- a. To reduce the frequency of forest fires and assist in restoring productivity of forests in affected areas.
- b. To formally establish a collaboration with forest fringe communities and the conservation of forests.
- c. To support the overarching objective of preserving the stability of the environment.
- d. To create a forecasting system for forest fires and a method for grading the hazard of fires.
- e. To support the States and UTs in making the most efficient possible use of modern technology (such as GPS, GIS, and remote sensing) for planning, developing, and implementing a system for managing and preventing fires
- f. To increase understanding of the dynamics and effects of forest fires.

Progress/Achievements

As of November 17, 2023, an amount of Rs. 36.67 crore has been released to State/UTs under the Forest Fire Prevention and Management Scheme for the Financial Year 2023–2024.

7.6 SURVEY AND UTILIZATION:

Introduction:

Forest Survey of India (FSI), a premier national organization is a subordinate office of Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India. FSI is responsible for Remote Sensing and Field

Inventory based assessment and monitoring of the forest resources of the country on regular basis. In addition, it is also engaged in imparting training to the State & UT Forest Department personnel, and research & extension services in the forestry sector. Established on 1st June 1981, FSI succeeded the “Pre-investment Survey of Forest Resources” (PISFR), a project initiated in 1965 by Government of India with the sponsorship of FAO and UNDP. After a critical review of activities undertaken by FSI, Government of India redefined the mandate of FSI in 1986 in order to make it more relevant to the rapidly changing needs and aspirations of the country.

Objectives of FSI:

- To prepare State of Forest Report biennially, providing assessment of latest forest cover in the country and monitoring changes in these.
- To conduct inventory in forest and non-forest areas and develop database on forest tree resources.
- To function as a nodal agency for collection, compilation, storage and dissemination of spatial database on forest resources.
- To conduct training of forestry personnel in application of technologies related to resources survey, remote sensing, GIS, etc.
- To strengthen research & development infrastructure in FSI and to conduct research on applied forest survey techniques.
- To support State/UT Forest Departments (SFD) in forest resources survey, mapping and inventory.
- To undertake forestry related special studies/consultancies and custom made training courses for SFD's and other organizations on project basis.

Major Activities:

Important activities undertaken

A. FOREST COVER MAPPING & TREE COVER:

Forest Survey of India (FSI) carries out in wall-to-wall forest cover assessment of the country on biennial basis through interpretation of satellite data and publishes the information in the 'India State of Forest Report'. So far, seventeen cycles of forest cover assessment have been completed from 1987 to 2021. The results of 17th cycle Forest Cover Mapping (FCM) were published in ISFR 2021, and currently the work of 18th Cycle FCM, for ISFR 2023 is in progress. In addition to forest cover mapping, assessment of tree cover of the country is also being carried out using the Trees Outside Forests (TOF) inventory data. As per ISFR 2021, there is an increase of 1,540 sq km (0.22%) in the forest cover and 721 sq km (0.76%) in the tree cover as compared to the last assessment, ISFR 2019. Thus, there is an overall increase of 2,261 sq km (0.28%), forest cover and tree cover put together at national level.

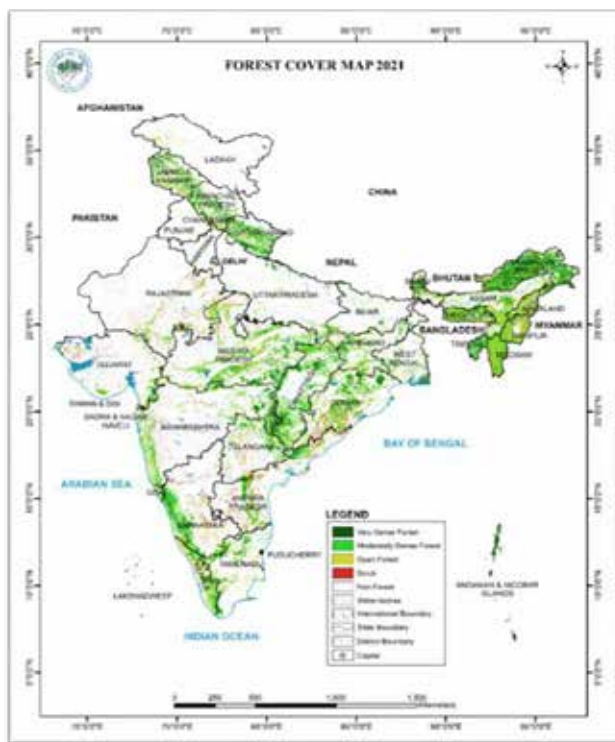


Fig.1 Forest Cover Mapping

For the 17th Forest Cover Mapping cycle, scenes from LISS-III sensor of Indian Remote Sensing Satellite (IIRS) have been procured from NRSC, Hyderabad. Fully ortho-rectified satellite data is being used for forest cover mapping, which improves the positional accuracy of the data. Ground truthing has been carried out by FSI across the country at 4,662 locations. Additionally, the State Forest Department personnel carried out validation visits to 3,749 change points nationwide to ensure precision and reliability of the forest cover estimates. The summary of various targeted tasks for the biennial forest cover mapping exercise are summarized as under:

B. FOREST FIRES

Near Real Time Monitoring of Forest Fires:

FSI has been alerting State Forest Departments of forest fire locations detected by the MODIS (Moderate Resolution Imaging Spectroradiometer) sensor on-board Aqua and Terra Satellites of NASA since 2004. A new faster, quicker and more robust version of FSI Forest Fire Alerts System (Version 3.0) was launched in 2019 by adding several new features to the earlier Version 2.0.

The number of near real-time forest fire detections and Large Forest Fire are in the table given below:

Near Real-Time Forest Fire Detections

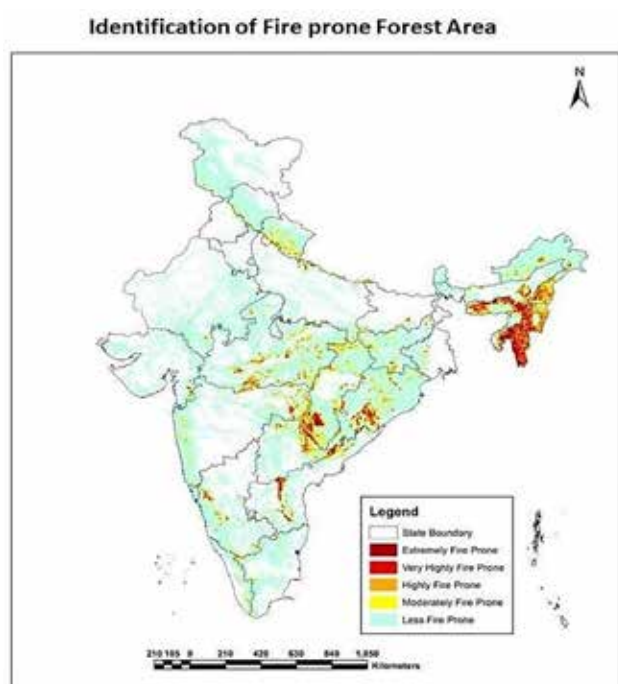
Sensor	(Nov. 2020 - June 2021)	(Nov. 2021 - June 2022)	(Nov. 2022 - June 2023)
MODIS	52,785	29,675	31,145
SNPP-VIIRS	3,45,989	2,23,333	2,12,249

Large Forest Fire Detections

(Nov. 2020 - June 2021)	(Nov. 2021 - June 2022)	(Nov. 2022 - June 2023)
21,142	13,555	12,506

S. No.	Name of Indicator	Target	Achievement from 01/01/22 to 17/11/23
1.	Procurement of cloud free satellite data for entire India	311 Ortho-rectified Satellite Scenes (LISS III Resource sat I/II) for the extent of 393 One-degree X One- degree (SCALE 1:250,000) Topographic sheets (Survey of India)	305
2.	Image registration of 18thcycle (ISFR 2023) ortho-rectified satellite data	393 One-degree x One-degree (SCALE 1:250,000) Topographic sheets (Survey of India)	393
3.	Interpretation (Classification) of satellite data for Forest Cover Mapping of 18thcycle (ISFR 2023) through Digital Image Processing (DIP) techniques	393 One-degree x One-degree (SCALE 1:250,000) Topographic sheets (Survey of India)	393
4.	Ground-truthing / Ground Verification	36 State & UTs (642 Districts)	542
5.	Incorporation of Post Field Corrections as per the ground verification	36 State & UTs (642 Districts)	542
6.	Change detection and Change Polygons preparation for ISFR 2023	36 State & UTs (642 Districts) Total polygons = 4,359 (sent to SFDs)	4,662
7.	Quality Control/Quality Assurance (QA/QC) Exercise	36 State & UTs (642 Districts)	36
8.	State wise, District wise area calculation for ISFR 2023	36 State & UTs (642 Districts)	In-progress

Study on identification of fire prone forest areas based on GIS analysis of archived information:



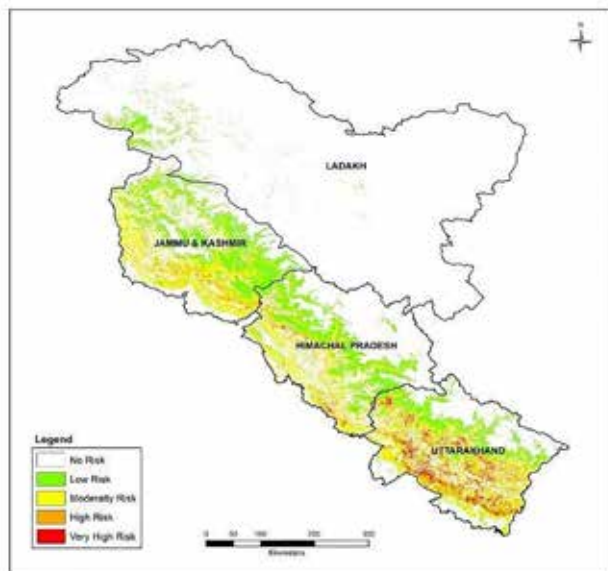
FSI carried out a study based on spatial analysis of forest fire points detected by FSI in the last 17 years to identify fire prone forest area in the country. Extent of forest cover under different fire prone classes (Extremely fire prone, very high fire prone, highly fire prone, Moderately fire prone and Less fire prone) has also been determined for each State/UT.

Forest Fire Risk Zonation Mapping in West Himalayan States:

A pilot study has been carried out for the West Himalayan States/UTs comprising Himachal Pradesh, Uttarakhand, Jammu & Kashmir, and Ladakh to identify Fire Risk Zones and categorize them into different risk classes using suitable variables. It has been observed that the number of detections per unit area of each class in each State/UTs is highest in Very High Risk class followed by High Risk and



Moderate Risk class.



FSI Van Agni Geo-portal

Forest Fire Geo-portal, VAN AGNI 3.0 (http://vanagniportal.fsiforestfire.gov.in/fsi_fire/fire.html) is an in-house development of FSI using open source software/tools like MapServer, which was launched in 2019. The Geo-portal provides user-friendly interactive viewing where the user can view forest fire related data (Near Real Time Forest Fire data, Large Forest Fire events tracking etc. along with other thematic layers such as Forest administrative boundaries, Forest Cover, Forest Type, Fire Prone Forest Area and FWI based fire danger rating etc.) pertaining to area of interest.

C. NATIONAL SPATIAL DATA INFRASTRUCTURE (NSDI)

National Spatial Data Infrastructure (NSDI) is a national program monitored by NSDI division of Department of Science and Technology to build consensus on harmonizing the available countrywide spatial database to a common set of standards, parameters and to minimize the disparity in data themes among various institutions, organizations across the country. In this context, Forest Survey of India (FSI) has

been identified as a partner institutions and a member of working groups (WG) assigned with the important responsibility of creating theme layers pertaining to forest resources and their categories. FSI has worked on creation of Metadata on National level, Creation of Web Map Service (WMS) for the FSI-Forest Cover and Forest Type for the entire country.

D. DECISION SUPPORT SYSTEM (DSS)

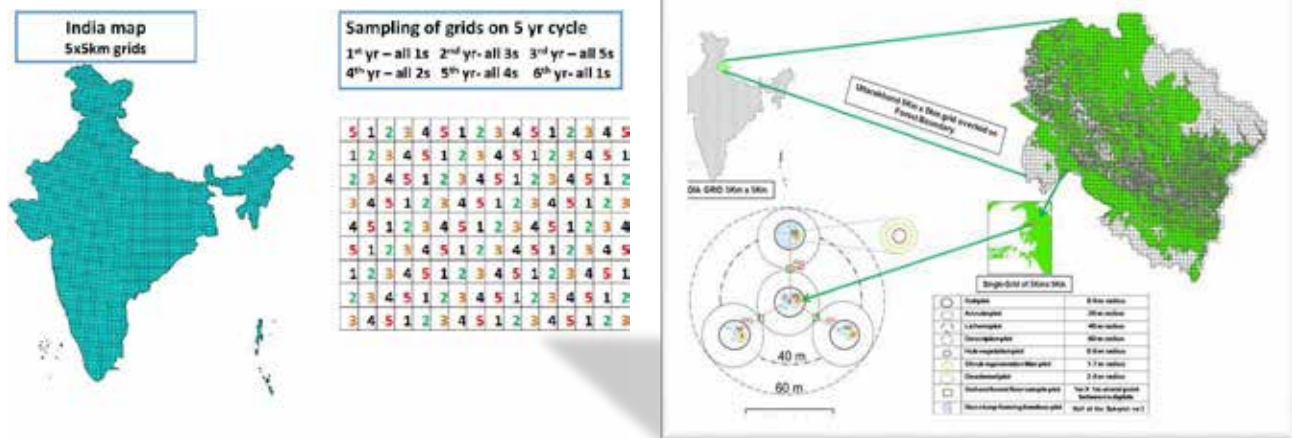
The Decision Support System (DSS) was launched in 2014. It is a web based GIS tool, developed by Forest Survey of India (FSI), which provides qualitative, quantitative & administrative characteristics of forests, which help in informed, unbiased and expeditious decisions on management of forest. This system uses Rule based algorithm, which in turn uses several parameters derived from the spatial layers (given in the table) for identification of Inviolable and Not Inviolable areas.

E. e-Green watch

With its genesis in the order of 10th July, 2009 of the Hon'ble Supreme Court of India, the e-Green Watch portal was developed by NIC in consultation with the MoEF&CC, FSI and State Forest Departments. The e-Green watch portal helps in keeping a track of all plantation and other activities being carried out by the State Forest Departments (SFDs) using CAMPA funds. The project was initiated with 5 pilot states viz. Andhra Pradesh, Karnataka, Madhya Pradesh, Sikkim and Tripura in nearly mid of 2012.

At present 32 States/ UTs are linked to the e-Green Watch portal. The application is capable of monitoring of five categories of CAMPA activities: Compensatory Afforestation (CA) Lands, Diverted Lands (DL), CA Plantations, Other Plantation Works (OPW) and Assets.

Till October, 2023, FSI has analysed 2,11,441 polygons under fresh category and 1,21,029



NFI Grids of 5 km x 5 km and Plot configuration

under revisited category, from 32 States/UTs. Out of the total no. of polygons, 45,425 are under the correct category, 94,128 under the incorrect category and 71,888 under the unascertainable category.

F. Forest & TOF Inventory

(i) National Forest Inventory:

National forest inventory is a major activity of FSI. Since 1965, forest inventory was carried out in different parts of the country in different time periods, thus it was not possible to generate the national level estimates of growing stock.

FSI redesigned the National Forest Inventory (NFI) programme from district based approach to grid based approach after the previous NFI design which continued till 2016. Under the new design, whole country is divided into a nationwide uniform grids of 5 Km x 5 Km. Thus, the revisit time has been reduced from 20 years to 5 years for Forest Inventory and 10 years for TOF inventory. In 5 years period about 33,000 forested and 1,00,000 grids in TOF will be covered under the new NFI design. In forest inventory about 7,000 and in TOF inventory 10,000 plots will be surveyed in a year.

FSI has also taken steps to modernize the National Forest Inventory by switching over from manual data collection in prescribed formats designed

for NFI followed by data entry of to PDA based data collection and entry which is transmitted in real time to the Zonal & Central Servers for analysis. This system will help reducing the time and manpower and improve the efficiency of the work.

(ii) Trees Outside Forest Resources in India:

A new methodology has been developed to



Map showing sample plots of NFI during 2016-20



Training courses during the period 01 December, 2022 to 30 October, 2023

S. No	Theme	Date	Venue	Total Participants
1	Application of Drone/DGPS in forest survey & Demarcation	05.12.2022 to 09.12.2022	FSI	34
2	"One Week Customized Training Programme for Officials of Chhattisgarh State Forest Department"	09.01.2023 to 13.01.2023	FSI	21
3	"DSS, e-Green Watch & Forest Fire"	23.01.2023 to 25.01.2023	FSI	12
4	Special Training course for IFS officers of MCTP (IGNFA) on "Forest Cover Mapping, Forest Fire, Carbon Dynamics, DSS & e- Green Watch Portal (One & half day)	15.02.2023 to 16.02.2023	FSI	61
5	"Application of Drone/DGPS in forest survey & Demarcation"	13.03.2023 to 17.03.2023	FSI	15
6	Training on ARC GIS at FSI Hq Dehradun	26.04.2023 to 28.04.2023	FSI	29
7	Application of GIS & Environment Statistics	19.06.2023 to 23.06.2023	FSI	27
8	Forest Survey & Assessment (Forest Cover Mapping & Forest Inventory)	31.07.2023 to 04.08.2023	FSI	4
9	Carbon Stock Estimation and Other parameter	07.08.2023 to 09.08.2023	FSI	13
10	Four Days training Programme for Zonal Staff of Forest Survey of India	08.08.2023 to 11.08.2023	FSI	22
11	Three Days training Programme for Zonal Staff of Forest Survey of India	16.08.2023 to 18.08.2023	FSI	20
12	Assessment of Forest Resource & Carbon Inventory for preparation of working plan	21.08.2023 to 25.08.2023	FSI	18
13	Forest Fire Monitoring & Damage Assessment	11.09.2023 to 13.09.2023	FSI	14
14	Application of Drone/DGPS in Forest Survey & Demarcation of Forest Blocks	18.09.2023 to 22.09.2023	FSI	25
Total				315

estimate the TOF resources and the extent of TOF area in the country, under the present NFI design. The major species found therein has been assessed using the newly developed methodology. Moreover, potential annual yield

from timber from TOF has also been assessed.

A total of about 27,917 plots have been inventoried in forest areas and nearly 62,074 plots have been inventoried in TOF area.

G. Training of Forestry Personnel:

(i) Regular Training Courses as per Training Calendar 2022-2023 & 2023-24

FSI imparts training to forestry personnel working at various levels in State Forest Departments to sensitize them with the latest advancements in application of Remote Sensing & GIS for preparation of Working Plans, Forest Carbon Assessment, GPS Applications in Forest Survey and Demarcation, Application of GIS in Forest Resources Management, Applications of Drones etc. The following training courses has been conducted during the period between



Hon'ble Minister Shri. Bhupendra Yadav Visit to FSI, Dehradun

H. Financial Budget of FSI:

The above activities are being carried out since 2016 as per the availability of funds. Regular budget of FSI during the last five financial years is as follows:

(Rs. In Crores)

S. No.	Financial Year	Budget
1	2019-20	34.0
2	2020-21	26.0
3	2021-22	33.1
4	2022-23	34.0
5	2023-24	37.0

I. Forest Carbon Projects under NATCOM

FSI has been estimating carbon stock in the country's forests on regular basis for various National Communications (NATCOMs) and providing valuable inputs to the MoEF&CC in preparation of GHG inventory of the country. FSI has estimated forest biomass and carbon stock change between 1984 and 1994 for India's Initial National Communication (INC) submitted to UNFCCC in 2004.

For Second National Communication (SNC) to UNFCCC, FSI conducted 'Greenhouse gas inventory in Forest Land Remaining Forest Land & Land Converted into Forest Land for the period 1994 to 2004' under 'Land Use, Land-Use Change and Forestry (LULUCF)'.

For Third National Communication, FSI has undertaken the following projects:

1. Estimation of Soil Organic Carbon (SOC) in TOF. This report has already been submitted to Ministry within proper deadline.
2. Developing volume equations for important 30 species in forest and TOF
3. Estimation of carbon stock in Mangrove Eco-system.

Centre for Forest Carbon Assessment (CFCA)

(i) Background

The Centre has also been responsible to take care the study of developing volume equations, forest biomass estimation and practical processing as well as analysis of soil sample.

- Forests play an important role in mitigation and adaptation to climate change. Forests are considered as sink, reservoir and source of carbon. Healthy and growing forests sequester and store more carbon than any other terrestrial ecosystem.
- Centre for Forest Carbon Assessment



(CFCA) in FSI has been established in the year 2019, to regularly assess the Forest Carbon (%) as a primary source, of collected Soil, Plant, Litter and Dead Wood sample collected from field during inventory.

(ii) Present National Focus on Carbon Study

- In India, there is significant chance of creating 'Additional Carbon Stock of 2.5 to 3.0 Billion tonnes by the year 2030 by following the so far adopted methods i.e. 'Business As Usual'.
- However, in 2019, FSI has done a comprehensive study from 'CFCA' by identifying the possibilities of creating an additional carbon sink over and above 'Business As Usual'. Accordingly, FSI identified possible activities, where further emphasis could be given to raise the 'Carbon Stock' of the country.
- Under those different activities, possible land area that could be utilized had been enumerated.
- The setup has also undertaken the analysis of nearly 3500 soil and forest floor samples of the States falling under the jurisdiction of FSI North Zone. Those States are Rajasthan, Punjab, Haryana, Jammu and Kashmir, Himachal Pradesh, Uttarakhand and Uttar Pradesh. The analytical results are in process for the publication under ISFR 2023.

7.7 FORESTRY RESEARCH:

Research & Training Division (RT) is a nodal division for a major central sector plan schemes namely "**Forestry Training and Capacity Building**". This division looks after the administrative, financial and other matters of the research & training institutions viz. Indian Council of Forestry Research & Education (ICFRE) - Dehradun, Indian

Institute of Forest Management (IIFM) – Bhopal, Indira Gandhi National Forest Academy (IGNFA)- Dehradun and Directorate of Forest Education (DFE)-Dehradun.

A. Indian Institute of Forest Management (IIFM)

Indian Institute of Forest Management (IIFM) was established to provide comprehensive training in Natural Resource Management (NRM), climate change, sustainability, and management, aiming to prepare individuals for effective forestry management. The institute emphasizes the paramount importance of conservation in managing natural resources and instils an understanding of the crucial ecological role of forests. Additionally, IIFM strives to meet the informational needs of India's forestry and forest-related industries through education, research, consulting, and publications, fostering the development of forestry in the country. In its 42nd year, IIFM continues to excel in consistent placement and academic achievements, driven by applied research, consulting, training, and high-quality educational activities.

Objectives of IIFM:

- Provide training in management and related subjects for persons from the Indian Forest Service, Forest Departments, Forest Development Corporation and Forest-related industries with a view to equip them to practice the art and profession of management of forestry development.
- Inculcate an appreciation in those selected for training, that conservation is of overriding importance in the management of living natural resources and that the primary role of forests is the vital ecological



and environmental purpose they serve.

- Select and prepare outstanding and talented young persons for careers leading to management responsibility in forestry and the forest-related system.
- Meet the needs of Indian forestry and forest-related industry and commerce with respect to up-to-date information on forestry management through research, consulting and publication.
- Assist, institute and carry out research in matters concerning the use of management and allied techniques and methods conducive to the development of forestry in the country.
- Institute awards, scholarships, fellowships, prizes and medals in accordance with the rules and bylaws.
- Create partnerships, affiliations and other classes of professional or honorary membership or office, as the society may consider necessary.

Major publication brought out: During the year, 23 research papers/books/popular articles etc. have been published in various National/International Journals by IIFM, Bhopal.

B. **Directorate of Forest Education (DFE), Dehradun**

Directorate of Forest Education (DFE) was created in 1953 under the FRI and Colleges to assist the President, FRI. Subsequent to reorganization of Forest Research Institute and Colleges and creation of Indian Council of Forestry Research and Education (ICFRE) as an autonomous organization, under the Ministry of Environment and Forests in the year 1991, the Directorate of Forest Education was delinked from the Forest research Institute and Colleges.

The Directorate ensures “Standard and Quality” of forestry training in the country and in its current form, functions under direct administrative control of the MoEF&CC, Government of India to take care of all aspects of training of SFS officers and FROs. Located in the scenic Forest Research Institute campus at Dehradun, the Directorate is headed by the Director who is a senior Forest Officer drawn on deputation basis.

Vide order No. 15-15/2018-RT dated 03.02.2022, integration / unification of all Forestry Training Academies in the country has been carried out, Subsequently DFE, 03 Central Academy for State Forest Services (CASFOS), Dehradun, Burnihat & Coimbatore and Central Academy for Forest Education (CAFE), Kurseong have been brought under the single command of Director, Indira Gandhi National Forest Academy (IGNFA) as administrative head.

Important Activities undertaken/Training imparted:

- One (01) new batch of State Forest Service Officers for induction training
- Four (04) batches of State Forest Service Officers are undergoing induction training
- One (01) batch of State Forest Service Officers have passed out induction training
- Three (03) new batches of Range Forest Officers for induction training
- Six (06) batches of Range Forest Officers are undergoing training
- Ten (10) batches of Range Forest Officers have passed out Organized one-week theme based Workshops / General Refresher Courses for In-service State Forest Service Officers and Senior Forest



Range Officers

- Organized three days training under “Forestry Training and Capacity Building” conducted during 2023-2024 in the constituent Academies under Directorate of Forest Education
- Organized two-weeks training on ‘Forest Fire Prevention & Mitigation Strategies’ for National Disaster Response Force (NDRF) funded by the National Management Authority, Gol New Delhi
- Organizing five days training under National Collaborative Scheme on “Forest Fire Management” (CAMPFA) for Frontline Staff Organizing training / workshop for IFS officers

Functions of the Division: Education, Research, Training, Consultancy and Outreach Activities

C. Indira Gandhi National Forest Academy (IGNFA)

Indira Gandhi National Forest Academy (IGNFA) was constituted in the year 1987 by renaming the erstwhile Indian Forest College, which was originally established in 1938 for training senior forest officers. IGNFA is currently functioning as the Staff College for the officers of the Indian Forest Service (IFS). The primary mandate of the Academy is to impart knowledge and skills to the professional foresters and help them to develop competence for managing the country’s forest and wildlife resources on a sustainable basis.

Important activities:

- 67 IFS Probationers of 2021-23 Course (53rd RR) completed professional forestry training at IGNFA.
- 102 IFS Trainees of 2022-24 batch (54th

RR) completed Term I of Phase I of training course.

- 114 IFS Trainees of 2023-25 batch (55th RR) joined in 14th December 2023 for professional forestry training at IGNFA.
- Commencement of Post Graduate Diploma in Environment Science (PGDEL) for IFS (P) of 2021-23 Course by NLSIU, Bangalore.
- Total 36 IFS officers have attended the Senior Foresters’ Workshop (30 Years) held on 19th-30th April 2023.
- Mid-Career Training MCT Phase-V (19), Mid-Career Training MCT Phase-III (12) & Mid-Career Training MCT Phase-IV (14) Programme for In-service IFS Officers was organized and total 141 IFS officers have attended the MCT programme.
- One-week Training on “International Convention on Forestry, Climate Change and Environment” organized on 21th – 25th August 2023 and 20 officers have attended the Workshop.
- Total 46 IFS officers have attended Professional Skill Up-gradation Course (PSUC) held on 28th August – 27th October 2023.
- 66 IFS Probationers of 2021-23 Course (53rd RR) completed Post Graduate Diploma in Environment Science (PGDEL) Course by NLSIU, Bangalore.
- Total 46 State Forest Service officers have completed 35th Professional Skill Up-gradation Course (PSUC) and promoted from State Forest Service into IFS.

Important Cumulative achievements:

- **Professional Forestry Training for IFS Probationers**



- Till 2023, 53 IFS professional training Courses (since 1968) have been completed and 3365 Officers trained.
- **Professional Skill Upgradation Course (PSUC)**
 - 35 PSU Course have been conducted and 970 inducted officers trained.
- **Mid Career Training (MCT)**
 - Started in 2009 for All India Services as part of civil service reforms by DoPT and replaced the Advance Forest Management (AFM) Course
- **Conducted for IFS officers with**
 - 7 to 9 years of service for 4 weeks (Phase-III)
 - 14 to 16 years of service for 4 weeks (Phase-IV)
 - 26 to 28 years of service for 2 weeks (Phase-V)
- Till 2023, 95 AFM Courses and 45 MCT have been conducted and 4981 IFS Officers trained.

Promulgation of new Acts/Rules:

- IFS Probationers (training & Evaluation) Rules 2023 to be enhanced soon.

Continuing committee/commissions-their work during the year and present position:

- Annual PCCFs & HoFFs meeting held on 10.10.2023.
- Eighth Academic Council meeting held on 30.10.2023.
- FC (Amendment) Act 2023 dissemination workshop on 29.09.2023

Important Conferences organized in India or International Organizations

- Training Programmes on 'National Project on Forest Fire Management' for NDRF. The Workshop would aim at introducing the NDRF senior functionaries to the overall outlook and perspectives pertaining to forest fire management.

D. Indian Council of Forestry Research and Education (ICFRE):

ICFRE is an apex body in the national forestry research system, has been undertaking the holistic development of forestry research, education and extension covering all aspects of forestry. The Council deals with solution based forestry research in tune with the emerging issues in the sector, including global concerns such as climate change, conservation of biological diversity, combating desertification and sustainable management and development of resources.

Objectives of ICFRE:

- To undertake, aid, promote and coordinate forestry research, education and extension leading to scientific and sustainable management of forest resources in the country.
- To align forestry research programs in the council with national priorities including achievement of Sustainable Development Goals and combating climate change.
- To provide scientific advice and policy support to the central and state governments aiding informed decision making in forestry matters of national importance and international commitments.
- To act as a repository of scientific knowledge related to forestry, environment and climate change, and disseminate

such knowledge to various stakeholders including forest dependent communities and also provide consultancy and capacity building services in environment and forestry sector.

- To provide technical assistance and support to states, forest-based industries, tree growers, farmers and others for forest protection, afforestation, agro- forestry and allied activities.
- To develop appropriate forest based technologies, processes and products for sustainable resource use, livelihoods and economic growth.
- To promote forestry education in the country and facilitate universities in improving quality through technical and financial support including development of uniform curricula.
- To conduct other activities incidental and conducive to attainment of forestry related objectives, which the council may consider necessary.

Important activities undertaken:

- Shri Bhupender Yadav, Hon'ble Minister, MoEF&CC chaired 29th Annual General Meeting of ICFRE Society at ICFRE-FRI, Dehradun on 20.05.2023. Released Forest Soil Health Card for Madhya Pradesh, Haryana, Delhi, Ladakh, Chandigarh and Pondicherry and a technology for manufacturing plywood panels using waste plastic as a binding agent giving an economic value to single use plastic waste.
- Shri Bhupender Yadav, Hon'ble Minister, MoEF&CC inaugurated the Centre of Excellence on Sustainable Land Management (CoE-SLM) in the presence of Shri CP Goyal DGF&SS, DG, ICFRE & other

members of ICFRE society at ICFRE-FRI, Dehradun on 20.05.2023.



Centre of Excellence on Sustainable Land Management inaugurated at ICFRE-FRI, Dehradun by Hon'ble Minister, EF&CC, Govt. of India on 20.05.2023

- Under CoE-SLM, following activities were carried out:
 1. Prepared and published the G20 presidency document on the "Restoration of mining-affected areas" in collaboration with UNCCD, UNDP and UNEP and National and International institutes working in the field of Mine Restoration.
 2. Participated in the G20 summit in the first ESWG meeting and exhibited a Pavilion with the theme "Land Restoration", showcasing the work undertaken by ICFRE institutes on the Restoration of degraded land
 3. Published the G20 presidency document on the "Restoration of forest-fire affected area" compiled by IIFM, Bhopal.
 4. To commemorate World Day to Combat Desertification & Drought under the theme "Her Land. Her Rights" workshop by CoE-SLM, ICFRE was inaugurated by Shri C P Goyal DGF&SS, MoEF&CC.



- Smt. Leena Nandan, Secretary, MoEF&CC, Govt. of India visited ICFRE and ICFRE-FRI, Dehradun on 13.6.2023 & reviewed the activities.
- A Green Credit Cell (GCC) has been established at ICFRE for the operationalization of Green Credit Programme in the Country. ICFRE would function as administrator.
- Detailed Project Report (DPR) on Development of Green Belt around refinery site of 'HPCL Rajasthan Refinery Limited' HRRL Pachpadra was released by ICFRE-AFRI, Jodhpur on 09.04.2023.



Tree Growers Mela at ICFRE-AFRI, Jodhpur

- The XXIII Meeting of the Research Policy Committee (RPC) of ICFRE was held during February 2023. 23 new Projects were approved for implementation at ICFRE institute under Plan funding.

• Regional Research Conferences:

- Regional Research Conference 2023 on "Improvement in productivity of forest and generation of livelihood through degraded land management" was organized by ICFRE-IFP, Ranchi in association with ICFRE-IFB, Hyderabad on 04.08.2023.
- Regional Research Conference (RRC), 2023 on "Nursery Technology for Propagation of Difficult Tree Species" was organized (Hybrid Mode) by ICFRE- Tropical Forest Research Institute Jabalpur on 18th August, 2023.
- ICFRE-Rain Forest Research Institute, Jorhat (Assam) organized 4th Regional Research Conference (RRC) on "Climate Change Impacts, Adaptations and Vulnerability: Northeast Indian Perspectives" on 11.07.2023.
- ICFRE-AFRI organized Tree Growers Mela on 17.03.2023 at ICFRE-AFRI, Jodhpur. More than 400 farmers, Forest Department Officers & Environmentalists participated in the event.



- Under HRD plan, 03 trainings conducted for Scientists in which 21 personnel participated. 01 training was conducted for technical staff

with 30 participants. 02 trainings were conducted for administrative staff with 105 participants.

- Under Ecosystem Services Improvement Project funded by the World Bank in Madhya Pradesh and Chhattisgarh, organised 27 trainings on Measurement of Forest Carbon Stock for JFMCs and 16 trainings on Scaling up of Sustainable Land and Ecosystem Management (SLEM) best practices for local communities. Under Scaling up of SLEM Practices, Azolla Cultivation for Integrated Farm Development was scaled up targeting 7000 beneficiaries, Micro Irrigation System for Enhancing Water Use Efficiency and Productivity targeting 5264 beneficiaries and Biopesticides and Biofertilizers Preparation for Sustainable Land Productivity targeting 20000 beneficiaries.
- ICFRE and its Institutes/Centres organized 98+ Webinars/Seminars/Trainings for different stakeholders including women, farmers, scientist and SFDs etc on various topics.
- Under Mission Life, ICFRE and its institutes have conducted various activities like cleanliness drive, awareness campaigns, Drawing competitions, Quiz competitions, Bicycle rallies, Seminar, Conferences and Important Days. Conducted 5747 activities from January 2023 to October 2023 and 98536 people participated in these events.



Honourable Union Minister of MoEFCC, Shri Bhupender Yadav released the awareness posters highlighting LIFM Mission conceived by IFGTB-EIACP during the national level workshop at MoEF&CC, New Delhi

- Under Azadi ka Amrit Mahotsav, from January, 2023 to 15th August, 2023, ICFRE and its institute/centres conducted 214 activities to decimate awareness amongst public.

● **Rajbhasha Activities**

- During the year 2023, a total of 19 workshops were conducted in ICFRE HQ and its institutes in which a total of 96 officers and 383 employees were trained and 29 meetings of the Official Language Implementation Committee were held.
- In September, 2023, Hindi Pakhwada was organized in ICFRE HQ and in all ICFRE Institutes.

Progress/Innovations:

- Released five varieties of three medicinal plants; *Picrorhiza kurroa* (2 varieties), *Valeriana jatamansi* (2 varieties) and *Sinopodophyllum hexandrum* (1 varietie), exhibiting high yield and active ingredient content and stability under different environmental conditions for the hill temperate region of Himanchal Himalaya.



- Developed mycorrhizal biofertilizer based product “HIM MRIDA SANJEEVANI-1” and this product got registered with Directorate of Agriculture, Himachal Pradesh for production and sale.
- Developed two Biopesticide products from Native plant extracts of *Boenninghausenia albiflora* (Pissumar) shrub in liquid and powder formulation i. e “HIM-ALBIWASH” and “HIM-BIOKIL-1” to manage insect pests of forests in NW Himalaya.
- Vegetative Multiplicative Garden (VMG) of three clones of *D.sissoo* (AFRI-DS-1, AFRI-DS-2 and AFRI-DS-4) was established at ICFREAFRI, Jodhpur.
- Through two eddy covariance-based carbon flux towers established in the states of Madhya Pradesh and Chhattisgarh it was found that Northern mixed deciduous forest of Madhya Pradesh and Southern mixed deciduous forest of Chhattisgarh act as net carbon sink with a net carbon uptake of 4.96-5.47 tC ha⁻¹y⁻¹ in MP and 4.15-4.66 t C ha⁻¹y⁻¹ in Chhattisgarh. The total forest carbon stock of project areas of MP and Chhattisgarh was increased by 9.38% over the baseline forest carbon stock.
- Developed a technology for manufacturing plywood panels using waste plastic as a binding agent.
- Released the Forest Soil Health Cards for Madhya Pradesh, Haryana, Delhi, Ladakh, Chandigarh and Pondicherry.
- Two novel barcodes identified for species authentication of red sanders
- Protocols have been developed for extracting natural dyes from two noxious weeds, *Stevia ovata* and *Eupatorium adenophorum*, and applying them to silk, wool, and cotton fabrics.
- A fire retardant door that can withstand a fire rating of 120 minutes was successfully developed and demonstrated at industrial scale
- An adhesive system to bond the veneers for plywood production using lignin a material of bio origin has been developed.
- Developed the technology to replace the wood particle by the scrap currency notes upto the extend of 20%. The technology has been implemented on commercial scale in 2 units.
- License agreement signed with five commercial labs for mass production of tissue culture teak, Bebzini Seedlings, Saharanpur, Uttar Pradesh to extend propagation rights of released varieites of *Melia dubia* and 7 farmers/nursery growers of Bihar for mass multiplication of poplar clones.
- Under Policy Research Studies 02 studies have been completed on ‘Popularization of the use of wood and wood substitutes as per the National Forest Policy and Modalities for facilitating industries for its optimum utilization’ by NCCF, New Delhi and ‘Grazing Policies in different state and Formulation of grazing policy guideline for states’ by SRPDR, Bhopal.
- The ENVIS Centre of Institute of Forest Genetics and Tree Breeding (IFGTB), Coimbatore, launched an interactive, real-time mobile application called ‘Forest Seed Science and Technology’.
- **Patent Granted:** A patent titled “A process for obtaining phytoecdysteroids from *achyranthes aspera* for the synchronized maturation of silkworm (Patent no.



440485) has been granted to the FRI, Dehradun.

Important Conferences organized in India or International Organizations.

- ICFRE, GSFD & RO-MoEF&CC organized workshop on Carbon Credits & Accredited Compensatory Afforestation under Changing Legal Scenario at Gandhi Nagar on 26.09.2023.
- ICFRE organized workshop on Sustainable Land Management for Combating Degradation & Collaborative Development of Training Modules at CoE-SLM, ICFRE Dehradun on 11.09.2023.
- ICFRE-FRI, Dehradun conducted an interactive workshop on screening and production of quality raw material for Indian Pulp, Paper and Panel Industry (jointly organized by Central Pulp and Paper Research Institute, Saharanpur, UP and FRI, Dehradun) on 20th October, 2023.
- ICFRE-IWST, Bengaluru organized first meeting of advisory committee of ICFRE-WINCOIN at ICFRE-IWST, Bengaluru on 24.07.2023.
- ICFRE organized National Training on “RS-GIS application in Land Resources Assessment from 18-22 September 2023.
- ICFRE-TFRI organized National Conference on Value Addition & Marketing of Non-Timber Forest Produce/ Medicinal & Aromatic Plants for Livelihood Security from 03-04 May 2023.
- ICFRE organized National Workshop on Agroforestry and Farm Forestry for Sustainable Land and Ecosystem Management from 5-6 January 2023.
- ICFRE organized International Workshop on ‘Enhancing Ecosystem Services by Improving Forest Quality and Productivity, and SLEM Knowledge Dissemination’ from 22-24 March 2023.
- 62nd IUFRO Annual Board Meeting hosted by ICFRE during 27-28 March, 2023.
- The IUFRO-SPDC sponsored Knowledge Sharing Workshop on “Mainstreaming Landscape Thinking in Natural Resources Management Education for Restoration Impact in BIMSTEC Region: The Way Forward” in collaboration with Global Landscapes Forum (GLF), ICFRE and IGNFA from 31 March to 1 April 2023 in Dehradun.
- ICFRE-IFGTB, Coimbatore organized Symposium on Forest Genetic Resource Conservation and Utilization at the 59th Annual Meeting of the Association for Tropical Biology and Conservation (ATBC 2023), Coimbatore on 03.07.2023 and it was attended by Researchers, students, conservationists, academicians.
- ICFRE-IFGTB, Coimbatore organized training workshop on Assessing the availability of tree seed sources for forest and landscape restoration from 28 November to 2 December 2022.
- ICFRE organised “Sensitization workshop on Sustainable Land Management” from 11-12 September 2023 for collaborating development of training modules.
- ICFRE-TFRI, Jabalpur organized four-one day, workshops on “Roadmap of QPM delivery and Scope of TOF expansion” in Tamil Nadu, Rajasthan, Haryana, and Andhra Pradesh under TOF

MEAs, Agreement with countries, international organization, compliance:

ICFRE has signed MoUs with National and



International Organizations for collaboration in the field of forestry research, education and extension:

- National Environmental Engineering Research Institute (CSIR-NEERI), Nagpur.
- Rubber Research Institute of India (RRII), Kerala
- Faculty of Forestry, Kasetsart University, Bangkok, Thailand
- National Centre for Biological Sciences-Tata Institute of Fundamental Research (NCBS-TIFR), Bangalore
- Alliance of Bioversity International and CIAT, Italy
- ICFRE Institute signed MoUs with:
- ICFRE-IFGTB with University of Copenhagen, Denmark
- ICFRE-IFGTB with Odisha Forest Department
- ICFRE-IFGTB with NCBS -TIFR, Bangalore
- ICFRE-IFGTB with M/s Tribal Co-operative Marketing Federation Of India Ltd (TRIFED)
- ICFRE-IFP, Ranchi with Central Tasar Research and Training Institute, Ranchi
- ICFRE-IFB, Hyderabad with ICFRI Law School, IFHE, Hyderabad.
- ICFRE-IFB, Hyderabad with Professor Jayashankar Telangana State Agricultural University (JTSAU), Hyderabad
- ICFRE-IFB, Hyderabad, with **Centre for Forest and Natural Resource Management Studies (CEFARM)**, Hyderabad
- ICFRE-IFB, Hyderabad with Dr. Reddy's Foundation, Hyderabad

- ICFRE-TFRI, Jabalpur with Guru Ghasidas Vishwavidyalaya, Bilaspur
- ICFRE-TFRI, Jabalpur with R&D Global Consultants Pvt Ltd, Thane, Maharashtra

List of major publications brought out:

During the year, 413+ research papers/books/popular articles etc. have been published in various National/International Journals by ICFRE personnel.

1. Technical Paper on Pathway to achieve LDN in India
2. CoE-SLM provided Inputs toward the preparation of NAP to Combat Desertification and Land Degradation Through Forestry Interventions 2022
3. Archives of UNCCD-COP Documents
4. FAQs on Agroforestry (Hindi and English)
5. Special issue of Indian Forester on "Sustainable Land Management Practices to Prevent Land Degradation"
6. Compendium of Sustainable Land Management Practices
7. Technology for Manufacturing Plywood using single use plastics as a binding agent
8. SOP for Seed Collection and Handling; Nursery Techniques (Odisha); Plus Tree Selection; Seed Collection & Handling; Nursery Techniques; Plantation Techniques and Post Plantation Techniques
9. Transplantation of Trees - An Informative Manual for fresher's

Forest Research Institute (FRI):

Important Cumulative achievements:

- In Uttar Pradesh the areas affected by *Prosopis juliflora* and *Lantana camara*



were estimated at 44,467.09 km² and 31,310 km² respectively. Four site-specific treatment models were prescribed for addressing the problem of *L. camara* and six models for *Prosopis juliflora* in UP. Specific recommendations were provided for restoration of degraded forests of Bundelkhand and Vindhya region in the state.

- A valuable technical database with comprehensive botanical, chemical, and medicinal information on 50 Lesser Known Forest Plants was created, serving as a resource for bioprospecting of these plants and providing directions for future studies.
- Developed protocol for isolation of a dark brown colorant in 28.04% yield from wild grown *Punica granatum*. The colorant exhibited excellent colour pay off, deposition, and even colour distribution in the desired substrates and found to be stable and resistance to fading after exposure to heat, durable and suitable for long-term use without causing irritation in cosmetic products.
- Management of Sal seed borer– *D. leptalis* was done under lab and field conditions. Fumigating the Sal seeds in laboratory with EDB + CCl₄ 0.02 ml/kg for 48 hours followed by EDB, PDCB and CS₂ at the same dose and duration for the maximum control of borer. In field, recommendation is to use Imidacloprid 19.87+ Beta cyfluthrin 8.49% OD at optimum concentration of 0.08% followed by Imidacloprid 17.8% SL and Cartap hydrochloride 50% SP at same concentration to obtain maximum percentage of control of the Sal seed borer.
- Under insect pest management of poplar using bio-pesticides, effect of artificial defoliation on poplar trees was assessed

under field conditions. The results revealed a significant decrease in tree height, viz. 18.41%, 31.78%, 46.11%, and 60.01% at 25%, 50%, 75%, and 100% defoliation levels compared to the control. Tree volume increment loss reached up to 65.57% from July to October. This loss assessment depicts the economic loss of the poplar growth due to defoliation. To mitigate this loss, screening of 88 clones of *Populus deltoides* (poplar) was conducted. Among these, thirteen clones were found to exhibit relative superiority against the poplar defoliator.

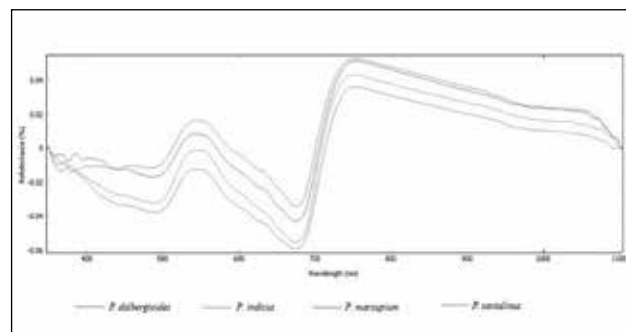
- Eighty-nine rhizospheric soil samples were collected from Sonipat, Haryana and cultured. Four *Trichoderma* isolates were identified based on microscopic features through growth rate trials on different saline concentrations (50, 100, 150, 200, 250 & 500 mM), identified two isolates (SW1 & FB) having maximum salt tolerance.
- Assessed ecosystem functions of a limestone mine area in Chunakhala on Dehradun-Mussoorie road, restored 30 years back, in comparison to its adjoining natural forest. Higher diversity (Diversity index of 2.35, 2.55, and 2.81 respectively, for trees, shrubs, and herbs compared to 1.68, 2.05 and 2.26 in adjoining natural forest) was recorded in restored mine area. Annual litter production (5020.25 kg ha⁻¹y⁻¹), and soil microbial biomass (0.18 mg g⁻¹) in the restored mine area were comparable with that of the natural forest. The total above-ground and below-ground biomass estimated for the restored mine areas was far less compared to the adjoining natural forest at Chunakhala.

Institute of Forest Genetics & Tree Breeding (IFGTB), Coimbatore

- The bio-pesticide Hy-ACT developed using the tree borne seed oil of *Hydnocarpus pentandra* supplied to IWSST for the management of *Hyblaea puera* in Mangroves areas in Mumbai Metropolitan Region reported significant reduction of the insect incidence.
- Prediction of suitable habitat mapping of *Anogeissus latifolia* through MaxEnt Model was developed.
- Developed rapid protocol for evaluating EcHKT1;1 gene edits in Eucalyptus using composite plant strategy.
- Eucalyptus composite transgenic expressing artemia ClC and NaKA genes were tested for salt tolerance. An improved salt tolerance in terms of survival of plants was observed in ClC expressing composite transgenics.
- For Red Sanders developed micro and micropropagation methods for mass multiplication of Red Sanders germplasm. The draft genome of red sanders and evidence of whole-genome duplication in the Eocene period with expansion of drought responsive gene families was documented. 51,713 consensus gene set were predicted with 31,437 annotated genes. Two novel barcodes identified for species authentication of red sanders
- *Prosopis juliflora* invasion in various districts of Tamil Nadu and habitat suitability for *P. juliflora* under current climate scenario were assessed. An extent of 4,70,48,600 ha of the country is highly vulnerable for *Prosopis* invasion. By 2050, the very high suitability habitat in the country for *P. juliflora* has been predicted

to increase by 24% (584,499 sq.km) under RCP 2.6.

- An *Azospirillum* sp. (nitrogen-fixing beneficial bacteria) was identified as a Zn solubilizer isolated from the *Tectona grandis*, rhizosphere soils also serves as a Zn biofertilizer for plants.
- Described a new species of the genus *Kalidasa* sp. nov. Latern bug (Hemiptera: Fulgoridae) and deposited in Zoo bank urn:lsid:zoobank.org:pub:5869955F-7F1D-4E27-BFBA-0E3D08D6F789 (IFGTB/Hem/28).
- The potential of leaf spectral signatures to distinguish the four *Pterocarpus* species (i.e., *P. santalinus*, *P. marsupium*, *P. indicus* and *P. dalbergioides*) was assessed and the results revealed that the red-edge region of the visible spectra showed the highest potential to discriminate the above species. This can be applied in mapping the species diversity using airborne high spatial resolution imaging spectroscopy.



Mean reflectance factor spectra of *P. dalbergioides*, *P. santalinus*, *P. indicus* and *P. marsupium*

- The near complete chloroplast genome *Dalbergia latifolia* was assembled from leaf transcriptome data. The genome was 158,966 bp long containing 116 genes. Phylogenomics study conducted with 27 *Dalbergia* species clustered *D. latifolia* with *D. cochinchinensis* and *D. obtusifolia*.



- The efficacy of the biopesticide Tee PAL^H has been evaluated on teak, mahogany and pongam and showed 70 – 80 % efficacy.

Rain Forest Research Institute (RFRI), Jorhat

- ICFRE-RFRI, Jorhat reported a macro fungus named *Galiellarufa* from the institute campus which is a new distribution record for Assam.
- A low-cost Pyrolysis System for Thermal Decomposition of Biomass was designed, indeigenously developed and successfully tested. Test result showed that slow pyrolysis (5-6 hours) of composite necromass of tropical trees resulted in slightly higher than 3:1 conversion/recovery ratio for feedstock to biochar which is at par with the Lambiotte double-reactor system.
- Assessed the population of threatened rattans *Calamus acanthospatrhus*, *C. nambareinsis* and *Plectocomia assamica* in Assam, Mizoram, and Nagaland. 10 populations of *Calamus acanthospatrhus* and 8 populations of *C. nambareinsis* were explored from Mizoram and one population of *C. nambareinsis* was explored from Nagaland. 8 populations of *Plectocomia assamica* and 3 populations

of *C. nambareinsis* were explored from Assam. Produced seedlings of threatened rattans-*Plectocomia assamica* (50 nos) and *Calamus nambareinsis* (200 nos) at RFRI nursery, Jorhat for enrichment plantation in natural habitats and conducted sensitizing meeting with field staff.

- To assess the socioeconomic status and their dependency of forest resources of Manas Tiger Reserve, a total of 758 households comprising of population of 3687 persons in 40 forest fringe villages were surveyed. 47% of surveyed households revealed that they are collecting part of their fuelwood from Manas Tiger Reserve. There are 16.22% of households which either are sending their cattle inside the boundary of Manas Tiger Reserve for grazing or collecting fodder. Only 5% of total households were getting their partial livelihood from tourism activities.
- Studied the soil carbon pools under different land uses of Assam. A total of 451 collected soil samples from different rubber, coffee, tea gardens and reserved forests were analysed for pH, bulk density (BD), moisture content and SOC pools and TOC. The mean values of analysed samples



Double-Barrel Pyrolysis System

for BD are $1.37 (\pm 0.62)$, while the mean value of soil pH is $4.58 (\pm 0.19)$. Moreover, the mean value of SOC content in collected samples was 0.88%.

- Total 10,500 seedlings of important 23 native forest trees were planted in the degraded coal mined area. The survivability rate resulted is 84.75%. Seed balls were prepared and plantation through dribbling method was done.

Himalayan Forest Research Institute (HFRI), Shimla

- A study was conducted to investigate the field growth performance of male and female genotypes of *Populus ciliata* provenances viz., Khanola, Pahnala, Nashala, Solangnala and Gaganshil. Maximum GBH (56.01 cm) was observed for Khanola provenance, however highest total height (19.04 m) and clean bole height (6.34 m) were recorded for Gaganshil provenance. Solangnala provenance demonstrated largest crown width (5.60 m) and survival percentage (75.00 %). Females performed better for GBH (54.70 cm), total height (17.83 m), crown width (4.40 m) and males performed better in terms of clean bole height (6.10 m) and survival percentage (63.33 %).
- Documented different traditional agroforestry systems and species grown by local communities in 41 selected villages of Lahaul & Spiti and Kinnaur districts of H. P. and Kargil and Leh districts of Ladakh UT. Raised 5000 seedlings in total of preferred agroforestry species viz., *Populus nigra*, *Salix alba*, *Elaeagnus angustifolia*, *Prunus armeniaca*, *Juniperus polycarpus* raised at Model Nursery, Baragaon, FRS, Tabo and FRS, Leh.
- Carbon Stock potential and Carbon dioxide sequestration by *Salix alba* populations at Gue 1, Gue 2 of Lahaul & Spiti distt. Ladang and Gulling, H.P. were analyzed and maximum Carbon dioxide sequestration was observed at Gue 1 site.
- Mass inoculum of *Trichoderma* species was successfully produced on pine needles and utilized for the treatment of diseased Shisham trees.
- In *Salix* insect pest infestations were recorded for *Nematus povidus* and *Tuberolachnus salignus* in the field trials and analysis revealed significant resistance in genotypes G1T2, G2T3, G2T13, PT1, G2T11, GU2T2, and GU1T2 of *Salix* as compared to control and other genotypes.
- Meta-genomics analysis of mycorrhizal roots of *Abies pindrow* revealed 188 fungal genera associated with the roots; among these 26 were ectomycorrhizal. Ectomycorrhizal fungi were the most abundant among all the associated fungi, with *Tuber* having the highest abundance value.
- Prepared People Biodiversity Register (PBRs) of 152 panchayats of Kinnaur, Shimla, Solan, Sirmaur, Hamirpur and Bilaspur, districts.



Agri-Horticulture System, Poh Village Agri-Horticulture System, Hurling Village



Tropical Forest Research Institute (TFRI), Jabalpur

- In study of climate driven effects on Indian forests through long term monitoring, tagging and enumeration of 10 ha permanent plot at Kanha Tiger Reserve (KTR) was undertaken. *Terminalia tomentosa* was reported as the most common tree species with 364 individuals followed by *Diospyros melanoxylon* (293), *Ougeinia oojeinensis*(247), *Lagerstroemia parviflora*(169), *Cassia fistula* (103) and *Syzygium cumini*(113).



Installation of AWS at Kanha Tiger Researve

- Evaluation trials of *Melia dubia* has been initiated in Central India and five sites viz. Morena, Chhindwara, Nagpur, Amravati and Durg were selected and 50 genotypes were planted. 80-90 % survival were recorded at initial stage of planting.



A view of *M. dubia* trial & collection of growth data

- Value Added Products developed from NTFPs like Mahua chocolates, Mahua

wound healing cream, Mahua handwash gel, etc. to utilize NTFPs and generate livelihood opportunities for tribal population.



- For Genetic improvement and conservation of Chironji (*Buchnanania cochinchinensis*) in Central and Eastern India, selected 139 phenotypically promising trees in three different categories i.e. Spreading, Semi-spreading and Upright in Betul, East Chhindwara, West Chhindwara, Katni forest divisions of Madhya Pradesh and Marvahi, Chhattisgarh. Data as per DUS (Distinctness Uniformity and Stability) guidelines notified.
- For development of Package of practices on *Gmelina arborea* (Khamer or Gamhar) in selected agroclimatic regions of India, total 340 CPTs were selected 210 in Jharkhand & Bihar and 130 in Chhattisgarh (70), Madhya Pradesh (45) and Maharashtra (15). Established 6 Progeny trials and 3 Seed Orchard (CSOs at: HRS, Kahikuchi, Assam, RARS, Diphu, Assam & SSO at: SRS, AAU, Buralikson, Golaghat). Established 06 *G. arborea* based agroforestry systems in the selected regions of India viz. *Gmelina* + *Brassica compestris* at TFRI, *Gmelina* + *Zea mays* at TFRI, *Gmelina* + *Banana* at Vadakadu, Pudhukottai, *Gmelina* + *Papaya* at Kangeyam, Thiruppur, *Gmelina* +

Casuarina + Groundnut at Soolakal, Pollachi and Gmelina + Chilly at IFB Hyderabad

- Processed *Cyprus rotundus* rhizomes and extracted essential oil by hydro-distillation from 113 accessions of 12 populations and the yield percentage was found in the range of $0.29 \pm 0.06\%$ to $0.7 \pm 0.01\%$.
- Tubers of *Curculigo orchioides* (Kali Musli) were collected from 11 MPCAs (Medicinal Plants Conservation Areas) of Madhya Pradesh. Tubers from Budhni, Sehore (M.P.) had high curculigoside content ($0.372 \pm 0.017\%$). Propagation through tubers revealed that apical buds of tubers showed early and higher germination rate (70-80%) than segments (40-50%). Multilocal trials were established at 03 places i.e. Narsinghpur, Mandla & Jabalpur to study the performance, growth attributes, chemical content and stability characters.

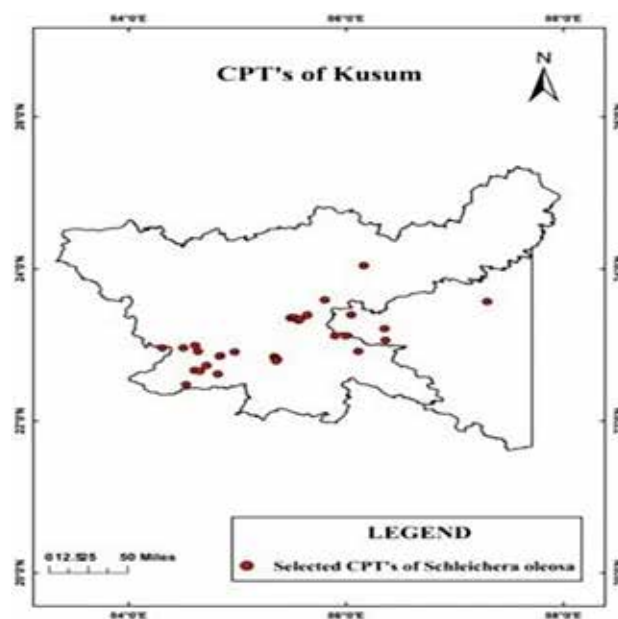
Institute of Forest Productivity (IFP), Ranchi

- In progeny of *Petrocarpus marsupium* established trial at Chandwa, Jharkhand 92% survival was recorded and the family collected from Arabari, West Bengal had maximum height of 7 feet. In the progeny trial at Arid village, Ranchi 56% survival and maximum height of 12 feet in Arabari family was recorded. First time progeny trial of the species has been established in eastern India.



Progeny trial in Chandwa, Jharkhand

- For selection of CPTs of Kusum, survey was conducted in different districts of Jharkhand and West Bengal and 63 CPTs have been selected. An average of 32-35% oil content was observed from the collected seed samples of Kusum CPTs. The CPTs selected from Simdega Division, Jharkhand exhibited highest oil content in terms of percentage compared to others.
- Nursery has been established from identified genotypes of poplar at Jadua Hajipur for raising ETPs. Four Clonal field trial of poplar has been established at Muzaffarpur (1), Nathpur Araria (1) & Jhakhra (2).
- Poplar based agroforestry models viz. Poplar-Litchi, Poplar-Wheat and Poplar Maize have been established at Muzaffarpur, Gaya and Araria for estimating the economics of the model. At Nathpur, Araria Poplar-Jute model established. In Barnihar, Narkatiyaganj, Poplar-Sugarcane model has been established. Poplar-Rice agroforestry model has been established at Jhakhra, Pipra Kothi, East Champaran in Kharif season of 2023.



Selected CPTs of Kusum across the study area



- For five productive clones of Poplar and its hybrids nonexclusive license was given to seven farmers and nursery growers for mass multiplication of released poplar clones of ICFRE-IFP, Ranchi. The nursery has been raised through stem cutting of released poplar clones.
- Flemingia based agroforestry model viz. Flemingia-cabbage, Flemingia-cauliflower, Flemingia-Chili, Flemingia-Tomato, Flemingia-Maize, Flemingia-Faba-bean etc. have been established at Roro, Khunti.
- In the mined-out areas and waste dump at Meghataburu planting of 8.50 hectare has been achieved by planting 1.50 and 7.00 hectare in the year 2022-23 & 2023-24 respectively. A total 12162 seedlings of 21 tree species and 7055 seedlings of 07 shrubs and grasses species were planted.
- In Rajrappa OCP mines Miyawaki plantation has been carried out in an area of 1.50 hectare and 2.00 hectare of overhead dumps plantation. Under Miyawaki plantation a total number of 19500 seedlings of 15 trees species and 9750 seedlings of 3 shrubs species were planted. Under overhead dumps plantation a total number of 1728 seedlings of 12 trees species and 864 seedlings of 04 shrubs species were planted on 2.00-hectare land.



Miyawaki plantation in Rajrappa

- The mortality suitable habitat of Sal (*Shorea robusta*) in Jharkhand using

MaxEnt species distribution models have been identified as “Highly suitable area” in term of sal mortality was predicted 7574.96 sq. km (9.50 %) of the total geographical area, which is a very good sign for forest health. Field survey analysis depicts some of the significant factors that could be responsible for Sal mortality including Staghead (dieback), Lightning, Waterlogging, Anthropogenic stress, Soil erosion, and Injury.

- After three years of clonal trial of Casurina at Chandwa and Arid, 76% and 30% survival were recorded respectively. In Chandwa, Clone no. CJ9 and CES recorded maximum survival of 81.94% and 84.02% and Clone CJ9 recorded maximum height of 29 feet and maximum girth of 46.30 mm. In Arid, Clone no CH-2 and CH-3 recorded maximum survival of 45% and 40% respectively with 20-22 feet of height after six months.
- Selected CPCs from different areas/regions is being maintained in the rhizome bank at ICFRE-IFP, Ranchi. Clonal wise plantation of 323 plants of 19 different bamboo species at FRC, Mandar has been successfully completed in 0.5 hectare of area. ICFRE-IFP, Ranchi distributed 500 *Dendrocalamus hamiltonii* seedlings for the plantation drive at Pahari mandir, Ranchi (in collaboration with Team GREEN)
- The seeds of 150 accessions of 15 populations of *Pithecellobium dulce* have been collected from 7 districts of Jharkhand. The fatty oil content in 07 populations varied from 13.62 to 18.46 %. Essential oil extraction from 100 accessions of *Cinnamomum cecidodaphne* of 10 populations, content varied from 1.67 to 1.03 %. In 23 populations of *Schima wallichii*, 230 accessions Kurseong (5.40 %) Panijhora (5.26 %), and Chelka 1 (4.58

- %) were found to be chemically superior populations of for dye extraction.
- For *Dalbergia latifolia*, progeny trials have been established at Chandwa, Ranchi, Jharkhand and vill- Harhad, Hazaribagh, Jharkhand. Progeny DLA 2-3 performed better under field trial with recorded average plant height 117.10 cm and average CD 12.08 mm.
- Field gene-bank was established in IFP nursery with 568 saplings of 6 species (*Buchanania cochinchinensis*, *Haldina cordifolia*, *Petrocarpus marsupium*, *Litsea glutinosa*, *Sterculia urens*, *Boswellia serrata*). Another field trial was established in Chandwa, Latehar, Jharkhand with 293 seedlings of 4 species, i.e. *Buchanania cochinchinensis*, *Petrocarpus marsupium*, *Litsea glutinosa*, *Sterculia urens*.
- Raised 47500 plant saplings and supplied plants and provided technical know how on the cultivation of medicinal plants to different stakeholder through farmers meeting and field visit. More than 1200 saplings has been distributed through "Ayush Aapke Dwar"
- Suitability of four hardwood species (*Hevea brasiliensis*, *Melia dubia*, *Grevillea robusta* and *Eucalyptus* hybrid) as well as their combinations has been evaluated for manufacturing cross laminated timber (CLT). The prepared CLT from these short rotation plantation timbers, including their combinations, met the European standard (EN 16351 -2015) requirements.
- Nano-emulsion of linseed oil (30%) with 2% zinc oxide nano-particle was found to provide excellent UV resistance to wood surface.

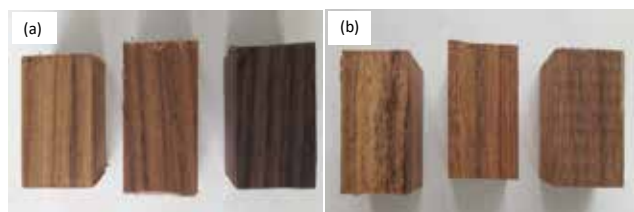


CLT prepared from plantation grown hardwood species



Institute of Wood Science and Technology (IWST), Bengaluru

- An integrated approach to distinguish *D. latifolia* and *D. sissoo* wood using TLC, UV-Vis., NIR spectroscopy and DNA barcoding along with anatomy has been developed. These analytical tools are suitable for distinguishing wood from two timber species i.e., *D. latifolia* and *D. sissoo*.
- Four number of Vacuum pressure treatment units were established in Manipur at four location viz., Sowmbung, churachandpur, Khangsim and Noney. At Sowmbung a Vacuum pressure treatment unit -22 feet length and 3.3 feet diameter was installed and at other three locations



Dalbergialatifolia

Dalbergia sissoo



Vacuum pressure treatment unit -22 feet length and 2.3 feet diameter were installed.

- An adhesive system to bond the veneers for plywood production using lignin a material of bio origin has been developed. The technology for the manufacture of phenol lignin formaldehyde resin adhesives for plywood was formulated for achieving Boiling water resistance grade plywood with 30%, 40% and 50% replacement of lignin for phenol in the resin preparation. Replacement of phenol by lignin minimizes the resin cost.
- Developed a non-destructive technique for estimation of heartwood of trees using Electrical Resistivity Tomography

Institute of Forest Biodiversity (IFB), Hyderabad

- One *Pterocarpus santalinus* progeny trial was established at Nelhal, Karnataka.
- Germplasm bank of *Madhuca longifolia* was established in IFB campus with grafted plants made of scion materials collected from phenotypically superior trees selected in Andhra Pradesh, Odisha and Telangana.
- Potential habitat suitability maps for *P. santalinus* have been generated for Andhra Pradesh and whole of India. 58 plus trees have been selected and their progenies raised. Vegetative propagation of *P. santalinus* through air layering of coppice shoots optimized.
- Three multi locational trials laid with *Eucalyptus camaldulensis* second generation clones in Telangana. (First MLT at Mulugu - 152 clones; Second MLT at Mulakalapally - 162 clones; Third MLT at Parsapalle - 152 clones). Growth assessment was done in first MLT and top fifty clones were identified for second level of trials.
- Data base for the distribution pattern of *Soymida febrifuga* (38 population), *Buchnanian axillaris* (16 population), *Gardenia resinifera* (12 population), *C. speciosus* (15) and *G. superba* (16) have been generated and mapped. Germplasm bank of *Soymida febrifuga* (02 population), *Gardenia resinifera* (01 population), *C. speciosus* (15), *G. superba* (16) and *Pimpinella tirupatiensis* (04) established.
- Identified the 07 promising population of *S. febrifuga* (KNC-329, KNC-328, NUP, NM, RM, MA, and EK) for dye yield (32.11 to 29.13%) and 01 population of *B. axillaris* (Lenkagadda) for dye yield (30.38%) from Telangana. Identified promising populations of *G. resinifera* (04) viz. Moddulakudum (12.40%), Ankhoda (12.47%) Peddapally (12.57%) and Peddabanda (12.80%) based on total flavonoid content using Quercetin standard.
- Developed a novel herbal hair gel formulation using *S. febrifuga* bark dye in association with R&D Global Thane, Maharashtra which was found to be stable over a period of three years and gave a golden blonde colour with reddish tint to the hair upto seven washes. The hair colorant gel tested in-vivo and found suitable for human uses.
- Recorded data for 18 villages harvesting, post harvesting and procurement data of prioritized 10 major NTFP species/parts of Telangana were recorded which revealed *Strychnos nux-vomica* seed was the major harvested NTFPs followed by *Madhuca longifolia* flower/fruit/seed, *Decalepis hamiltonii* root and *Terminalia chebula* fruit and GCC, Govt. Telangana purchased from them at MSP.
- Recorded data for 14 villages traditional

knowledge for treatment of four chronic diseases which showed that plant parts especially leaves and bark from trees was used for preparation of formulation for application on affected area. It has also been observed that *Gymnema sylvestre*, *Kalanchoe pinnata* and *Andrographis paniculata* are the widely used species to cure Diabetes while *Terminalia arjuna* is widely used species for heart related diseases.

- Identified in transcriptome data sequences of novel deltapartitviruses in *Neolamarckia cadamba* and novel cholivirus in *Gymnema sylvestre*.
- Permanent research plot of 10 ha area has been installed in the Dry deciduous forests of Narsapur Reserve Forest for monitoring the impact of climate change on forests.
- A total of 200 mangrove seedlings were planted in 4 block plantations at two locations (142 at Appikonda and 58 at Bheemili)
- The technique called REM (Riley encased methodology) developed and successfully implemented for the purpose of establishing mangroves along high-energy shorelines of Gosthani river confluence, Visakhapatnam. Results indicate that seedlings planted within PVC encasements had the highest survival (91.66%) because of their protection from waves and currents.

Scheme on “Strengthening Forestry Research for Ecological sustainability and Productivity Enhancement” Funded by National Authority CAMPA (2019-2025)

- A. **Component-1** on 31 All India Co-ordinated Research Projects - 13 species-based projects on Teak, Poplars, Casuarina, Eucalyptus, Tamarind, Bamboo, Sandalwood, Redsanders, *Dalbergia sissoo*, *Madhuca longifolia*, *Dalbergia latifolia*, Neem & *Gmelina arborea* and 18 theme

based projects of Nano technology, NTFP, biopesticide, bio fertilizers, climate change and soil etc.

- In species-based project location selection, germplasm collection from natural populations, Mass multiplication, clonal trail, progeny trials, breeding programs and field demonstration has been achieved:
 - In *Casuarina* established 05 clonal trials in 09 locations.
 - Out of 450 CPCs of several bamboo species, macro- propagation of superior germplasm of selected bamboo species has been carried out and Rhizome bank of different bamboo species have been established at FRI, IFGTB, HFRI, and IFP Ranchi.



Germination of tubers of kali musli under natural shade

In Sandalwood, established one field trial (1 ha) with 7 seed sources at Kanasar village Bap Tehsil, Jodhpur district.



Clonal trial of Teak at ICFRE-IFP, Ranchi, Jharkhand



- In Eucalyptus, established 04 Multi locational trails for Eucalyptus (Birsa Agriculture University Farm, Kanke Ranchi; Harhad, Hazaribagh; Jaisalmer and Prayagraj).
- In Teak, clonal trials established in Tamil Nadu, Kerala, Karnataka and Chhattisgarh. About 7 lakh plants have been provided to the Chhattisgarh forest department for planting in farmers fields. Initial survival reported is 90 to 95%.
- For Mahua, Vegetative Multiplication Garden (Clonal Orchard) & Seedling Seed Orchard established at Guru Ghasi Das University campus, Bilaspur, Chhattisgarh.

In *Gmelina arborea*, progeny trials of 14 selected progenies have been raised in Seothi and Bithmera, Haryana. Seeds of *Gmelina arborea* have been collected from 9 identified CPTs from Bihar, 15 identified CPTs from West Bengal and 26 identified CPTs from Jharkhand.

- For *Azadirachta indica*, in ACZ 13 the lowest and highest values of *Azadirachtinin* ppm units were found to be 174.12 and 2412.67, respectively. Likewise, for ACZ 14 the lowest and highest values were found to be 114.93 and 2052.11, respectively. Oil content from 100 seed samples for ACZ 14 (Rajasthan) ranged from 25.03 and 52.17%. For ACZ 13 (Gujarat), the oil ranged between 21.16% to 48.1%.

- Developed Seed germination protocol for 27 species.
- Developed techniques for propagation through seeds and vegetative parts for mass multiplication for *Semecarpus*

anacardium, *Flacourtia indica*, *Limonia acidissima* and *Pithecellobium dulce*.

- Developed bio-fertilizers such as *Azospirillum lipoferum*, *Azotobacter chroococcum*, *Phosphobacteria*, Potash Mobilizer and *Trichoderma viride* to be used in *Gmelina arborea*, *Melia dubia*, *Santalum album*, *Dalbergia sissoo* and *Capparis decidua* across ICFRE institutes. Biopesticide Tree PAL^h tested at multi locations (7 locations) across the country against insect pests of commercially important tree species showed significant results.
- Fire sample tool kits (Kit-1 hand tools (15 sets) and Kit-2 safety clothing (06 sets)) has been sent to SFDs of Uttarakhand, Odisha and Kerala for testing in actual field conditions.
- Chemical composition of *Punica granatum* peels derived dye using LC-QTOF-MS was established. Processes for preparation of a herbal hair colorant using *Woodfordia fruticosa* flowers derived dye and cookies from *Pithecellobium dulce* seeds were developed.
- Value added products of *Ficus palmata* (Himalyan Fig Jam, Himalyan Fig Candy, Dried Himalayan Fig, Fig Squash) prepared.
- The forest soil health card for Ladakh (2) & MP (63) released and for Puducherry (2), Haryana (22), Delhi (4), Chandigarh (1) has been prepared.
- In wood industry-based projects “Pilot scale microwave vacuum dryer” and “Microwave based moisture meter system” for wood drying designed, fabricated and installed. Eco-friendly wood preservatives/coating of linseed oil emulsion embedded with zinc oxide (ZnO) and cerium oxide (CeO₂) nanoparticles embedded developed for wood industry.

- Design & developed a bending testing machine capable of testing bamboo up to 40 feet length as per new Indian standard IS:6874(2008) and International standards ISO:22157 (2004/2019).
 - To monitor the impacts of climate change on Indian forests, ICFRE in 46 permanent research plots in different forest types with an area of 152 ha studied the biodiversity of the respective areathrough its nine institutes. A total of 1,84,361woody individuals above 1 cm DBH have been measured, mapped and tagged with unique numbers so far covering 84 ha following CTFS (Center for Tropical Forest Science) protocol. A book titled “Floral diversity of Kanha Tiger Reserve (Sarhi Range)” has been published.
- B. **Component II:** Programme for Conservation and Development of Forest Genetic Resources (FGR).157 FGR species documented from Forest divisions of 9 states. Regeneration status studied for 27 species. Eco-distribution mapping was done for 84 species. Prediction mapping was done in 2 FGR species. Seeds collected from 96 species. Viability testing was performed in 20 species. Genotyping of 11 species was carried out. Raised seedlings of 7 species from different populations.
- C. **Component-III:** Under Policy Research Studies 02 studies have been completed on ‘Popularization of the use of wood and wood substitutes as per the National Forest Policy and Modalities for facilitating industries for its optimum utilization’ by NCCF, New Delhi and ‘Grazing Policies in different state and Formulation of grazing policy guideline for states’ by SRPDR, Bhopal.
- D. **Component IV:** Capacity Building of State Forest Departments for developing “State REDD+ Action Plans” under National REDD+ strategy:Completed . Capacity of 469 participants from various states had been developed for development of State REDD+ Action Plan for implementation of REDD+ activities at state level.



Seedlings raised at nursery for establishing field gene-banks: (a) *Litsea glutinosa*, (b) *Boswellia serrata*, (c) *Haldina cordifolia*; (d) *Pterocarpus marsupium*; (e) *Sterculia urens*; (f) *Oroxylum indicum*



- E. **Component V:** In Operationalization of Human Resource Development Plan of ICFRE Under this component total 325 participants have been trained in scientific, technical and administrative aspects.
- F. **Component VI:** Under Operationalisation of Forestry Extension Strategy and Action Plan of ICFRE; Established 01 VVKs, organized Two Tree Grower Melas/Kisan Melas, conducted 44 Trainings under VVK, 07 trainings under DV, produced 12

documentaries, developed 04 mobile apps and established demonstration plot of 10 Poplar clones at Trewa Arnia, RS Pura, Jammu in collaborations with KVK Jammu, Four Agroforestry demonstration plot for *Melia dubia* at Sambhalkha, Ambala (Harayana), Birampur, Garhshankar (Punjab) and at Baro, Prayagraj (Uttar Pradesh) with area coverage of 1 ha and 0.15 ha of VMG of *Calophyllum innophyllum* at Panampally, Kerala.

Environmental Knowledge and Capacity Building: Forestry Training and Capacity Building (CS)

FINANCIAL OUTLAY (Rs in Cr)	OUTPUTS 2024-25			OUTCOMES 2024-25		
2024-25	Output	Indicators	Targets 2023-24	Outcome	Indicators	Targets 2023-24
11.43	1.1 Creation of pool of IFS officers equipped to handle new technologies, new ideas	1.1 No of officers trained	2084	1. Build-up of pool of specialized officers	1.1 % of trainees applied new skills acquired through training	100
		1.2 No of training/ refresher courses held	101			

Bengal, Uttarakhand & Uttar Pradesh for carrying out the afforestation activities over 20944 ha and livelihood improvement activities of forest dependent communities.

- Various livelihood improvement activities like fish farming, Mahua collection, Lac cultivation,

a. Progress/Achievement

S. N.	Name of Scheme / Programme	Objective/ Outcome	BE 2023-2024 (Amount in Crores)		Quantifiable Deliverables / Physical Outputs	Projected Outcomes	Pro-cesses/ Timelines	Remarks / Risk Factors
1.	Capacity Building in Forestry Sector, Directorate of Forest Education (State Forest service and Rangers college) Central Scheme (CS)	1. Induction training of State Forest Service (SFS) Officer and Forest Range Officers (FRO) Short-term Workshops / GRC for in-service SFS Officers and FROs Training under "Forestry Training and Capacity Building" for Other Stakeholders and Personnel of Other Services Training on "Forest Fire Prevention & Mitigation Strategies"	BE Revenue – Rs. 17.00 Cr Capital-Communication – Rs. 2.10 Cr Capital- Build-ings - Rs.18.90 Cr Total- 38.00 Cr	Exp. Revenue – Rs. 10.00 Cr Capital-Communication – Rs. 1.00 Cr (upto 16.11.23) Capital- Buildings – Rs. 5.24 Cr (upto 31.10.23)	1. New SFS induction training 2. Undergoing of SFS induction training Passed out induction training New FROs induction training Undergoing of FROs induction training Passed out of FROs induction training One-week Workshops / GRC for in-service SFS Officers & FROs Organizing three	01 batch 04 batches 01 batch 03 batches 06 batches 10 batches 03 courses 9 training 01 training 04	----	All the activities will be undertaken as per General Rules and Financial Rules and orders Moreover this is also subject to audit. On de-mand

S. N.	Name of Scheme / Programme	Objective/ Outcome	BE 2023-2024 (Amount in Crores)		Quantifiable Deliverables / Physical Outputs	Projected Outcomes	Pro-cesses/ Timelines	Remarks / Risk Factors
		for NDRF funded by the NDMA Training under National Collaborative Scheme on "Forest Fire Management" (CAMP) for Frontline Staff Organizing training / workshop for IFS officers Refresher Courses for in-service Deputy Rangers / Foresters / Forest Guards of the States / UTs and one-week workshop for FROs. Courses on Forestry for Sister & other organizations on request			days training under "Forestry Training & Capacity Building" Training on "Forest Fire Prevention & Mitigation Strategies" for NDRF funded by the NDMA Training under National Collaborative Scheme on "Forest Fire Management" (CAMP) for Frontline Staff Organizing training / workshop for IFS officers Forestry skill development certificate courses on different themes	training 01 training 2 workshop ---		

Name of the Scheme/Programme

Directorate of Forest Education, Dehradun

Capacity Building in Forestry Sector, Directorate of Forest Education (State Forest Service and Rangers College) Central Scheme (CS)

7.8 NATIONAL AFFORESTATION AND ECO-DEVELOPMENT BOARD (NAEB):

In order to promote afforestation, tree planting, ecological restoration and eco-development activities in the country, the National Afforestation and Eco-Development Board (NAEB) were set up in August 1992. Special attention is also given by NAEB to the regeneration of degraded forest areas and lands adjoining forest areas, national parks, sanctuaries and other protected areas as well as the ecologically fragile areas like the Western Himalayas, Aravallis, and Western Ghats etc.

The following are projects/schemes operated in NAEB:

1. Nagar Van Yojana

The Nagar Van Scheme was initiated during June, 2020, by revamping the Nagar Van Udyan

Scheme (2015) during 'World Environmental Day Celebrations. The implementation of the revamped "Nagar Van" Scheme aimed to develop 'Nagar Vans/Vatikas' across the country. The Scheme focuses on peoples' participation, and is to be implemented in collaborative mode by various agencies. The primary objective is to create forest/green spaces in urban areas by developing Nagar Van/Vatikas, with a view to protect forest land within cities/towns or its fringes from degradation and encroachment. NVY envisages developing 1000 Nagar Vans/Vatikas in the country during the period of 2020-21 to 2026-27 with the Central grants of Rs.1535 crores from funds under National Authority of CAMPA. The Central grants from funds under National Authority of CAMPA is provided under the scheme to cover mainly the cost of fencing, soil-moisture conservation measures & related activities, administrative activities, plantation and maintenance.

Progress: Total 421 projects are sanctioned and First installment of Rs. 28603.81 Lakhs has been released.

2. School Nursery Yojana

The Ministry is implementing School Nursery



Yojana' in the country. The School Nursery Yojana aims to provide an environment for the students to understand and appreciate the significance of plants in maintaining and sustaining the natural eco-system. Around 5000 school nurseries are proposed to be developed in five years from 2020-21 to 2024-25. The scheme is being funded from CAMPA. An amount of Rs.49.50 crore has been allocated tentatively for the period of five years (2020-21 to 2024-25) for implementation of SNY in the country.

The Scheme will be implemented for a period of five years and all public and private schools recognized by State Boards /Central Government Boards shall be eligible to implement the scheme. Every year 1,000 schools will be selected and each school will raise 1000 seedlings.

Progress: So far, Ministry has approved sanction and release of Rs. 5.78 crores to 743 School Nursery projects in 21 States of the country.

3. Eco Development Forces(EDF)

Eco-Development Forces Scheme was established in 1980s as a scheme implemented through Ministry of Defence for ecological restoration of terrains, rendered difficult either due to severe degradation or remote location or difficult law and order situation.

Under this scheme, the establishment and operational expenditure on the Eco Task Force (ETF) Battalions raised by Ministry of Defence is reimbursed by Ministry of Environment and Forests while the inputs like sapling, fencing, etc. and also professional and managerial guidance is provided by the State Forest Departments. In ETF battalions, the Ministry of Defence deploys its ex-servicemen, preferably from within the area of operation, whereas the nuclear core of the force is constituted of regular servicemen. Presently there are six ETFs operating in 4 states of India. So far, an amount of Rs. 54.20 Crores

has been released under the scheme by the Ministry in the year 2023-24.

4. National Afforestation Programme (NAP)

NAP has been merged with Green India Mission (GIM). And the committed liabilities are to be given under Green India Mission (GIM).

7.9 NATIONAL GREEN INDIA MISSION:

National Mission for a Green India (GIM) is one of the eight Missions outlined under the National Action Plan on Climate Change which aims towards protecting, restoring and enhancing India's forest cover and responding to Climate Change. It envisages a holistic view of greening and focuses on multiple ecosystem services along with carbon sequestration and emission reduction as co-benefit.

Mission Objectives

- Increased forest/tree cover and improved quality of the existing forest cover.
- Improved ecosystem services including biodiversity, hydrological services and carbon sequestration.
- Increased forest-based livelihood income of households living in and around the forests.
- Enhanced annual CO₂ sequestration.

Activities undertaken GIM activities were started in year 2015-16 and so far, a sum of Rs. 836.36 Crores have been released to Seventeen States and one union territory for creation of plantation over an area of 155130 ha and livelihood improvement activities of forest dependent communities.

- Fund amounting to Rs. 86.86 crore has been released to ten states namely Haryana, Karnataka, Madhya Pradesh, Manipur, Mizoram, Punjab, Sikkim & West

making of incense sticks, computer trainings, driving, Sitafal processing, Sewing, bee keeping, poultry, Processing and packaging of NTFPs, etc. has also been taken up by members of JFMCs.

Continuing committees/commissions

- The National Executive Council (NEC) has approved Annual Plan of Operations (APOs) for carrying out the GIM activities in 17 States (including Uttar Pradesh) and one Union Territory for the FY 2023- 24 and balance work of FY 2022-23.
- The 1st Meeting of the National Governing Council of the Green India Mission was held under the chairmanship of Hon'ble Minister wherein the review of the Implementation of the Green India Mission was done and suggestions were made for enhancing the impact and the outreach of the interventions being done under the Mission.

Progress/Achievements

A sum of Rs 836.36 Crore has been released to seventeen states and one union territory from the year 2015-16 to 2023-24 for creation of plantation of 155130 ha in the forest and non-forest areas along with various livelihood improvement activities. The State wise details of afforestation being taken up and funds released is given in table below:

State-wise funds released for afforestation

S. No.	Name of the State	Creation of Plantation (Area in ha .)	Funds Released (Rs. in crore)
1	Andhra Pradesh	1433	6 . 19
2	Arunachal Pradesh	-	34.7 1
3	Chhattisgarh	19128	72.75
4	Haryana	1301	14.74
5	Himachal Pradesh	-	17.09

6	Jammu & Kashmir	1066	32 .22
7	Karnataka	2722	18. 67
8	Kerala	12297	25.47
9	Madhya Pradesh	26597	99.65
10	Maharashtra	5223	10.3
11	Manipur	14432	62.66
12	Mizoram	19643	160.2 1
13	Odisha	207 11	75.78
14	Punjab	6568	26 .95
15	Sikkim	6567	30.49
16	Uttarakhand	14836	132. 10
17	West Bengal	2606	10.95
18	Uttar Pradesh	-	5.43
Total		155130	836.36

(4) Grant-in-aid

Funds released to the State Forest Development Agencies (SFDAs) for carrying out the GIM activities during the FY 2023-24 under the Green India Mission (01.04.2023 to till date):

Funds released to State Forest Development Agencies

S. No.	Name of Organization	Funds Released (Rs. in Crore)
1	SFDA, Haryana	5.19
2	SFDA, Karnataka	2.33
3	SFDA, Madhya Pradesh	8.62
4	SFDA, Mizoram	21.13
5	SFDA, Manipur	8.91
6	SFDA, Punjab	5.38
7	SFDA, Sikkim	7.5
8	SFDA, West Bengal	0.76
9	SFDA Uttarakhand	21.6 1
10	SFDA, Uttar Pradesh	5.43
Total		86. 86



CHAPTER - 8

CONSERVATION- WILDLIFE



8.1 Wildlife Conservation:

For the conservation of wildlife in the nation and dealing with its policy, legal and finances, the Wildlife Division of the Ministry of Environment, Forest and Climate Change act as a Nodal Division. The Wildlife wing is headed by the Additional Director General of Forests (Wildlife) who is also designated as the Director, Wild life Preservation under the Wild Life (Protection) Act, 1972. The Division also provides financial support to the States/UTs for conservation of wildlife and their habitats through the Centrally Sponsored Scheme-Development of Wildlife Habitats (CSS-DWH).

Activities undertaken:

Matters related to Wild Life (Protection) Act, 1972

- Increase in Protected Area Network in the Country, Project Dolphin & Lion, Human-Wildlife Conflict Management, Indo-German Technical Cooperation Project on Human –Wildlife Conflict Mitigation in India, Wildlife Week, 2023 Celebrations, GoI, UNDP-GEF SECURE Himalaya Project and MoEFCC-GEF funded 'Small cats Project'

Progress/Innovations:

Enforcement of Wild Life (Protection) Amendment Act, 2022 and framing of Rules:

The Wild Life (Protection) Amendment Act, 2022 has been enforced from 1st April, 2023 and during the period rules have been notified under the Wild Life (Protection) Act, 1972 subsequent to the amendment.

Protected Area Network in the Country:

A considerable magnification in the Protected Areas (PAs) of the nation is observed during the period. The number of the PAs is now extended to 998 in the country. It covers an area of

1,73,629.52 Sq. Km which is 5.28% of the total national geographic area.

Project Dolphin:

The 'Project Dolphin' was announced by the Hon'ble Prime Minister in his address on 74th Independence Day on 15th August 2020. The Project Dolphin is envisaged to conserve both the marine and riverine dolphins as well as associated Cetaceans under its conservation programme.

The following progress has been observed during the period along with the incepted activities:

1. States of Assam, Rajasthan, Madhya Pradesh, Punjab and UT of Lakshadweep have identified dolphin hotspots.
2. Species conservation and habitat improvement; monitoring and patrolling; facilities for staff and awareness generation programmes have been initiated as part of Dolphin conservation with financial support from Ministry.
3. A Comprehensive Action Plan for Project Dolphin (2022-2047) has been finalized and shared with the concerned line Ministries with a request to initiate actions.
4. A Joint meeting of the Committees for Scientific research for riverine and marine dolphins was convened to deliberate on matters related to research on dolphins.
5. The population estimation of riverine dolphins is complete and the report is being finalized. A meeting with all coastal and marine dolphin range states and stakeholders was convened.
6. Ministry has re-constituted the Project Dolphin Steering Committee in pursuance of the recommendation of the Committee of Secretaries.



7. The Wild Life (Protection) Act, 1972 has been amended in December 2022, which also provides for empowering the Indian Coast Guards for search, seizure, arrest and detention.
8. The Wild Life (Protection) Amendment Act, 2022 includes Gangetic River Dolphin (*Platanistagangetica*) and Indus river dolphin (*Platanista minor*) as two different species in Schedule I of the Act.
9. During the year 2022-23, an amount of Rs. 241.73815 lakhs and for the year 2023-2024, an amount of Rs. 248.18052 lakhs have been sanctioned to States for Dolphin conservation activities under the CSS: Development of Wildlife Habitats.
10. All concerned states have been requested to associate with the regulations of the International Whaling Commission for Project Dolphin by designating Dolphin Commissionaires for riverine dolphin habitats and Whaling Commissionaires for marine habitats.
11. A Tri-partite meeting with States of Madhya Pradesh, Rajasthan and Uttar Pradesh was held wherein the length of the stretch of the Chambal River from Chambal Bridge, Dholpur area till the Yamuna confluence of the Chambal River (~200 km) within the Chambal Sanctuary in the states Rajasthan, Uttar Pradesh, and Madhya Pradesh was recommended for declaration as Conservation Zone for dolphins by the State Governments for focused activities.
12. A meeting regarding Irrawaddy dolphins was conducted in Odisha in the presence of the Honourable Minister of Environment, Forest, and Climate Change.
13. The Dolphin Steering Committee Meeting was convened on the 6th of September

2023 under the chairmanship of the Secretary, EFCC.

14. The first edition of the quarterly Newsletter for Project Dolphin was launched at the Dolphin Steering Committee Meeting.
15. Representatives of the Ministry participated for discussions on Global Declaration for River Dolphin on 23-24 October 2023 at Bogota, Colombia.

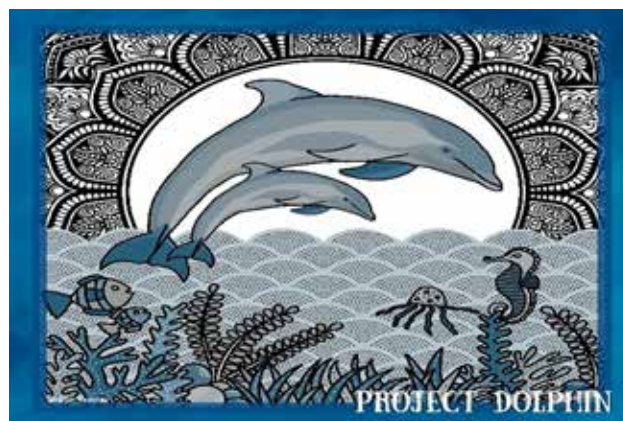
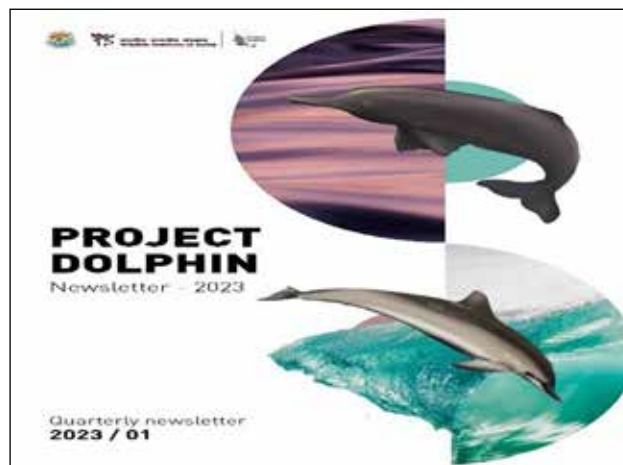


Illustration of Project Dolphin



Project Dolphin Newsletter-2023

Project Lion:

The 'Project Lion' was announced by the Hon'ble Prime Minister in his address on 74th Independence Day on 15th August 2020 for recognizing the best interest of Asiatic Lion for securing their future and proliferation. The Project Lion envisaged a long-term conservation



Launching of the first edition of Newsletter of 'PROJECT DOLPHIN' by Secretary, EFCC in presence of Dolphin Steering Committee

of Asiatic Lions in the nation.

The following advancements have been observed during the period under this project:

1. A Steering Committee meeting for Project Lion has been conducted under the Chairmanship of ADG PT & E.
2. The activities conducted by the Gujarat Forest Department are:
 - a) Habitat improvement; Monitoring through radio-collaring, camera trap, telemetry, SIMBA, and patrolling through e-Guj; Human-wildlife conflict management; Eco-development works; Awareness generation and sensitization
3. Blueprint for Establishment of All India Wildlife Disease Diagnostic Research and Referral Centre has been prepared; and sites identified have been handed over for implementation to the State Forest Department.
4. The document titled 'Project Lion: Lion @47 vision for Amrutkal' has been prepared

and shared with the State Government of Gujarat for further action.

5. A Lion Cell has been created to look after Lion conservation issues.

Human-Wildlife Conflict Management:

During the period the National Human-Wildlife Conflict Mitigation Strategy, an Action Plan (2021-2026) has been developed using the participatory approach to bring a common understanding and consensus among the key stakeholders on the approaches and possible solutions to mitigate human-wildlife conflict in the country. Further, species specific guidelines for mitigation of human-wildlife conflict have also been issued by the Ministry. The regulatory functions for dealing with Human-Wildlife conflict situations is provided by the Wild Life (Protection) Act, 1972.

Indo-German Technical Cooperation Project on Human –Wildlife Conflict Mitigation in India:

An Indo-German Technical Cooperation Project on "Human Wildlife conflict mitigation in India", has been commissioned by the German Federal Ministry for Economic Cooperation

and Development (BMZ), and implementation by *Deutsche Gesellschaft für Internationale Zusammenarbeit* (GIZ) in partnership with the MoEFCC, Government of India, and the State Forest Departments of Karnataka, Uttarakhand and West Bengal in June 2023.

Hon'ble Minister, EF&CC has released 14 guidelines to address Human-Wildlife Conflict in the country in a holistic manner, developed with support from GIZ under the project on Human-Wildlife Conflict Mitigation in India.



Guidelines (In bilingual version)

Wildlife Week, 2023 Celebration:

The Hon'ble Prime Minister of India Shri Narendra Modi delivered a message on the occasion of Wildlife Week, 2023. Throughout the nation, various activities like painting competition, webinars, documentaries, Competition on Wildlife Photography were taken place at

different level to create awareness among every group of the citizens.

Achievements in Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES):

A team of Indian delegates attended the 77th meeting of Standing Committee of CITES held in Geneva, Switzerland, in November 2023 and bagged remarkable achievement as India was removed from the process of Review of Significant Trade (RST) for Red Sanders, under



Do & Don'ts (In bilingual version)

CITES. India was also placed under 'Category-1' for the CITES National Legislation Programme.

GoI, UNDP-GEF SECURE Himalaya Project:

The GEF funded SECURE Himalaya entered into sixth year of implementation. This year marks consolidation and replication of ongoing activities,

as per the recommendations of Independent Mid Term Review conducted in 2022. In Uttarakhand, 10 ha of sea buckthorn plantation on degraded forest land area for restoration purposes was done and a sea buckthorn processing unit is under establishment. The activity is providing the opportunity of income generating livelihood to approx. 400 households in 8 villages. Farmer Producer Organisation working on Apple based product development has been established in the market and received special invitation to participate in Republic Day celebration 2023 from Prime Minister Office.



Products derived from Sea Buckthorn

- i. 180 personnel from different law enforcement agencies were trained with the technical help from Wildlife Crime Control Bureau (WCCB) and TRAFFIC-India.

Forest Department, Himachal Pradesh in collaboration with WCCB notified a high-level Inter-Agency Coordination Committee to improve the interagency coordination for better coordinated efforts to tackle the important issues of wildlife crime and illegal trade in wildlife. Wildlife Information Management System (WMIS) and a Mobile App was successfully set up and deployed in Uttarakhand under SECURE Himalaya Project. The same system has been replicated in Himachal Pradesh for reporting of human wildlife conflict cases, submitting compensation claims, wildlife sighting, occurrence and abundance data collection. Director General of Civil

Aviation certified drone pilot training course was organized for a total number of 10 Forest officials in collaboration with *Indira Gandhi Rashtriya Uran Akademi* and State Government.

- ii. In Sikkim, SECURE Himalaya project successfully demonstrated decentralised food waste management through installation of Organic Waste Composter Machine at an Army transit camp at Kyongnosla, East Sikkim. The installed machine takes the food waste and converts it into compostable soil material overnight. This intervention has been helpful to demonstrate a technology that promotes decentralised waste management and also help reduce feral dog numbers.

The TungkyongDho Lake in HeeGyathang Gram Panchayat was declared as Sikkim's first Biodiversity Heritage Site in collaboration with State Biodiversity Board.

- iii. The SECURE Himalaya project supported the Administration of Ladakh in setting up India's first Dark Sky Reserve in Hanle village cluster, which amalgamates the objectives of wildlife conservation, habitat improvement, and livelihood enhancement and diversification, together. Similarly, in Rong Valley, the project has developed and is promoting responsible, community-led ecotourism in the region offering enriching experience of wildlife, culture, adventure sports, food, and wellness.

The project has been working in the basin of TsoKar, a Ramsar site, on the promotion of sheep and yak wool value chains, to build resilient communities, harmonise human-wildlife conflicts, and improve rangeland management in the region with more than 100 community members to



introduce new technologies, techniques and improved processes to augment the value of these neglected wool fibres at the source. In Gya-Meru village cluster, successful demonstration of Animal Intrusion Detection and Repellent System (ANIDERS) have reduced losses from crop-raiding by blue sheep has proven to be highly efficient.

MoEF&CC –GEF funded ‘Small cat Project’:

The project is supported by Global Environment Facility (GEF), and is being implemented by the MoEF&CC and the states of Arunachal Pradesh (Pakke-Eaglenest Landscape), Uttar Pradesh (Dudhwa Landscape) and Rajasthan (Ranthambore Landscape) in partnership with UNDP-India as the assurance partner and Global Tiger Forum (GTF) as the Responsible Party.

The project envisions the inclusion and integration of small cat needs into the existing big cat conservation mandate for the conservation of all wild cats to be considered together. Conservation of nine small cat species from three landscapes in the partner states through a centrifugal approach is envisaged. The focal species through targeted intervention are Caracal (*Caracal caracal*) in Western India, Fishing Cat (*Prionailurus viverrinus*) in Northern India, and Clouded Leopard (*Neofelis nebulosa*) in North-east India. The project builds on four pillars that enable institutional framework, strengthening management of protected areas, community stewardship, and partnerships.

Key updates during the current year include:

Conceptual Framework of the Landscape Master Plan and Population Assessment and Monitoring Protocol: The conceptual structure and design for a landscape-centric strategy and monitoring protocols have been deliberated in workshops held at the three landscapes with relevant

stakeholders from the forest department and subject matter experts. Profiling of the landscape and small cat species distribution therein is underway for the Pakke-eaglenest and Dudhwa landscapes.

National Green Business Platform: To engage the corporate sector in conservation initiatives benefiting wild cats and facilitate sustainable financing for maintaining community stewardship, regional and national level meetings were organized with representatives of the Ministry, the three partner states, assurance partners, and business houses. The contours of the trust fund structure and strategy for collaborating with business houses were deliberated. The state representatives are now in the process of identifying the key investment areas in the landscapes.

Community awareness for wild cat conservation raised at sub-national levels: Awareness regarding diversity of wild cats in India with their cultural and ecological values has been generated amongst the youth through the organization of a “special wild cats football tournament” with small cats and wildlife species being the mascots for each of the teams. This led to immense outreach and dissemination of information regarding small wild cats, with the youth pledging to protect the species and associated natural resources. Badminton tournament in the Pakke-Eaglenest landscape have also been supported under the project to increase awareness and foster community stewardship. On the occasion of ‘International Clouded Leopard day’ on August 4, a special webinar on the global and national status (both in-situ and ex-situ) was organized for the general public.

Financial assistance under Centrally Sponsored Scheme-Development of Wildlife Habitat:

Financial assistance has been provided to



States/UTs for the conservation and protection of wildlife and its habitats under the Centrally Sponsored Scheme-Development of Wildlife habitats in current financial year for the following components:

- Support to Protected Areas (National parks, Wildlife Sanctuaries, Conservation Reserves and Community Reserves)
- Protection of Wildlife Outside Protected Areas
- Recovery programmes for saving Critically Endangered Species and their habitats.

8.2 Wildlife Crime Control Bureau:

Establishment and Mandate: The Wild Life Crime Control Bureau (WCCB) was constituted by the Government of India on 6th June, 2007 under Section 38 Y of the Wild Life (Protection) Act, 1972, and it became operational in the year 2008. The Bureau has been envisaged as a multi-disciplinary body with officials from Police, Forest/ WL, Customs and other Intelligence & Enforcement agencies.

WCCB has been tasked with the following functions under Section 38 (Z), of the Wild Life (Protection) Act, 1972:

- a) Collect and collate intelligence related to organized wildlife crime activities and to disseminate the same to State and other enforcement agencies for immediate action so as to apprehend the criminals and to establish a centralized wildlife crime data bank;
- b) Co-ordination of actions by various officers, State Governments and other authorities in connection with the enforcement of the provisions of this Act, either directly or through regional and border units set up by the Bureau;

- c) Implementation of obligations under the various international Conventions and protocols that are in force at present or which may be ratified or acceded to by India in future;
- d) Assistance to concerned authorities in foreign countries and concerned international organizations to facilitate co-ordination and universal action for wildlife crime control;
- e) Develop infrastructure and capacity building for scientific and professional investigation into wildlife crimes and assist State Governments to ensure success in prosecutions related to wildlife crimes;
- f) Advise the Government of India on issues relating to wildlife crimes having national and international ramifications, and suggest changes required in relevant policy and laws from time to time.

Activities undertaken:

- Collection, collation and dissemination of 87 intelligence inputs on wildlife crime and criminals to the Central/ State agencies concerned for operations / joint operations / apprehension of criminals.
- Collection of wildlife crime data from 36 agencies of the States/UTs (Forest & Police Depts.) by creation of online data management system in WCCB website.
- Wildlife Crime Enforcement under the provisions of Wild Life (Protection) Act, 1972: -
 - Detection/ search/ seizures/ apprehensions – 46 Wildlife Crime cases detected in Joint Operations conducted by Bureau with other State/ central Enforcement Agencies during the period.



- Assistance in investigation and prosecution of important wildlife offences being investigated by other agencies: Assistance to the State authorities in investigation was provided in 33 new cases during the year.
- Capacity building in dealing with wildlife crimes and investigation of wildlife offences:-
 - Conducted 12 two days capacity building training courses on investigation of wildlife offences and intelligence tradecraft for 539 Police and Forest officials.
 - Conducted 51 Sensitization programmes/ workshops/ online webinars for the Central and State agencies on issues related to wildlife crimes and identification of wildlife articles in which 3224 Officials participated.
 - Conducted 09 PRI Sensitization programmes for the PRI members/ Villagers on issues related to wildlife crimes and protection of wildlife in which 587 PRI members participated.
 - Provided expert resource persons to various training centers and enforcement agencies for sensitization on wildlife and wildlife crime.
- Sensitization and awareness campaigns on wildlife and wildlife crimes to public and other stakeholders.
 - Human Resource Development in WCCB – Deployment of WCCB officials for various training courses for their capacity building as Trainers in the relevant fields.
- Coordination and cooperation to combat organized wildlife crimes with trans-border ramifications: -

Conducted 46 Joint operations with other agencies for prevention of wildlife crime.

 - Three Special Enforcement Operations coordinated by WCCB were launched with a focus on specific species related crime as well as on online illegal wildlife trade.
 - ICCA Alumni to attend International Conservation Chiefs Academy (ICCA) Training from 20th to 22nd June 2023 at Bangkok Thailand.
- Assisted the Customs Department in inspection of consignments in respect of violations of WLP Act, CITES and FTP; also assisted and advised them in identification of wildlife articles and issues related to CITES.
- Regulate legal trade under CITES: WCCB assisted Customs by conducting inspection of pre/post shipment of flora and fauna samples of EXIM consignments as per the provisions of the Wild Life Protection Act, 1972, CITES and EXIM Policy. Such inspections resulted in detection of 33 WLPA, CITES and EXIM policy violations at various exit points across the country during this financial year.

Collaboration with Online Trade Portals

WCCB swings in action, curbs illegal online trade of Sea Cucumbers, Online wildlife crime patrolling, conducted by WCCB, has started yielding results. Over 300 advertisements for sale of Sea Cucumbers on online portals were detected by WCCB and taken off the website with active intervention of WCCB during 2022.

Photographs of WCCB achievements during 2023:



Detection & seizures

The Introduction of Volunteers

To encourage participation of wildlife enthusiasts, “WCCB Volunteers Scheme” has been initiated where volunteers assist WCCB in collection of information on wildlife crime, capacity building, awareness generation, achieving mandated objective. In every two year, WCCB invite application from citizen having inclination towards wildlife conservation to become Volunteer with WCCB.

WCCB’s participation in the ‘Cheetah Reintroduction’ programme

In a proud moment, WCCB team participated in the historical ‘Cheetah reintroduction’ programme held on 17th September, 2022, to bring Cheetahs back to India and provided support in seamless passage of the big cats to India by acting as Assistant CITES Management Authority. WCCB assisted in import clearance

and also issued necessary CITES Import permit & Wildlife NOC to the import consignment carrying 08 Cheetahs.

Activities related to CITES and e-SANCHIT:

- A. As per the recommendation of the Working Group on National Committee on NCTF on PGA regulations and procedures, WCCB has prepared Questionnaire for Chatbot for trade facilitation for making it functional on the official website of WCCB. A comprehensive Chatbot has submitted to the ADG & MA, CITES for approval.
- B. The Bureau has developed a web based app for printing of CITES Permits and report generation. The app is in the stage of finalization by WCCB.
- C. WCCB is in the process of launching DICS (Digital Import Clearance System)



integrated to SWIFT platform of Customs, CBIC and UAT (User Acceptance Test) for the same have been completed.

- D. As per recommendation of the NTFAP on PGA Procedure & Regulation, a timeline of activities requiring minor and major procedures for cargo clearances has been prepared and uploaded on the website for trade facilitation and public information.
- E. CITES Annual Report, 2021 has been prepared & submitted to the M.A., CITES, New Delhi & also uploaded on the WCCB website.

WCCB Internship Programme

WCCB organized summer Internship Programme for 2023-24 from 3rd June, 2023. The program was inaugurated by Additional Director, WCCB, Sh. H.V Girisha.

Social Media Outreach

WCCB has been optimizing the potential of social media to connect with the society and making

them aware of all the activities being undertaken by the agency to check illegal wildlife crime. Apart from having a full-fledged webpage, WCCB has presence on all major social media platforms viz. Face book, Twitter, Instagram, and YouTube.

8.3 Central Zoo Authority:

The Central Zoo Authority (CZA) is a statutory body under the Ministry of Environment, Forest & Climate Change, Government of India. It was constituted in 1992 under the provisions of Wildlife (Protection) Act, 1972 to oversee the functioning of zoos in India and provide them technical assistance. The prime concern of the CZA has been to raise the existing standards of animal housing, upkeep and health care in the zoos of the country.

Objectives:

- Enforce minimum standards and norms for upkeep and healthcare of animals in Indian zoos and
- Control mushrooming of unplanned and ill-conceived zoos.

Functions:

The Authority has been assigned following functions under Section 38 (C) of the Wildlife (Protection) Act, 1972:

a)	To specify the minimum standards for housing, upkeep and veterinary care of the animals kept in zoos;	The CZA has prescribed following standards of for housing and upkeep of animals housed in captivity: 1. Recognition of Zoo Rules 2. Guidelines for the Scientific management of zoos
b)	To evaluate and assess the functioning of the zoos with respect to the prescribed standards or norms;	During the reporting period, the CZA is undertaking the evaluation of 69 zoos. The 6 zoos have been evaluated physically.
c)	To recognize or derecognize zoos;	The CZA granted recognition/ renewal of recognition to the 20 zoos. Besides, approval for establishment of 6 zoos was provided. At present there are 156 recognized zoos in the country.

d)	To identify endangered species of wild animals for purposes of captive breeding and assigning responsibility in this regard to a zoo;	The CZA has identified 74 species of indigenous fauna for focused conservation breeding. This includes 24 species of birds, 46 species of mammals and 3 species of reptiles and 1 species of amphibian. For this purpose, 42 zoos have been identified, of which 29, are designated as the coordinating zoo. It was earlier envisioned that at least 100 genetically, physically, and behaviourally fit individuals of each identified species are established. The goal is to have these populations as an 'insurance' (i.e., maintaining a viable population of the species ex-situ) in case species restoration is planned. The establishment of these populations broadly follows the "IUCN Species Survival Commission Guidelines on the Use of Ex situ Management for Species Conservation (Version 2.0)". The CZA had published the first "Guidelines/Norms for Conservation Breeding Programme of the Central Zoo Authority" in 2011. As part of this, 25 species (17 threatened species, 3 Critically Endangered and 5 Endangered) were provided financial assistance by the CZA. Examples of successful breeding programs that have resulted in the establishment of captive populations include:- - Barasingha (<i>Rucervusduvaucelii</i>) - White-rumped Vulture (<i>Gyps bengalensis</i>) - Himalayan newt (<i>Tylototritonverrucosus</i>) - Lion-tailed Macaque (<i>Macacasilenus</i>) - Stump-tailed Macaque (<i>Macacaarctoides</i>) - Western Tragopan (<i>Tragopanmelanocephalus</i>) - Red Panda (<i>Ailurusfulgenssspfulgens</i>) - Smooth-coated otter (<i>Lutrogaleperspicillata</i>) - Himalayan Monal (<i>Lophophorusimpejanus</i>) - Nicobar Pigeon (<i>Caloenasnicobarica</i>)
		Apart from the above the Indian Chevrotain (<i>Moschiolaindica</i>), Cheer Pheasant (<i>Catreuswallichii</i>) and Long-billed vulture (<i>Gyps indicus</i>) have also fared well in captivity. Breeding of Blyth's Tragopan (<i>Tragopanblythii</i>) at Nagaland Zoological Park and Temminck's Tragopan (<i>Tragopantemminckii</i>) at Padmaja Naidu Himalayan Zoological Park has continuously been successful in the year 2022-2023.
e)	To coordinate the acquisition, exchange and loaning of animals for breeding purpose;	During the reporting period, CZA has approved 118 animal exchange proposal between Indian Zoos and 38 exchange proposal between Indian & Foreign Zoos.
f)	To ensure maintenance of studbooks of endangered species of wild animals bred in captivity;	Out of studbook of 34 identified species of captive wild animals housed in Indian Zoos, Studbook has been prepared for 34 captive animal species which are being updated. During the reporting period, the data is being collected from the zoos in country and accordingly, the Studbooks will be updated. The program is currently being updated using the global standards including the IUCN - Conservation Planning Specialist Group - One Plan Approach.



g)	To identify priorities and themes with regard to display of captive animals in zoos;	CZA is assisting recognized zoos in finalization of Master Plan for long-term future development. The CZA is also reviewing the previously approved Master (Layout) Plans of Zoos and Master Plan of Zoos to ensure the more insight of CZA for better development of the Zoos. During the reporting period, CZA has approved the Master (Layout) Plan of 10 zoos and approved the Master Plan of 9 zoos.
h)	To coordinate training of zoo personnel in India and outside India;	CZA conducts dedicated in-person training programs at all verticals of zoo management such as - Zoo Managers, Veterinarian, Educationist, Biologist, Middle level official & Zoo Keepers.
i)	To coordinate research in captive breeding and educational programmes for the purposes of zoos;	During the period, CZA has granted NOC to two research projects that have zoo/ ex-situ linkage.
j)	To provide technical and other assistance to zoos for their proper management and development on scientific lines;	MoEF&CC has allocated an amount of Rs. 10.00 Crores during the reporting period out of which CZA has received an amount of Rs. 7.50 Crores. The same has been utilized and released to the zoos/ organization for approved items of the works and operational cost of CZA.
k)	To perform such other functions as may be necessary to carry out the purposes of this Act with regard to zoos.	Other than above, the CZA has convened 01 meeting of the Central Zoo Authority, 03 meeting of the Technical Committee of CZA, 01 meeting of Administrative Committee & 03 Meeting of Expert Group on Zoo Designing, CZA to finalize the various Technical and Administrative issues.

b. Activities undertaken

- Implementing the Management Effectiveness Evaluation (MEE) of zoos-pioneer in world
- Focus on emerging infectious diseases & establishment of National Referral Centre for wildlife disease monitoring and prevention; Preparation of Detailed Project Report of National Referral Centre – Wildlife including organising the first stakeholder meeting on March 10, 2023 and second stakeholder meeting on December 22, 2023.
- Implementation of 10-year Vision Plan for up-gradation of 15 zoos to Global Standards.
- Understanding genetic variation and its relevance using captive big cats' from National Centre for Biological Sciences, Bengaluru, Karnataka.
- Capacity Building Programme were organized for Indian zoos professionals.

- LiFE Campaign - #Mission LiFE-Zoos as Plastic free zones.
- Observance of Swachhata Pakhwada September-October 2023 in Recognized Zoos.
- Swachhata Hi Seva Campaign- On October 1, 2023 - Cleanliness drive at National Zoological Park, New Delhi. Over 59 registered events that witness a participation of nearly 6500 volunteers. Over 45 recognised zoos in 24 states participated in the event. Over 114 tonnes of waste collected and disposed as appropriate. Over 6500 Swachhata Pledges by volunteers.

c. Promulgation of new Acts/ Rules

Guidelines on placement and management of rescued animals in recognized zoos.

d. National/ International Conferences:

During the reporting period following in-person capacity building programmes, were organized:

Topic	Date of organization	Participation	Participants benefitted
National Conference of Zoo Directors	September 10-11, 2023 at the Nandankanan Zoological Park, Odisha	Zoo Directors from all over country	57
	January 18-19, 2023 at the Sri Chamarajendra Zoological Gardens, Karnataka		59
Capacity Building Workshop for Zoo Zookeepers	October 16-18, 2023 at Van Vihar National Park & Zoo, Bhopal, Madhya Pradesh	Zoo Veterinarians from all over country	35
Capacity Building Workshop for Zoo Keepers	February 21-23, 2023 at the Zoological Garden, Alipore, Kolkata, West Bengal	Region wise Zoo Keepers from all over country	27
	February 27 - March 1, 2023 at the Bannerghatta Biological Park, Bengaluru, Karnataka		29
	March 13-15, 2023 at the National Zoological Park, Delhi		34
	March 16-18, 2023 at the Nahargarh Biological Park, Jaipur, Rajasthan		32
	September 13-15, 2023 at Sakkarbaug Zoological Park, Junagadh, Gujarat		30
	December 06-08, 2023 at Sri Venkateswara Zoological Park, Tirupati, Andhra Pradesh		42
	December 18-20, 2023 at the Assam State Zoo cum Botanical Garden, Guwahati, Assam		24
Capacity enhancement workshops for Zoo Biologists and Education Officers	March 21-23, 2023 at the Greens Zoological Rescue and Rehabilitation Centre, Jamnagar, Gujarat	Zoo Biologists and Education Officers from all over country	51
	February 15-17, 2023 at the VeermataJijabaiBhosaleUdyaan and the Zoo, Maharashtra		32
	Aug – 5 to 7, 2023 at the Sanjay Gandhi Biological Park, Patna.	Zoo Biologists from all over country	29
	November 06-08, 2023 at the NawabWajid Ali Shah Zoological Park, Lucknow	Zoo Educator from all over country.	30

e. Major Publications

1. Ex-Situ Updates Vol 3 Issue 2, 3 & 4.
2. Ex-Situ Updates Vol 4 Issue 1.

Grant-in-aid:

Sl.	Name of Organization	Purpose	Total amount released	Status of third-party evaluation	Remarks
1.	Central Zoo Authority	Scientific Management of Zoos	563.00 lakhs	To be taken up	Total Amount received has been utilized as on 29.12.2023
2.		Salary and Operational cost	187.00 lakhs		



National Conference for Zoo Directors, Bhubaneswar, Odisha



Clouded leopard at Sepahijala Zoological Park, Tripura

8.4 Project Elephant:

As the largest of all land mammals, elephants play an important role in balancing natural ecosystems. They are an integral component of the biome and play a crucial role in maintaining forest ecosystems and biodiversity. They are referred as “keystone species” as it disperses seeds and supports large assemblages of invertebrates. Elephants after feeding transport plant material around in their guts and drop them off in their dung several kilometers away

from where the plants were initially eaten. Thus, known as ecosystem engineers, they control resource availability for other species by modifying the physical environment around them and in doing so transform, maintain, and create habitats.

India has 60% of the global population of Asian elephants and as per the last census conducted in 2017, 29,964 elephants were enumerated to be extant in the country. To ensure the long-

term survival of the population of elephants in their natural habitats by protecting them, their habitats and migration corridors, Government of India launched Project Elephant (PE) in the year 1991-92 as a Centrally Sponsored Scheme with the following objectives:

- To protect elephants, their habitat and corridors
- To address issues of man-elephant conflict
- Welfare of captive elephants

The implementation of Project Elephant is through the Centrally Sponsored Scheme with the grant to State Governments with a funding pattern ratio of Central: State share to 60:40 and 90:10 for North East and Himalayan states. Presently the Project is being implemented in 23 States/UTs, viz. Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Jharkhand, Karnataka, Kerala, Manipur, Madhya Pradesh,

Maharashtra, Meghalaya, Nagaland, Odisha, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh, West Bengal, Rajasthan, Bihar, Punjab, Himachal Pradesh and Haryana (where an elephant rescue centre has been set up supported by Project Elephant). To give a concerted thrust to the conservation of the species, Govt. of India has also declared the elephant as the National Heritage Animal of India. The Project Elephant, Project Tiger were the sub scheme of Integrated Development of Wildlife Habitats (IDWH). During the Expenditure Finance Committee meeting (EFC), Department of Expenditure, Ministry of Finance which was further approved by the Cabinet, it was decided that the Sub scheme of CSS- PE should be merged with CSS-PT and named viz. Project Tiger & Elephant (PT&E).

Activities undertaken:

- **GajUtsav**

The programme was inaugurated by Smt.



DNA sampling of captive elephants



Droupadi Murmu, Hon'ble President of India, on 7th April, 2023.. The inaugural session was held on 7th April, 2023, followed by 18th Steering Committee Meeting of Project Elephant and Plenary Session on "Taking the Elephant Conservation Forward in Modern India".

- Gaj Suchana App was developed for collation of data on captive elephants and their owners.
- So far, 602 samples of captive elephants have been recorded in the Gaj Suchana App. The sample collection process has been completed in the States/UTs of Delhi, Haryana, Chhattisgarh, Uttarakhand, Tripura, Rajasthan and Punjab and partially completed in the States of Tamil Nadu, Bihar, West Bengal, Uttar Pradesh and Odisha.

- **Ground-truthing of elephant corridors**

- The Project Elephant in coordination with the State Forest Departments have ground validated 150 elephant corridors across 15 elephant range states in India.
- A report on Elephant Corridors of India was released during the World Elephant Day, 2023 at Bhubneswar, Odisha by the Hon'ble Minister, EF&CC.
- The report comprises of details pertaining to 150 elephant corridors across India with corresponding maps.

- **Steering Committee meeting of Project Elephant:**

- The 18th meeting of the Steering Committee was held under the Chairmanship of Hon'ble Minister, EF&CC at Kaziranga National Park,

Assam on 7th April, 2023.

- The 19th meeting of the Steering Committee was held under the Chairmanship of Hon'ble Minister, EF&CC at Bhubaneswar, Odisha on 12th August, 2023.

- **Central Project Elephant Monitoring Committee (CPEMC)**

- Fifth meeting of the CPEMC was convened under the Chairmanship of ADG (PT&E/FC) & MS (NTCA) on 6th March, 2023 and Sixth meeting on 21st July, 2023 at MoEF&CC, New Delhi.

- **Captive Elephant Healthcare and Welfare Committee (CEHWC)**

- Second meeting of the CEHWC was convened under the Chairmanship of IGF (PT&E) & Director, PE on 17th January, 2023 at MoEF&CC, New Delhi through virtual mode and the third meeting on 27th July, 2023 at MoEF&CC, New Delhi.

Release of Publications:

- a. The Guidelines for Human-Elephant Conflict Mitigation-Taking a Harmonious Coexistence Approach (2023)



Release of publications:

- b. Human-elephant conflict manual (Assamese version).

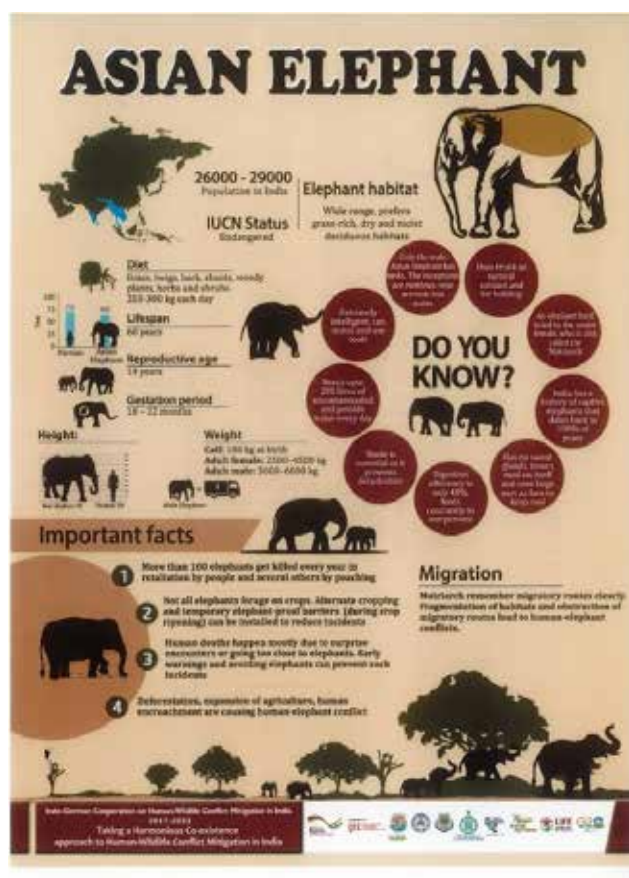
- c. Management Effectiveness Evaluation of the Elephant Reserves in India.
- d. Necropsy and carcass disposal of Asian elephant: Recommended operating procedure.
- e. Trumpet Quarterly Newsletter Volume 3: Issue 1-2, and 3
- f. Elephant Reserves of India – An Atlas-Version-2.
- g. Elephant Corridors of India
- h. Field manual for managing Human Elephant Conflict (Hindi version).

Oxford, United Kingdom from 30th March – 1st April, 2023.

- MIKE and ETIS data of Govt. of India for the calendar year 2022 submitted to CITES and TRAFFIC respectively.
- Presentation by IGF (PT&E) & Director (PE) during the 11th Meeting of the IUCN SSC AsESG held on 14th -17th March, 2023.

Management Effectiveness Evaluation (MEE):

- To streamline management approaches and provide a platform for sharing best practices in managing elephant habitats, the document released during GajUtsav



Guidelines (In bilingual version)

Multilateral environmental agreements and international meetings:

- IGF (PT&E) & Director (PE) attended the International Conference on Human-Wildlife Conflict and Coexistence at



Do & Don'ts (In bilingual version)

titled 'Management Effective Evaluation (MEE) of the Elephant Reserves in India' provided the conceptual, administrative and legal framework for objectively evaluating the elephant reserves.



- The Ministry has completed the pilot 'Management Effective Evaluation (MEE) of 4 Elephant Reserves in India namely. (i) Shivalik Elephant Reserve, Uttarakhand, Northern Region (ii) Kaziranga-KarbiAnglong Elephant Reserve, Assam, North-East Region (iii) Simlipal Elephant Reserve, Odisha, East Central Region (iv) Nilgiri Elephant Reserve, Tamil Nadu, Southern Region.

Capacity building workshops:

- A Capacity Building Workshop on "Minimizing Railway-induced Elephant Mortalities for the Officers of the Indian Railways" was conducted on 1st-3rd February, 2023 at Wildlife Institute of India, Dehradun. A similar program was also conducted 23rd-25th November, 2023 at WII, Dehradun.

GajGaurav Award

- Capacity Building Workshops on "Mainstreaming Management of The Elephant Reserves" were conducted on 13th-15th March, 2023 28th - 29th and November, 2023 at Wildlife Institute of India, Dehradun.

Progress/Innovations:

- 110 critical stretches across the Railway network in the country that pass-through elephant habitats have been identified. In these critical stretches, multipronged strategies are planned to minimize Railway-related elephant collisions. In these locations measures such as building underpasses, clearing vegetation along the tracks to increase visibility for the loco pilots to avoid collisions, provisioning ramps, and others will also be taken up.



Progress/Innovations:



- A joint survey of the critical stretches of railway lines passing through the elephant habitats in West Bengal for suggesting mitigation measures was conducted during 26-31st December, 2023 by the officers/officials of Project Elephant, MoEF&CC, Ministry of Railways and West Bengal Forest Department.
- The survey was conducted in the critical stretches of Alipurduars and Darjeeling Districts of North Bengal region and in Jhargram & Paschim Medinipur Districts of South Bengal region with an objective to identify specific elephant crossing zones on these stretches and to suggest site-specific mitigation measures based on the location and the extent of these crossing zones to mitigate train-elephant hits. The team deliberated on different structural mitigation measures in the identified critical elephant zones intersected by railway tracks such as level crossings, creation of ramps, wildlife underpasses, wildlife overpasses, installation of Distributed Acoustic Sensing (DAS) System etc

Achievements:

- Every year 12th August is celebrated as the World Elephant Day across the globe to reaffirm mankind's collective pledge in conserving one of the most iconic species in the planet. This year, the MoEF&CC has observed the Elephant day in Bhubaneswar with active support and coordination by the Odisha Forest Department.

8.5 Project Tiger/National Tiger Conservation Authority (NTCA)

The National Tiger Conservation Authority (NTCA) was constituted under enabling provisions of the Wildlife (Protection) Act, 1972, as amended in 2006, for strengthening tiger conservation as

per powers and functions assigned to it under the said Act.

Objectives:

The main objective is to provide statutory Authority to Project Tiger so that compliance of its directives becomes legal; to foster accountability of centre and states in management of Tiger Reserves; to provide an oversight by parliament and to address livelihood interests of local people in areas surrounding Tiger Reserves.

Functions of the NTCA:

The main function is conservation of tigers and their habitat. Further details of powers and functions of NTCA are given under section 38O of the Wildlife (Protection) Act, 1972, as amended in 2006.

Activities undertaken:

- 12 cheetahs reintroduced to Kuno National Park from South Africa with support from more than 450 "cheetah mitr" for successful acclimatization.
- Rajaji Tiger translocation project boosts tiger numbers in the western region; one tigress reintroduced.
- Project Cheetah was deliberated in the consultative committee of the parliament.
- Global Tiger Day marked with the release of comprehensive tiger numbers at Corbett Tiger Reserve.
- Final report of All India Tiger Estimation 2022 and 5th cycle of Management Effectiveness Evaluation of Tiger Reserves were released.
- Commemoration of 50 Years of Project Tiger was celebrated in Mysuru with a mark of Special Coin and International Big Cat Alliance (IBCA) was launched by the



Honorable Prime Minister.

- Six Tiger Reserves, Kali, Melghat, Pilibhit, Tadoba-Andhari, Nawegaon-Nagzira, and Periyar received Conservation Assured Tiger Standards (CA|TS) awards.
- World Rangers Day celebrated in Kanha and Manas Tiger Reserves.
- Pair of tigers reintroduced to Ramgarh Vishdhari Tiger Reserve.
- Hon'ble President of India inaugurated art exhibition showcasing tribal communities' relationship with wildlife under the title, "Silent Conversation: From Margins to the Centre" in New Delhi.
- MSTRIPES capacity-building workshop held in various tiger reserves.
- Regional Field Directors' Workshop was conducted with a focus on 'Changing Trends in Tiger Reserve Management.'
- World Wildlife Week and World Environment Day celebrated across tiger reserves.
- Empowerment of local communities for wildlife conservation through various capacity building workshop were taken up across Tiger Reserves.
- Successful translocation of 28 Gaurs from Kanha to Sanjay Tiger Reserve.
- Corridor conservation planning workshop at Panchmari for Satpura-Melghat-Pench was taken up.
- Mission Life program celebrated in different tiger reserves.
- NTCA orientation program organized for southern states at TN Forest Academy involves 18 officers from 11 tiger reserves.

- Swachhata Pakhwada adopted as a pledge for a brighter future.
- One-year celebration of cheetah reintroduction in Kuno National Park.
- Detailed report on MEE of Tiger Reserves 2022 highlights 12 Tiger Reserves in 'Excellent,' 21 in 'Very Good,' 13 in 'Good,' and 5 in 'Fair' categories.

(a) Progress and Achievements:

Prime Minister inaugurated a ground breaking initiative as India launches the International Big Cat Alliance (IBCA). This alliance marks a significant step toward global collaboration in the conservation and protection of big cats. The inauguration ceremony underscores India's commitment to safeguarding these majestic creatures, emphasizing the importance of international cooperation in preserving biodiversity and fostering a shared responsibility for the welfare of big cats worldwide. The formulation of IBCA and its secretariat is under progress.





Continuing committees/commission:

- As per section 38L of 'The Wildlife (Protection) Act, 1972', the National Tiger Conservation Authority consists of 15-member committee and meets as per the exigencies and reviews the agenda of Technical committee.
- Technical Committee of NTCA takes up the issue of all Tiger Reserves namely Tiger Conservation Plan approval and recommendation, Declaration of New Tiger Reserves etc, translocation of Tigers between Tiger Reserves, new projects etc. So far 04 Technical committee meetings were held. The decision taken in the Technical committee is placed before the committee of NTCA chaired by Hon'ble Minister for approval.

National/ International Conferences:

- During the 50th anniversary celebration of Project Tiger, Hon'ble Prime Minister Shri Narendra Modi released the 'Status of Tigers in India – 2022' report. The Prime Minister highlighted India's success in saving and fostering a thriving tiger population, emphasizing the country's commitment to global big cat conservation. At the International Big Cat Alliance session in Mysuru, he reiterated India's dedication to collaborative efforts against poaching and illegal wildlife trade, showcasing the nation's active role in international wildlife protection.

The President of India, Smt. Droupadi Murmu inaugurated an art exhibition titled, "Silent Conversation: From Margins to the Centre" in New Delhi. This art exhibition is a platform for tribal communities & other forest dwellers to share their centuries old relations with wildlife especially, tigers.

- On September 17, 2022, a historic moment occurred in India's wildlife conservation with the return of the world's fastest land animal after a 75-year local extinction. The one-of-a-kind cheetah translocation initiative from Namibia and South Africa marked its one-year completion on September 17, 2023. To commemorate this success, an event was held at Sesaipura Forest Complex, Kuno National Park, Madhya Pradesh. Officials from MoEF&CC, NTCA, and the Madhya Pradesh Forest Department graced the program.
- NTCA organized a three-day "Orientation/ Refresher course on Active Management of Tiger Reserves" for officers from various Tiger range states in collaboration with WII from August 09 to 11, 2023. Experts emphasized the significance of science, systems, governance, community welfare, and action-oriented management during their discussion.

MEAs, Agreement with countries, international organizations, compliance:

- A delegation from Cambodia visited Panna Tiger Reserve, Madhya Pradesh, to take back key learnings from the successful reintroduction in Panna. NTCA along with the WII and Madhya Pradesh Forest Department facilitated the visit.
- India and Bangladesh convened a bilateral meeting in Kolkata to discuss the conservation of Sunderban tigers and the landscape aiming to reinforce the enduring bonds of conservation and friendship between the nations, with a shared commitment to safeguarding the world's largest mangroves. The collaborative efforts seek to ensure the sustainable livelihoods of the local communities inhabiting this unique ecosystem.



- Representatives from the Land of Leopard National Park in PrimorskyKrai, Russian Far East, engaged in a knowledge-sharing session at NTCA. The visit aimed to foster collaboration and exchange insights on effective management practices for the conservation of tigers and other big cats in India.

Major Publications: All India Tiger Estimation Report

Scheme/Programme: Centrally Sponsored Scheme– Project Tiger

“Project Tiger “is an ongoing Centrally Sponsored Scheme of the Ministry of Environment, Forests & Climate Change providing funding support to tiger range States, for in-situ conservation of tigers in designated tiger reserves, and has put the endangered tiger on an assured path of recovery by saving it from extinction, as revealed by the recent finding of the All India estimation using the refined Scientific methodology.

1. Grant-in-aid:

Grant released to Institutions/organizations from 01.01.2023 to 21.11.2023			
Sr. No.	Name of Organisation/ Institutions	Purpose	Total Amount Released (Rs.)
1.	Global Tiger Forum (GTF), New Delhi	the Project “Preparation of Zonal Master Plan for Eco-sensitive Zone of Buxa Tiger Reserve	523,200.00
2.	Global Tiger Forum (GTF), New Delhi	the Project In-situ capacity building of front line in tiger reserves.	400,000.00
3.	Director, WII	the project “Movement Ecology of Tiger for Conflict Prediction and Landscape Management in Sathyamangalam Nilgiri Biosphere Complex Southern India”.	4,356,800.00
4.	Sankala Centre for Climate & Sustainability	towards research, Outreach and Advocacy Project for Tiger Conservation	2,192,000.00
5.	Global Tiger Forum (GTF), New Delhi	for preparation of Action Plan towards implementing national level action for Tiger @ 2047 “Amrit Kaal Ka Tiger Vision.	1,500,000.00
6.	Bandipur Tiger Conservation Foundation	to organize the international mega event “ Commemoration of 50 years of Project Tiger” from 9 to 11 April, 2023	3,000,000.00
7.	Bandipur Tiger Conservation Foundation	to organize the international mega event “ Commemoration of 50 years of Project Tiger” from 9 to 11 April, 2023	1,300,000.00
8.	Global Tiger Forum (GTF), New Delhi	for co-organising mega event- Commemorating 50 years of Project Tiger” from 1st April, 2023 to 3rd April,2023.	1,548,336.00
9.	Global Tiger Forum (GTF), New Delhi	for co-organising mega event- Commemorating 50 years of Project Tiger” from 9th to 11th April, 2023.	1,032,224.00
10.	Director, WII	For celebrations of the 50 years of the Project Tiger and 1st Indian conservation conference 2023 held at Mysuru, from 9 to 11 April,23	1,500,000.00
11.	Director WII	toorganizingtheinternationalmegaevent“Commemoration of 50 years of Project Tiger” from 9 to 11 April, 2023	1,500,000.00
12.	Director WII	For The project “Study on Cheetah reintroduction- Bringing back the Cheetah to India”.	33,500,000.00
	Total		52,352,560.00



8.6 Wildlife Institute of India:

Wildlife Institute of India (WII) was established at Dehradun in 1986 as an autonomous institute of the Ministry of Environment, Forest & Climate Change, Government of India. The Institute has emerged as a premier training and research institution in Wildlife and Protected Area Management in South and Southeast Asia. Its primary mandates are to (i) carry out scientific and applied research on various issues of wildlife and biodiversity conservation, (ii) develop wildlife science as a discipline through academic activities, (iii) build capacity in the field of wildlife management and conservation planning, (iv) provide technical inputs to MoEFCC and other stakeholders. The Institute has generated quality information and knowledge products in wildlife science through research and mainstreaming it in capacity-building programmes for various target groups.

A. Research

A.1 Research Projects

- **Major Research Projects:** Assessment of Spatial and Temporal Occupancy of Tiger and Elephant in Relation to Habitat Characteristics and Anthropogenic Factors for the Creation of Eco-Sensitive Areas in Sawantwadi and Dodamarg Talukas of Sindhudurg District in Western Ghats of Maharashtra, India
- Management Effectiveness Evaluation of National Parks and Wildlife Sanctuaries in India 2022-23
- Status of Threatened Medicinal and Aromatic Plants and their Use by the Local Community in Niti Valley, Nanda Devi Biosphere Reserve, Uttarakhand
- Development of City Biodiversity Index of Bhopal and Indore Cities of Madhya Pradesh
- Development of a Genetic Database of Captive Elephants Across India for Welfare and Management
- Feasibility Study of Wild Buffalo Reintroduction in Kanha Tiger Reserve
- Gender Advancement for Transforming Institutions (GATI)
- Mitigation Measures for Transportation Network and Mining Activities for Dinesh Open Cast Project, Umred, Maharashtra
- Movement Ecology of Tigers, *Panthera tigris* for Conflict Prediction and Landscape Management in Sathyamangalam-Nilgiri Biosphere Reserve Complex, Southern India
- Securing Habitats for Threatened Mountain Ungulates through Robust Population Assessment and Conservation Planning
- Spatial Mapping of Important Marine Habitats of Malvan Coast for Reorganization of Boundary of the Malvan Marine Sanctuary
- Population Management of Species Involved in Human-Wildlife Conflict
- The fifth cycle of Management Effectiveness Evaluation (MEE) for 51 Tiger Reserves in India during 2022-23
- Designing Canopy Bridge over Railway Line inside Hollongapar Gibbon Sanctuary, Assam
- Scientific Animal Passage and Mitigation Plan for 62 km Stretch of Myajlar-Jaisalmer Road (NH-11) Passing through Desert National Park, Rajasthan
- Economic Loss Assessment of Faunal Diversity due to Forest Fire on Per Hectare Basis in Uttarakhand and Madhya Pradesh
- Uttarakhand State Wildlife Population Estimation for the Himalayan Zone
- Assessment of Disease Prevalence in



Ungulates in Mizoram

- Response to Anthropocene and Climate Change: Movement Ecology of Selected Mammal Species across the Indian Himalayan Region
- Assessment of Wildlife Values and Land Tenure for Planning Rationalization of Boundaries for Changthang and Karakoram Wildlife Sanctuary, Ladakh
- Himalayan Alpine Biodiversity Characterisation and Information System-Network
- Assessing Fine-Scale Distribution Pattern, Population and Habitat Status of Northern Swamp deer, *Rucervus duvauceli duvaucelii* across Upper Gangetic Plains of North India
- Preparation of Wildlife Management Plan with Special Emphasis on Elephants for the Proposed Naini Opencast Coal Mining Project in Angul Forest Division, Odisha
- Integrated Wildlife Action Plan Comprising of Mitigation and Compensating Measures with Landscape Approach for the Entire Forest Area in Hazaribagh Wildlife Forest Division, Hazaribagh West Forest Division and Koderma Forest Division in the Impact Zone of Koderma Detour of DFCCIL Project
- Basic Study Design of Biodiversity Assessment for Himachal Pradesh
- Ecology and Recovery of Critically Endangered Vulture Species in Pong Dam Protected Area (PA) and its Eco Sensitive Zone (ESZ) in district Kangra, Himachal Pradesh
- Ecological Impacts of Major Invasive Alien Plants on Native Flora in Rajaji Tiger Reserve, Uttarakhand

B.1 Academic Programme

XVIII M.Sc. (Wildlife Science) Course 2022-24

and XIX M.Sc. (Wildlife Science) Course 2023-25

B.2 Training Programmes

XLIII Post-Graduate Diploma in Advanced Wildlife Management Concluded, 1 October 2022 to 31 July 2023



XLIV Post Graduate Diploma in Advanced Wildlife Management Commenced, Dehradun, commenced from 15 September 2023 to 15 July 2024.

XXXVII Certificate Course in Wildlife Management Concluded, Dehradun, 1 December 2022 – 28 February 2023.

The first Certificate Course in Heritage Management was conducted with the aim of equipping participants with the concepts, theories and practices implemented in the multidisciplinary field of heritage conservation. The six-week course included seven officer trainees representing the Government of India Departments of Forest, Tourism and Geological Survey. The course was imparted through interactive presentations and discussions, case studies, management techniques and heritage expert talks. Practical aspects of heritage site management were covered through a field tour to natural and cultural heritage sites in India, including Keoladeo National Park, Taj Mahal, Fatehpur Sikri, Jaipur City and monuments along with associated sites.



Six-week Certificate Course in Heritage Management, 7 August – 15 September 2023.

C.1 Workshops, Seminars, Meetings and Other Activities

A large number of activities were conducted during the reporting period. The information on some important events is given below:

- Workshop on Making Regional Heritage Global: Focus on the Future, Sundarbans National Park, 17-20 January 2023.
- State Level Spearhead Training Programme for NCC (National Cadet Corps) on Biodiversity Conservation of Ganga River and its Tributaries, 18-20 January 2023.
- Bhedaghat-Lametaghat in Narmada Valley World Heritage Nomination Dossier preparation, January-October 2023.
- Conference on Current Research and Management Interventions in Natural and Mixed World Heritage Sites of the Asia and Pacific Region, Bharatpur, 2-3 February 2023.
- Training on Linkage between River Conservation and Livelihood, Dehradun, 28 February - 3 March 2023.
- World Wildlife Day Celebration at HNB Garhwal University, Srinagar, Pauri Garhwal, Uttarakhand, 3 March 2023.
- Celebration of 'International Day of Action for Rivers', Dehradun, 14 March 2023.
- Awareness regarding Drug Abuse among Youths, Dehradun, 17 March 2023.
- World Heritage and Climate Change Session at UNESCO Sub-Regional Conference on World Heritage, Bhopal, 17-18 April 2023.
- National Level Spearhead Training Workshop for Veterinary College Students on 'Handling of Aquatic Species in Distress', Dehradun, 21-23 March 2023.
- World Heritage Volunteer Campaign, Khangchendzonga National Park, Sikkim, 15-24 April 2023 and 1-7 October 2023.
- World Heritage Day Celebration at WII, 18 April 2023.
- Sensitization Program for the Students of Gurukul Kangri University, Haridwar at Wildlife Institute of India, Dehradun, 19 April 2023.
- Biodiversity Conservation and Management Training for RFO Trainees, Dehradun, 19-21 April 2023.
- Awareness Programs on "Earth Day" 2023, at Different Schools of the Ganga River Basin, 22-26 April 2023.
- Inception-cum-training workshop of the



Gaur Reintroduction Project, Kanha Tiger Reserve, 26 April 2023.

- Two-day Training Workshop on 'Biodiversity & Wetland Conservation', Maldevta, Dehradun, 22- 23 May 2023.
- Mission LiFE Activities conducted by EIACP Programme Centre, WII, May-June 2023: (i) Earthen Pot Installation and Activities Under Mission LiFE, and (ii) Oath Taking Ceremony Under Mission Life.
- Keibul Lamjao Conservation Area, Manipur World Heritage Nomination Dossier preparation, June-October 2023.
- International Tiger Day 2023 is celebrated at WII, Dehradun, 29 July to 7 August 2023.
- Activities of the EIACP Programme Centre (i) Online Quiz on 'Plastic Free July', 2023, (ii) Mission LiFE Programme in 59th Annual Meeting of the Association for Tropical Biology and Conservation Conference 2023, Coimbatore, Tamil Nadu, 6 July 2023, (iii) Release of WII-EIACP Bulletin "An Illustrative Profile of Tiger Reserves of India", Corbett Tiger Reserve, 29 July 2023.
- 34th Annual Research Seminar of Wildlife Institute of India, Dehradun, 21-22 September 2023.
- Outreach Panel at United Nations Forum on Forests, FRI, Dehradun, 26-27 October 2023.
- World Natural Heritage Site Managers Meeting Round-II: Role, Responsibilities and Partnership, Bharatpur, 27-28 October 2023.
- Safeguarding Natural Heritage through Education, Awareness and Network Building among Teachers, Bharatpur, 29 October 2023.



C.2 Major Achievements

- A 'Memorandum of Understanding' (MoU) signed **between the** Export Promotion Council for Handicrafts (EPCH), New Delhi **and** Wildlife Institute of India (WII), Dehradun, **in setting up a 'Pashmina Testing Facility' in WII, Dehradun**, 5 January 2023.
- IUCN Asia Protected Area Partnership Meeting, Dehradun, 27-29 April 2023.
- Successful Translocation of Gaurs from Kanha and Satpura to Sanjay Dubri Tiger Reserve, 26-29 June 2023.



CHAPTER - 9

CLIMATE CHANGE



9.1 Climate Change:

a. Introduction

Climate change is a global challenge and requires collective global action to avert and minimize the impacts of climate change. International efforts to address climate change are guided by the United Nations Framework Convention on Climate Change (UNFCCC) and its two instruments, namely the Kyoto Protocol and the Paris Agreement. As a responsible global player, India is a Party to the UNFCCC and its instruments.

As a part of its overall strategy, India emphasizes the foundational principles of equity and common but differentiated responsibilities and respective capabilities. India's historical contribution to cumulative global GHG emissions is therefore minuscule, despite having a share of ~17% of the world's population. India's per capita annual emissions are about a third of the global average.

The National Action Plan on Climate Change (NAPCC) provides an overarching policy framework for climate actions in the country and outlines a number of steps towards achievement of India's climate change related objectives of adaptation and mitigation. It comprises, *inter alia*, of focused national missions on climate change in specific areas of solar energy, enhanced energy efficiency, water, agriculture, Himalayan eco-system, sustainable habitat, green India strategic knowledge on climate change and human health. Further, the National Mission on Sustainable Transport is being developed to devise efficient and cost-effective strategies across environmental, social, and economic aspects of transportation.

The Missions are institutionalized and implemented by the respective nodal Ministries. The national missions have a focus on adaptation

in sectors such as Sustainable Agriculture, Water, Sustainable Habitat, Himalayan Ecosystem, Forestry and Human Health. States and Union Territories (UTs) are being supported in respect of their respective State Action Plans on Climate Change (SAPCC). Prepared in line with the strategy outlined in the NAPCC to address State specific actions, these SAPCCs, *inter-alia* indicates regional climate vulnerability and state level actionable strategies for mitigation and adaptation.

In addition, Government has launched many schemes and programs to scale up India's climate action to support projects that builds climate resilience in the priority areas identified under the missions of NAPCC and SAPCCs. Appropriate measures are being taken under these schemes and programs across many sectors including water, agriculture, forest, energy and enterprise, sustainable mobility and housing, waste management, circular economy and resource efficiency, etc.

India updated its ambitious Nationally Determined Contribution (NDC) in August 2022. India has shown impressive achievements to what it committed in 2015, as shown in the figure below.

NDC (2015)	Target (2030)	Achievement
Non-fossil fuel based electric installed capacity	40% cumulative	43.8% (August 2023). Target achieved 9 years ahead of committed time
Reduce emissions intensity of GDP	33-35% over 2005 levels	Reduced by 33 per cent between 2005 and 2019
Additional carbon sink	2.5-3.0 billion tons	1.97 billion tons (2021)

MoEFCC is designated as the nodal Ministry for coordinating India's domestic as well as international actions through its Climate Change Division. As a Party to UNFCCC and its

Paris Agreement, India has to communicate to the Conference of the Parties, through the secretariat, National Communication (NATCOM) and Biennial Update Report (BUR). The Division through its NATCOM Cell undertakes specific studies and submit NATCOM and the BUR to UNFCCC as per the requirements.

b. Activities undertaken

India at COP-28: Major outcomes

The 28th Conference of Parties (COP28) was held in Dubai, United Arab Emirates (UAE), from 30th November to 13th December 2023, where the representatives from 197 countries showcased their efforts to limit global warming and held discussions to prepare for future climate change. The global stocktake is considered the central outcome of COP28. The stocktake recognizes the science and calls on Parties to take actions towards achieving, at a global scale, a tripling of renewable energy capacity and doubling energy efficiency improvements by 2030. The list also includes accelerating efforts towards transition in energy systems, in a just, orderly and equitable manner, with developed countries continuing to take the lead. In the short-term, Parties are encouraged to come forward with ambitious, economy-wide emission reduction targets in their next round of nationally determined contributions by 2025. This was the first time when the countries formally assessed their progress under the 2015 Paris climate agreement.

The COP28 adopted the decision on the operationalization of the new funding arrangements, including a Fund, for responding to loss and damage. The decision was adopted by consensus by all Parties including India. The purpose of the Fund is to assist developing countries that are particularly vulnerable to the adverse effects of climate change in responding to economic and non-economic loss and damage

associated with the adverse effects of climate change, including extreme weather events and slow onset events.

The delegates at COP-28 also discussed the adaptation and mitigation efforts required to achieve significant positive outcomes in the coming years towards tackling climate change. Such efforts are especially crucial for countries that are vulnerable to climate change.

India submitted its Third National Communication on 09 December 2023. As per the report, the emission intensity of its GDP has been reduced by 33 percent between 2005 and 2019.

India's engagements at COP-28

Hon'ble Prime Minister Shri Narendra Modi participated in the inauguration of High Level Segment of COP-28 of Head of State (HoS)/ Head of Government (HoG). During his Special Address, he advocated for equitable climate action based on principles of justice and shared responsibilities. He emphasized to give a fair share to all developing countries in the global carbon budget. He also stated that India's goal is to bring down the emissions intensity by 45 per cent till 2030 and increase the share of non-fossil fuel to 50 per cent. He stressed that the energy transition should be just, inclusive and equitable.



Hon'ble Prime Minister Shri Narendra Modi participated in the COP-28 Presidency's Session on **"Transforming Climate Finance"** on December 1, 2023, in Dubai, UAE. The event focused on making climate finance more available, accessible, and affordable to developing countries. During his address, the Prime Minister voiced the concerns of the Global South and reiterated the urgency of making the means of implementation, particularly climate finance, available to the developing countries to achieve their climate ambitions and implement their NDCs. Hon'ble PM Modi also welcomed the operationalisation of the Loss and Damage Fund and establishment of the UAE Climate Investment Fund at COP-28 and called for the COP-28 to deliver on the issues related to Climate Finance.



Hon'ble Prime Minister Shri Narendra Modi along with Prime Minister of Sweden H.E. Mr. Ulf Kristersson, co-launched the **Phase II of the Leadership Group for Industry Transition (LeadIT 2.0) for the period 2024-26, at COP-28 in Dubai.** India and Sweden also launched the **Industry Transition Platform**, which will connect the governments, industries, technology providers, researchers and think tanks of the two countries. During the event, Hon'ble Prime Minister highlighted that LeadIT 2.0 will focus on inclusive & just industry transition, co-development and transfer of low-carbon technology, and financial support to emerging economies for industry transition. India and Sweden had co-launched

LeadIT at UN Climate Action Summit in New York in 2019.



Hon'ble Prime Minister Shri Narendra Modi together with the President of UAE Sheikh Mohammed bin Zayed Al Nahyan, co-hosted the High-level event on **'Green Credits Programme'** at COP-28, on December 1, 2023, in Dubai. The Green Credit Initiative has been conceptualized as a mechanism to incentivize voluntary pro-planet actions, as an effective response to the challenge of climate change. It envisions the issue of Green Credits for plantations on waste/degraded lands and river catchment areas, to rejuvenate and revive natural eco-systems.



Side events hosted at the India pavilion at the UN Climate Conference COP-28

The India Pavilion at COP 28 showcased more than 45 side events, sharing the perspectives on India's climate action. These events aligned with

the thematic days communicated by the COP 28 presidency. The Pavilion saw the release of a publication on India's Sustainable Cooling and showcasing of India's Climate Action Publication "From Paris to Dubai".

The Pavilion also became a center point for discussions on the pillars of Quad Climate Working Group which India is leading this year. The pavilion's theme of 'Vasudhaiva Kutumbakam' inspired many events which were focused revolving around the Lifestyle for Environment (LiFE). The expert speakers and panelists from the Government Departments and Ministries along with the private sector have participated in the events. The pavilion saw huge participation during COP-28 with visitors numbered around 40,000.



Conclusion

India's engagements at COP-28, led by Hon'ble Prime Minister Shri Narendra Modi, showcased a comprehensive and proactive approach to tackling climate change. Emphasizing the urgency of accessible climate finance for developing nations, Hon'ble Prime Minister highlighted the need to implement Nationally Determined Contributions (NDCs) and voiced concerns on behalf of the Global South. The initiatives launched, including LeadIT 2.0 for industry transition, the Green Credits Programme incentivizing pro-environment actions, and the focus on the Himalayan region's vulnerability,

demonstrate India's commitment to diverse strategies for sustainable development.

India's involvement in the Quad Climate Working Group and the Mangrove Alliance illustrates recognition of the pivotal role played by local communities and regional governments in fostering sustainable lifestyles and holistic conservation efforts. The National Statement by Union Minister Shri Bhupender Yadav emphasized India's comprehensive approach to environmental conservation, addressing not only emissions but also land degradation, ecosystem restoration, and biodiversity enrichment. India's active participation at COP-28 positions the country as a proactive and influential player in the global fight against climate change, showcasing a commitment to collaborative, innovative, and localized solutions.

c. Continuing committees/commissions-their work during the year and present position

The seventeenth meeting of the National Steering Committee on Climate Change (NSCCC) was held on 23rd March 2023 under the Chairpersonship of Secretary (EF&CC). The revised State Action Plan on Climate Change (SAPCC) submitted by the States of Madhya Pradesh, Tripura, Haryana and Uttar Pradesh were approved by NSCCC.

d. National and International Conferences

Ministry of Environment, Forest and Climate Change in collaboration with the Department of Environment, Forest and Climate Change, Government of Uttar Pradesh organized a two-day "National Climate Conclave 2023" on 10th and 11th April 2023 at Indira Gandhi Pratishthan, Lucknow, Uttar Pradesh. The National Conclave focused on discussing various sources for mobilizing climate finance, Innovative Approaches for localizing climate action, promoting Mission LiFE and enhanced role of Youth in combating Climate change etc.



The Conclave witnessed participation from Senior Government officials from 17 States/UTs. 80 experts and over 100 academicians, researchers and civil society organizations as well as 50 policy-planners have participated and brainstormed on climate change issues.



e. List of major publications

Showcasing of India's Climate Action Publication "From Paris to Dubai": During COP-28, a publication on India's Climate Action Journey from Paris to Dubai has been showcased. The publication highlights the rapid strides the country has made in under a decade since the Paris Agreement. It reinstates India's steadfast commitment to the United Nations Framework Convention on Climate Change (UNFCCC).

f. Multilateral Support:

The Green Climate Fund (GCF) was set up under the UNFCCC at the 16th Conference of the Parties (COP-16) in 2010 to support the shift towards a low-emission and climate-resilient development path by providing support to developing countries in the form of grants, loans, guarantees, equity etc.

The Government of India has been actively engaging with the GCF. So far, nine (09) projects/programmes have been approved to India with a total allocation of USD 542.3 million in diverse areas including water, clean energy, coastal, livelihood and transport. Projects/ programmes

increased from three (03) to nine (09) in the last three years (URL: <https://www.greenclimate.fund/countries/india>).

9.2 Ozone layer Protection:

1. Introduction

The stratospheric ozone layer is present from 10 to 50 kms above the Earth's surface. The stratospheric ozone layer acts as a shield and protects us from harmful ultraviolet-B (UV-B) radiation from the sun. Chlorofluorocarbons (CFCs), Hydrochlorofluorocarbons (HCFCs), Halon, Carbon Tetrachloride (CTC), Methyl Bromide, Bromofluoromethane (BFM) etc. are recognised as Ozone Depleting Substances (ODSs) that depletes the ozone layer. Depletion of Stratospheric Ozone Layer has the potential to cause skin cancer, eye cataract, suppress body's immune system, decrease crop yield etc., which led to the adoption of the Vienna Convention for the Protection of the Ozone Layer in 1985 and the Montreal Protocol on Substances that Deplete the Ozone Layer in 1987. The Montreal Protocol has been recognized as the most successful international environmental treaty in history enjoying universal ratification from all the 198 United Nations Member countries and has led to phase out of 98% of ODSs globally.

The MoEF&CC has set up the Ozone Cell as a National Ozone Unit (NOU) to render necessary services for effective and timely implementation of the provisions of the Montreal Protocol and its ODSs phase-out program in India. The Ministry has constituted an Empowered Steering Committee (ESC) under the Chairpersonship of the Secretary (EF&CC) for overall implementation of the provisions of the Montreal Protocol in the country.

In order to comply with the requirements of the Montreal Protocol, the Ministry has brought out comprehensive Ozone Depleting Substances



(Regulation and Control) Rules, 2000 under the Environment (Protection) Act, 1986 for phasing out of various ODSs. The ODS Rules have been amended in 2001, 2003, 2004, 2005, 2007, 2014 and 2019 to implement ODS phase-out activities in the country.

2. Implementation of Hydrochlorofluorocarbons (HCFCs) Phase-out Management Plan (HPMP) Stage II

The HCFC Phase out Management Plan (HPMP) Stage-II project for India was approved by the Executive Committee (Ex-Com) of the Multilateral Fund (MLF) during its 77th meeting held during December 2016. The HPMP Stage-II would address phase-out of HCFCs in various sub-sectors of foam manufacturing, Refrigeration and Air Conditioning (RAC) manufacturing and RAC servicing sector.

Under HPMP Stage-II project, 160 enterprises including large number of Micro, Small and Medium Enterprises (MSMEs) have participated for technology conversion from HCFC-141b to non-ODS and low-Global Warming Potential (GWP) technologies in foam sector. Similarly, 4 enterprises in RAC manufacturing sector have been participating for conversion from HCFC-22 to HFC-32 technology.

In the foam manufacturing sector, the third party has been onboarded, after physical site verification, confirmed that 158 out of 160 participating enterprises have phased out the use of HCFC 141b and no stocks of HCFC 141b are available at any of the manufacturing sites. Regarding the balance 2 enterprises, the MOA could not be operationalized as the enterprises have closed their operations. In the RAC manufacturing sector, 6 enterprises have completed the technology conversion activities and have shifted to Hydrofluorocarbon (HFC)-32 technology.

A separate notification S. O. No. 4724 (E) dated 31st December, 2019, amending the Ozone Depleting Substances (Regulation and Control) Rules, 2000, was published in the Gazette of India inter alia prohibiting the issuance of import license for HCFC-141b from 1st January, 2020. HCFC 141 b is one of the most potent chemical involved in stratospheric ozone depletion after the CFCs.

In addition to the amendment to the Ozone Depleting Substances (Regulation and Control) Rules during 2019, the DGFT, Ministry of Commerce and Industry amended the import policy to ban the import of HCFC 141b to the country.

In a significant first, amongst the Article 5 Parties (developing countries) under the Montreal Protocol, India has been able to achieve the complete phase out of HCFC 141 b in the foam manufacturing sector, as part of implementation of HPMP Stage II.

HCFC Reductions through HPMP Stage-II

The required level of reduction in HCFCs consumption in the year 2022 as per the target under the Protocol and the allowable consumption of HCFCs in different years in the range of 2017 - 2023, as per the approved HPMP-II is given in table below:

In line with the accelerated phase out schedule of the Montreal Protocol for HCFCs, against the target of 35% reduction in the production and consumption of HCFCs from the baseline for the year 2020, India has successfully achieved the reduction in the consumption and production of HCFCs by 44% from the baseline.

The production and consumption of HCFCs for the controlled uses for the year 2022 were very much lower than the compliance target under the Montreal Protocol. Hence, the country was



S. No.	Particulars	2016	2017	2018	2019	2020	2021	2022	2023	Total
1	Montreal Protocol Reduction Schedule (ODP tons)	1447.38 90% of baseline	1447.38 90% of baseline	1447.38 90% of baseline	1447.38 90% of baseline	1045.33 65% of baseline	1045.33 65% of baseline	1045.33 65% of baseline	1045.33 65% of baseline	
2	Maximum allowable Consumption as per HPMP-II (ODP tons)	1447.38 90% of baseline	1447.38 90% of baseline	1433.63 89.15% of baseline	1103.85 68.64% of baseline	832.32 51.75% of baseline	799.76 49.73% of baseline	698.82 43.45% of baseline	643.28 40% of baseline	
3	Reductions required (ODP tons)	—	—	13.75	329.78	271.53	32.50	100.94	55.54	804.10

**from the implementation of HPMP-II, it is envisaged that 804.10 ODP tons reduction will be achieved*

in compliance with respect to the obligation under the Montreal Protocol.

Enabling Activities under HPMP Stage-II

Ozone Cell, MoEF&CC, in association with the UN Environment Programme (UNEP) have been implementing the enabling components (Capacity Building and Awareness creation) of HPMP Stage-II. The following activities have been undertaken as part of the enabling component under HPMP Stage-II.

▪ Capacity Building of Enforcement Department/Agencies

Activities relating to the capacity building of enforcement Departments are being implemented in association with the National Academy of Customs Indirect Taxes and Narcotics (NACIN) for capacity building by imparting training in the field of import and export of ODSs, through a MoA. The following activities have been implemented:

- 3 Supervisor Officers' Workshop to combat illegal trade in ODS under HPMP Stage-II held on 6th -7th February, 2023 at NACIN ZC Chandigarh, 16th – 17th February, 2023 at NACIN ZTI Delhi, 5th -6th April, 2023 at NACIN Faridabad.
- 3 workshops for Training of new Customs and Enforcement Officers held on 3rd – 4th

October, 2023, 11th -12th October, 2023 and 19th – 20th October, 2023.

- 2 Train the Trainers (ToT) on combating Illegal trade in ODS on 4th -6th January, 2023 at NACIN, Visakhapatnam, Andhra Pradesh, 8th -10th February, 2023 at NACIN, Mumbai, Maharashtra,

The training programme includes sensitizing field customs formations regarding prohibition of its import of HCFC-141b in the country and towards enforcing import ban on HCFC-141b starting from 01.01.2020, a special module was introduced in customs trainings. A Country handbook on the national regulations for monitoring and controlling production and use of ODSs in India was updated by NACIN in consultation with Ozone Cell, MoEF&CC.

• Studies on key issues relating to Montreal Protocol implementation:

Following studies have been undertaken:

- Booklet on Passive & Low Energy Cooling Strategies for Achieving Thermal Comfort in India's Upcoming Affordable Housing
- Study report on sensitizing building construction community on Passive Cooling design, non ODS, low GWP and energy efficient technologies.



- iii. Study Report on “Sustainable e-commerce cold chain infrastructure”. aims to promote measures for developing e-commerce infrastructure for cold chain which would result in overall development of the cold chain sector in a sustainable manner.
- iv. Study report on “Public Procurement Policies for Hiring Trained and Certified Refrigeration and Air-Conditioning Service Technicians” aims to examine the benefits associated with the utilization of trained and certified technicians, to evaluate the influence of their specialized knowledge not only in improving the performance of the equipment, but also promoting the energy efficiency of the equipment through good servicing practices.
- **Development and dissemination of knowledge products**

Knowledge products comprising Booklet on good servicing practices or flammable refrigerants a quick guide, has been brought out and disseminated widely.

Quarterly e-newsletter for RAC service technicians on the importance of good servicing practices including handling of different types of refrigerants, related safety issues and updates on refrigerant transition under the Montreal Protocol are being published in association with M/s TERI.

3. Approval of Project Proposal for HPMP Stage-III By MLF Secretariat

The Ex-Com of the MLF at its 87th meeting held in June 2021, approved the project preparation funding of US\$ 450,000 for preparation of Stage-III of HPMP for India. United Nations Development Programme (UNDP) is the lead implementing agency for HPMP Stage-III and the agency for the investment component, i.e., technology conversion from HCFC to non HCFC and low GWP

alternative technologies in the refrigeration, air-conditioning and firefighting manufacturing sectors. UNEP is the implementing agency for the enabling activities and GIZ Proklima for the RAC servicing sector along with UNDP.

After approval of the project preparatory funding by the Ex-Com of the MLF, consultant has been on boarded for carrying out sectoral surveys and collect enterprise wise data, conducting awareness workshops, analysis of data and identification of all eligible enterprises to participate in HPMP Stage-III, preparation of sectoral strategy for each manufacturing sector and overarching strategy after integration of the strategies of enabling component and the RAC servicing sector. The sectoral strategies for the enabling component and the RAC servicing sector.

National stakeholder consultation workshop was held on 22nd July 2022, which was attended by about 120 participants comprising representatives from nodal line Ministries/ Departments, CPCB, SPCBs, industry associations and the participating enterprises.

Subsequently, HPMP Stage-III document, submitted to the MLF Secretariat through UNDP, the lead implementing agency for seeking funding. The HPMP Stage III for India was approved in the 91st meeting of the Ex-Com of the MLF to phase out 10,678.87 MT or 579.99 ODP tonne of HCFCs consumption from the starting point, contributing to India's compliance with the 2025 and 2030 control targets HCFCs under the Montreal Protocol.

The HPMP Stage-III will be the last of the HPMPs for India, for assisting the country in achieving compliance with the Montreal Protocol 2025 and 2030 control targets for consumption of Annex C Group 1 substances (HCFCs) with complete phase-out of HCFC-22 by 1 January 2025 in



all manufacturing sectors as per the Ozone Depleting Substance (Regulation and Control) Rules 2000, as amended in 2014. A total of 48 enterprises in the refrigeration manufacturing sector and 16 enterprises in the air-conditioning manufacturing sector are participating in HPMP Stage-III.

In addition, HPMP Stage-III addresses phase-out of HCFC-22 in the RAC Manufacturing sector, Servicing sector, capacity building, project activities, policy and regulations, enforcement training, etc., for the successful and sustainable implementation of complete phase-out of HCFCs by 2030, with a service tail of 2.5% of the baseline of HCFCs.

Implementation of HPMP-Stage-III will result in net direct CO₂ equivalent emission reductions of 19,239,929 tonnes CO₂-eq. from 2030 onwards.

The meeting of the Local Project Appraisal Committee to consider the approval for implementation of HPMP Stage-III was held on 22 June 2023 under the chairmanship of Deputy Director General, Department of Economic Affairs, Ministry of Finance, Government of India. The Committee after review and discussions, accorded approval for the implementation of HPMP Stage- III.

4. Ratification of the Kigali Amendment to the Montreal Protocol for Phase Down of Hydrofluorocarbons (HFCs) by India

The Union Cabinet in its meeting held on 18th August 2021 approved the Ratification of Kigali Amendment to the Montreal Protocol for phasedown of HFCs by India. India ratified the Kigali Amendment to the Montreal Protocol for phasedown of HFCs on 27th September 2022.

After ratification, the Kigali Amendment to the Montreal Protocol came into force for India on 26th December 2021. Accordingly, the deadline

for India to establish the licensing system for HFCs was on 26th March 2022. Further, as per Article 7 of the Montreal Protocol, each Party shall provide to the Ozone Secretariat, statistical data for the year during which provisions concerning HFCs entered into force. Accordingly data for 2021 must be reported by India, for which data on import and export of HFCs and blends containing HFCs is needed, for which a licensing system need to be in place.

As per the agreed phase-down of HFCs under the Kigali Amendment, India will have to complete its phase down of the production and consumption of HFCs in 4 steps from 2032 onwards with reduction of 10% in 2032, 20% in 2037, 30% in 2042 and 85% in 2047 respectively. The list of HFCs to be phase-down under the Kigali Amendment are as follows:

Sr. No.	Substance	100-Year Global Warming Potential
1.	HFC-134	1100
2.	HFC-134a	1 430
3.	HFC-143	353
4.	HFC-245fa	1030
5.	HFC-365mfc	794
6.	HFC-227ea	3220
7.	HFC-236cb	1340
8.	HFC-236ea	1370
9.	HFC-236fa	9810
10.	HFC-245ca	693
11.	HFC-43-10mee	1640
12.	HFC-32	675
13.	HFC-125	3500
14.	HFC-143a	4470
15.	HFC-41	92
16.	HFC-152	53
17.	HFC-152a	124
18.	HFC-23	14800



5. Establishment of licensing system for import and export and reporting of statistical data on consumption, production, import and export of HFCs under the provisions of the Montreal Protocol

First stakeholder consultation meeting was held on 20th January 2022 to discuss the issues relating to establishment of licensing system, data reporting and those relating to development of national strategy for phase down of HFCs.

In accordance with Article 4B of the Montreal Protocol, a licensing system for import and export of HFCs has been put in place by DGFT, as per which DGFT revised the import/export policy for HFCs and put HFCs in the “restricted category”. As per DGFT’s policy, import/export of HFCs is permitted only under license issued by DGFT after seeking recommendation of Ozone Cell.

The development of national strategy includes outreach and awareness component, and as part of the awareness and outreach component, 34 workshops comprising 18 workshops through physical mode and 16 workshops through virtual mode are being conducted across the country.

These workshops are being organised in close cooperation with the concerned line ministries and departments comprising DPIIT, DCPC, MSDE, MSME, Ministry of Power including BEE and EESL, DST, CSIR, DRDO, CPCB, State Pollution Control Boards and the concerned industry associations concerned with the Montreal Protocol implementation. Till date, 23 awareness-cum sensitization workshops have been completed. Sectoral HFC data is also being collected through these workshops.

6. India Cooling Action Plan (ICAP)

The Ministry of Environment, Forest and Climate Change, Government of India has developed and launched the India Cooling Action Plan (ICAP) during March 2019. India is one of the first countries in the World to have a comprehensive

cooling action plan. ICAP aims to provide an integrated vision towards cooling across sectors encompassing inter alia reducing cooling demand, refrigerant transition, enhancing energy efficiency and better technology options with a 20-year time horizon, i.e. 2037-38.

ICAP recommends synergies with ongoing government programmes and schemes to maximize socio-economic co-benefits. The Government of India has taken steps to operationalize the recommendations given in ICAP after mapping of the recommendations for each thematic area, with the on-going government programmes/schemes and list out actions to be undertaken for achieving the said goals including identifying the required policy and regulatory interventions. Further, the following thematic groups during its meetings have identified a list of action points for operationalizing the recommendations of the ICAP, which have been finalized in the meeting of Steering Committee and are under implementation by the concerned nodal Ministries/ Departments/ agencies:

- i. **Space cooling in buildings:** Space cooling covers both passive and active cooling strategies, optimization of cooling loads, encompassing natural and mechanical ventilation in building design, thermal comfort standards specifying pre-setting of temperatures for air-conditioning equipment in commercial built spaces and promoting use of energy efficient refrigerant based appliances including not in-kind technologies. Action points relating to implementation of recommendations of ICAP for the thematic area Space Cooling in building sector has been released on the occasion of the World Ozone Day, 2022.
- ii. **Cold Chain:** Cold Chain sector comprising cold storages or refrigerated warehouses, pack houses, reefer transport and ripening



chambers is poised for a significant growth in the coming years. The development of uninterrupted cold chain infrastructure will be a major driver in supporting the Government's priority areas of reducing food loss, ensuring food security and doubling farmers income. Action points relating to implementation of recommendations of ICAP for the thematic area cold chain sector has been released on the occasion of the World Ozone Day, 2022.

iii. Domestic Manufacturing and Production Sector – Alternative Refrigerants and technologies:

Indian fluorocarbon industry has improved their technological capability in indigenous development of production processes including new generation low-GWP refrigerants such as HFOs and blends of HFOs and HFCs. This industry has shown results and is expected to continue to strive for self-sufficiency in indigenous refrigerant development and production of low/zero GWP alternative refrigerants. Action points related to the said thematic area have been released during World Ozone Day 2023.

iv. Research and Development: The development of a robust R&D ecosystem in India will involve further development of scientific manpower in the area; requisite academic and R&D institutional capacities; support for R&D activities on various facets of cooling including cooling equipment, passive building design interventions, not-in-kind technologies and new emerging technologies. Action points related to the said thematic area have been released during World Ozone Day 2023.

v. Servicing Sector: Servicing sector is directly related to the consumption of refrigerants

and optimum and efficient performance of in-use air conditioning equipment. Training and certification of RAC service technicians have potential to provide significant environment and livelihood benefits. These could be achieved through appropriate skill development of service technicians along with creating a market demand for skilled technician, which shall be a key driver. Action points related to the said thematic area have been released during World Ozone Day 2023.

Action points for the Transport air-conditioning thematic area is under discussion.

The ICAP has been recognized as an important policy initiative which has the potential to provide socio-economic and environmental benefits related to reduced refrigerant use, climate change mitigation and Sustainable Development Goals.

6. Awareness creation and consultation activities/ meetings

The following activities have been undertaken for awareness creation to ensure that the industries and public at large are aware about the ill effects of ozone depletion, and undertake necessary ODS phase-out activities and support the policies to protect the ozone layer:

i. World Ozone Day 2023:

- (a) The MoEF&CC, Government of India organized the World Ozone Day 2023 function in Delhi where Secretary (EF&CC) was the Chief Guest for the event. Shri Atul Bagai, Head, UNEP India office and Ms. Isabelle Tschan, Deputy Resident Representative, UNDP India were also present during the event. The theme for this year World Ozone day was ***“Montreal Protocol: fixing the ozone layer and reducing climate change”***.

- (b) The World Ozone Day 2023 was attended by School Children (more than 500 school students), Industries associated with Montreal Protocol implementation, Service technicians of Refrigeration and Air-conditioning (RAC), Partners associated with Montreal Protocol implementation, think tanks, Refrigerant gas Manufacturers, RAC and foam manufacturing enterprises, implementing agency, technical assistance providers (CIPET) etc.
- (c) Major activities undertaken during the World Ozone Day 2023 are:
- **School Competition:** To create awareness among the students to protect the Ozone Layer, competitions in the categories of Poster and Slogan Writing were organized jointly by National Museum of Natural History (NMNH) and the Ozone Cell, MoEF&CC for school children across the country with 6152 entries for both the categories.
 - **Release of Awareness Material:**

Winning Poster: The first prize winning entry in poster competition was released by the Chief Guest during the World Ozone Day function.



25th edition of “The Montreal Protocol: India’s Success Story” highlights India’s achievements in the Montreal Protocol Implementation in phasing out of Ozone Depleting Substances till date.



Booklet on Action Plan for implementation of the recommendations of the ICAP for (a) Domestic Manufacturing and Production Sector – Alternative Refrigerants and technologies, (b) Research and Development and (c) Servicing Sector : In order to operationalize the recommendations of ICAP, the action plan for each of the 3 thematic areas has been finalized after mapping of the recommendations given in the ICAP with the on-going government programmes/schemes and the proposed actions by different agencies.





Stage-III of the HCFC Phase out Management Plan (HPMP), to be implemented from 2023 to 2030 to meet the HCFC phase out compliance obligations of 2025 and 2030. Phase out of HCFCs in manufacturing of new equipment must be completed by 31.12.2024 and complete phase out of HCFCs as on 01.01.2030 for all controlled applications.

Study Report on “Sustainable e-commerce cold chain infrastructure”: This study report aims to promote measures for developing e-commerce infrastructure for cold chain which would result in overall development of the cold chain sector in a sustainable manner.



- **Study report on “Public Procurement Policies for Hiring Trained and Certified Refrigeration and Air-Conditioning Service Technicians”:** The study report aims to examine the benefits associated with the utilization of trained and certified technicians, to evaluate the influence of their specialized knowledge not only in improving the performance of the equipment, but also promoting the energy efficiency of the equipment through good servicing practices.
- **Animation video of messages by Prakriti on Ozone Layer Protection was released.**
- **Documentary film on India’s Success Story on implementation of Montreal Protocol was released.**

ii. **Initiatives taken for Indigenous capacity development including research on low global warming (GWP) chemicals to be used as alternatives to HFCs:**

- (a) In order to promote indigenous manufacturing of low global warming potential chemicals and development of a robust R&D ecosystem the MoEF&CC has collaborated with 8 Indian Institutes of Technology (Roorkee, Hyderabad, Kanpur, Patna, Banaras, Madras and Tirupati) to promote research and development of low global warming potential chemicals, including blends thereof, to be used as alternatives to substances controlled under the Montreal Protocol in line with industry requirements through engagement of research scholars. This would help in creating awareness for development and adoption on indigenous low global warming potential alternative technologies which could be deployed during the HFC phase down besides promoting “Make in India” initiative of the Government. National Productivity Council (NPC), an autonomous organization under Department for Promotion of Industry & Internal Trade, Ministry of Commerce and Industry, Government of India is appointed as an overarching institution for effective implementation of the proposed activities by the IITs.
- (b) The MoEF&CC has also organised a workshop on “Indigenous capacity development including research on GWP chemicals to be used as alternatives to HFCs on 4th August 2023 in Delhi. The objective of

the workshop was to develop a Roadmap along with an action plan for indigenous development, which encourages domestic manufacturing of next generation low GWP refrigerants, cooling appliances along with safety standards and upgradation of skill of the existing manpower for wider adoption of such refrigerants during the phase down of HFCs under the Kigali Amendment. The deliberations from the workshop resulted in specific recommendations towards achieving the said objectives, categorised as short term (up to 3 years), medium term (3-5 years) and long term (above 5 years).



- iii. A meeting with the Directorate General of Commercial Intelligence and Statistics (DGCI&S) and the Directorate General of Foreign Trade (DGFT) was held on 26th May, 2023 and 29th August, 2023 under the Chairpersonship of Economic Advisor, MoEF&CC to discuss issues relating to reporting of data on controlled substances, import and export of Hydrofluorocarbons (HFCs) w.r.t development of a National Strategy for phase down of HFCs for India.
 - iv. The Seventh meeting of the Project Steering Committee (PSC) for the Projects under the Montreal Protocol, being implemented through UNDP as implementing agency, was held on 20th July 2023 through virtual mode under the Co-Chairpersonship of Economic Adviser, MOEF&CC and Deputy Resident Representative, UNDP India office.
 - v. Meeting of the Standing Committee on Monitoring was held on 13th September, 2023 under the Chairpersonship of Chairman, CPCB, in which the Article-7 and Country Program Progress Report (CPPR) data for 2022 were recommended for approval.
 - vi. Two meetings of the Working Group of the Standing Committee on Monitoring were held to discuss applications related to use/manufacture of ODSs for feedstock uses, inter alia including qualifying process as feedstock use.
- Following meetings of each of the thematic working groups were held:
- a. Domestic manufacturing and Production Sector – Alternative Refrigerants and Technologies and Research & Development- 1st September, 2023
 - b. RAC Servicing Sector- 20th March, 2023 and 23rd August, 2023
 - viii. The meeting of the Steering Committee was held on 15th May 2023 under the Chairpersonship of Secretary (EF&CC) to review progress of implementation of action points finalized for Space Cooling in Buildings and Cold Chain Thematic Areas under India Cooling Action Plan.
 - ix. The meeting of the Steering Committee was held on 6th September, 2023 under the Chairpersonship of Secretary (EF&CC)



for finalizing the action points for implementation of the recommendations of the (a) Domestic Manufacturing and Production Sector; (b) R&D Thematic Area, and (c) Servicing Sector Thematic Area.

- x. A National Workshop on “Good Management Practices for Energy Efficient Buildings by introducing Passive Cooling Designs, to reduce operational costs, improve health and comfort and promote use of non HCFC and low GWP alternatives” under HCFC Phase-Out Management Plan in India (HPMP Stage-II) was organized by M/s Construction Industry Development Council (CIDC) in close consultation with the Ozone Cell, MoEF&CC on 21st March, 2023.
- xi. Meeting of Production Quota was held on 14th February, 2023 under the Chairpersonship of Joint Secretary, Ozone Cell, for distribution of production quota of HCFC 22 for non-feedstock applications.
- xii. Review meetings with UNDP to discuss progress of MLF Projects implemented by UNDP were held from time to time.
- xiii. Training, workshops were organized across the country for RAC servicing technicians by GIZ, as part of the activities in the RAC Servicing Sector.
- xiv. Ozone Cell has made available awareness creation material to the public on its website. Instructional training videos for RAC service technicians in 6 different languages have been made.
- xv. Separate QR codes have been generated for the instructional videos for wider dissemination through print medium.
- xvi. In a large exercise to provide contemporary

update relevant material related to RAC servicing, the publications brought out by Ozone Cell were sent to Government run ITIs across the country which have RAC trade vocational training.

- xvii. CPCB, SPCB's and other State Government Departments are being regularly updated/informed about the ODS phase-out programme being implemented in the country.
- xviii. The Indian delegation actively participated in the following meetings of the Montreal Protocol:
 - 45th meeting of the Open-Ended Working Group of Parties to the Montreal Protocol held from 3-7 July 2023.
 - 91st and 92nd meetings of the Ex-Com of the MLF for implementation of the Montreal Protocol

7. Activities related to the implementation of ODS Rules, 2000 and its Amendments and Montreal Protocol

Activities related to the implementation of ODS Rules, 2000 and its amendments were carried out inter alia including registration, regulation of export/import, issuance of production quota, monitoring and reporting.

The statutory reporting under the Montreal Protocol under Article 7 has been completed and the Country Program Progress Report (CPPR) submitted to the Secretariat of the Multilateral Fund for the implementation of the Montreal Protocol. The compiled data submitted under Article 7 and Country Programme Progress Report (CPPR) for the year 2022 is as follows:

- 1 For feedstock only
- 2 Recovered/Reclaimed halon

ODS	Production* (MT)	Export** (MT)	Import** (MT)	Feedstock use within country (MT)	Consumption as per definition # ODS (MT)
CFC-11	0.000	0.000	0.000	0.000	0.000
CFC-12	0.000	0.000	0.000	0.000	0.000
CFC-13	0.000	0.000	0.000	0.000	0.000
CFC-113a¹	0.000	0.000	372.592	372.592	0.000
Total	0.000	0.000	372.592	372.592	0.000
CTC¹	34367.859	0.000	3741.371	34367.859 (Production) 3741.371 (Imported)	0.000
Total	34367.859	0.000	3741.371	38109.230	0.000
Halon -1211²	0.000	0.000	4.000	0.000	0.000
Halon -1301^{1&2}	559.140 (feedstock)	280.000 (feedstock)	8.000 (Recovered/ Reclaimed)	279.14 ^b	0.000
Halon -2402²	0.000	4.912	0.000	0.000	0.000
Total	559.140	284.912	12.000²	279.14^b	0.000
Methyl Bromide³	3682.535	2170.367	28.844	0.000	1541.012
Total	3682.535	2170.367	28.844	0.000	1541.012
HCFC-22	79736.032	11170.262 ^c	0.000	62345.217 ^d	6220.553
HCFC-123	0.000	0.000	173.376	0.000	173.376
HCFC-142b¹	6158.249	576.762	0.000	5581.487	0.000
HCFC-141b	0.000	0.000	0.000	0.000	0.000
HCFC-133A¹	0.000	0.000	0.000	0.000	0.000
HCFC-225 ca/cb¹	25.334	69.590 ^e	0.000	0.000	0.000
Total	85919.615	11816.614	173.376	67926.704	6393.929
Bromofluoro-methane¹	0.52256	0.52256 ^f	0.645	0.645 (Imported)	0.000
Total	0.52256	0.52256	0.645	0.645	0.000

3 for Pre-shipment & Quarantine

a) a Total production of CTC for feedstock is 34367.859 MT out of which 0.011 MT exported and 34367.848 MT is used within the country for feedstock

b) b Total production of Halon-1301 for feedstock is 559.140 MT out of which 280 MT exported for feedstock, and 279.140 MT is used within the country for feedstock

c) c Including 206.910 MT exported for feedstock (106.91 MT exported to Japan and 100 MT exported to United Kingdom.

d) d Total production for feedstock of HCFC-22 is 62552.127 MT out of which 206.910 MT exported and 62345.217 MT is used within the country for feedstock

e) e Out of 69.590 MT export, 25.334 MT is from the production for the year 2022



and 44.256 MT is from the previous year balance quantity produced for feedstock only.

- f) f 0.35456 MT export to Singapore+0.168 MT export to United Kingdom (for feedstock).The data with respect to export as reported by producer along with shipping bill details, since BFM covers under ITC(HS) Code-2903 79 00 which is for others and individual data w.r.t BFM is

not available with Ozone Cell.

Sources

*Producers

**Producer/Consumer/Directorate General of Commercial Intelligence and Statistics

As per the definition under the Montreal Protocol Consumption for controlled use= Production (for controlled use)+ Import(for controlled use)- Export (for controlled use)

HFC	Production (MT)	Export (MT)	Import (MT)	Consumption (MT)
HFC-32	9590.20	2391.383	8994.68	16193.497
HFC-23		0	0	0
HFC-125	8754.751	4874.95	122.26	4002.061
HFC-134a	14727.82	6112.542	9125.191	17740.469
HFC-227ea		0.415	263.973	263.558
HFC-152a		4.970	2940.478	2935.508
HFC-245fa		0	1064.839	1064.839
HFC-236fa		0.155	72.584	72.429
HFC-365MFC		0	38.4	38.4
HFC4310mee		0	0.6	0.6
R404A (HFC-125 = 44%, HFC-134a = 4%, HFC-143a = 52%)		227.334	1265.6	1038.266
R407C (HFC-32 = 23%, HFC-125 = 25%, HFC-134a = 52%)		274.371	718.92	812.049*
R-407F (HFC-32=30%, HFC-125=30%, HFC-134a =40%)		0	1.452	1.452
R410A (HFC-32 = 50%, HFC-125 = 50%)		4627.717	3887.67	3814.326*
R-426A(HFC-125=5.1%,HFC134a=93%,HC-600=1.3%,HC601a=0.6%)		0	20	20
R-438A (HFC-32=8.5%, HFC-125= 45%, HFC-134a=44.2%, HC600=1.7%, HC-601a=0.6%)		0	200	200
R-454B (HFC-32=68.9%, HFO-1234yf =31.1%)		0	0.176	0.176
R-454C (HFC-32=21.5%, HFO-1234yf =78.5%)		0	0.073	0.073
R-455A (R-744=3%,HFC-32=21.5%, HFO-1234yf =75.5%)		0	0.8	0.8
R-513A (HFO-1234yf=56%, HFC-134a= 44%)		0	0.684	0.684
HFC-365mfc/HFC-227ea (87%/13%)		0	115.2	115.2
R467A (HFC-32=22%, HFC-125=5%, HFC-134a=72.4%, R-600a=0.6%)		37.800	0	0
Total	33072.771	18551.637	28833.58	48314.387



9.3 United Nation Convention to Combat Desertification:

Introduction:

The Desertification Cell plans, coordinates and collaborates activities for restoration of degraded land and for the achievement of Land Degradation Neutrality ((LDN) in India.

The Division is:

- The focal point addressing the issues pertaining to the United Nations Convention to Combat Desertification (UNCCD), which was ratified by India on 17th December 1996.
- Co-ordination division for SDG 15.3 (By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world) in the Ministry.
- Co-ordination division for National State Environment Report for information pertaining to land Degradation Status.

Activities undertaken: On the occasion of International Day of Forests 2023, Ministry has announced to revive the Aravalli's through various initiatives like single-use plastic ban, water conservation efforts and natural resources protection which will contribute to green the 5 km buffer area around the Aravalli Hill Range in three states namely Haryana, Gujarat, Rajasthan and parts of Delhi NCR.

The Detailed Project Report has been prepared and further the preparation of state-wise holistic action plan for taking up restoration activities in Aravalli range is under process in consultation with the State Forest Departments, civil society groups, local communities and relevant private sector.

Study initiatives:

Enhanced Capacity Building of Stakeholders and State Governments on Forest Landscape Restoration and Reporting Mechanism on Bonn Challenge

NAEB is implementing a pilot project "Enhanced Capacity building of Stakeholders and State Governments on Forest Landscape Restoration and Reporting Mechanism on Bonn Challenge" in consultation with IUCN is compiling the data for reporting the achievements under Bonn Challenge Commitments.

The project aims to develop and adapt best practices and monitoring protocols for the Indian States, and build capacity within five pilot States (identified as Haryana, Madhya Pradesh, Maharashtra, Nagaland and Karnataka) on the same in the first phase of the project. This will be eventually rolled out across the country in all States in subsequent phases of the project. The Project period is 3.5 years with a total cost of Rs.5.9 crores.



CHAPTER - 10 | INTERNATIONAL COOPERATION



10.1 International Cooperation:

The International Co-operation (IC) Division coordinates all issues related to international environmental cooperation and allied areas. The Division also handles bilateral country to country cooperation in the areas of environment protection and supports annual contributions to various UN and other international bodies, as it is a nodal agency for all the issues related to the environment within the Ministry of Environment, Forest and Climate Change (MoEF&CC).

Multilateral: The IC division coordinates with UNEP, GEF, the World Bank (WB) and regional bodies like Economic & Social Commission for Asia & Pacific (ESCAP), Brazil-Russia-India-China-South Africa (BRICS); South Asian Association for Regional Cooperation (SAARC), South Asia Cooperative Environment Programme (SACEP), Association of South-East Asian Nations (ASEAN), Asian Development Bank (ADB), European Union (EU); Shanghai Cooperation Organisation (SCO); G20 India; and United Nations Environment Assembly (UNEA).

Bilateral: The IC division is also the Nodal Division for bilateral (country-to-country) cooperation in the field of environment and related matters. The Ministry has entered into many Agreements MoUs on various environmental issues and related matters of mutual benefits. Most of the MoUs agreements are operated through the Joint Working Groups (JWGs).

Important multilateral activities

1. **Shanghai Cooperation Organization (SCO):** The Shanghai Cooperation Organization (SCO) is a multilateral organization, established on 15th June 2001 in Shanghai, China, initially by 6 countries viz: China, Kazakhstan, Kyrgyzstan, Russia, Tajikistan and Uzbekistan. Amongst other

things, it aims to promote their effective cooperation in environmental protection. India officially joined SCO as full-fledged member at the historic summit in Astana on 9th June 2017. Shanghai Cooperation Organization has the status of Observer at the United Nations General Assembly.

India assumed the Chairmanship of the Shanghai Cooperation Organisation Council of Heads of State (SCO CHS), as per rotation, after Uzbekistan from 17th September 2022 onwards, for a period of one year. As part of its responsibilities as Chair, India hosted the regular session of the SCO Council of Ministers for Environment and the meetings of its Expert Working Group in 2023. The agenda items discussed in the meetings included Status and prospects for developing the cooperation in the field of environmental protection; follow-up to realisation of the Action Plan for implementation of the Concept of Cooperation in Environmental Protection of the SCO Member States for 2022-2024, with a focus on the topics of India's chairmanship in the SCO within the track "Environmental Protection"; and Joint Communique. The Fourth Meeting of the Heads of Ministries and Department of SCO Member States Responsible for Environment Protection was held virtually on 18th April, 2023 under the Chairmanship of Union Minister for Environment, Forest and Climate Change, Shri Bhupender Yadav. The meeting resulted in adoption of the Joint communiqué on the outcome of the Fourth Meeting. The Joint Communique was framed on the basis of the SCO Action Plan to implement the 2022-24 concept of cooperation in the field of environment protection.



2. **United Nations Environment Assembly:**

The United Nations Environment Assembly (UNEA) is the world's highest-level decision-making body on the environment. UNEA enjoys the universal membership of all 195 UN Member States and the full involvement of major groups and stakeholders. It sets the global environmental agenda, provides overarching policy guidance, and defines policy responses to address emerging environmental challenges. It undertakes policy review, dialogue and the exchange of experiences, sets the strategic guidance on the future direction of the UN Environment Programme (UNEP), and fosters partnerships for achieving environmental goals and resource mobilization.

UNEA sessions since 2014 have been organized as five-day events, including the high-level segment that continues to attract heads of state and governments. The first three days of the 5-day UNEA are dominated by plenaries, national and regional statements, and the work of The Committee of the Whole. The last two days are dedicated to the High-Level Segment where heads of state and government participate.

The sixth session (UNEA-6) will take place

from 26 February to 1 March 2024 at the UNEP headquarters in Nairobi, Kenya. The sixth meeting will be preceded by the Open-ended Committee of Permanent Representatives (OECPR) will take place from 19 to 23 February 2024. The UNEA-6 will be held in-person and the overall theme of UNEA-6 is "Effective, inclusive and sustainable multilateral actions to tackle climate change, biodiversity loss and pollution".

The Indian delegation also attended the **5th Forum of Ministers and Environment Authorities of Asia Pacific** that took place in Colombo, Sri Lanka from 3 to 6 October 2023. The purpose of the meeting was to discuss the regional environmental priorities and provide regional inputs to the outcome of the 6th session of the UN Environment Assembly (UNEA-6).

3. **BRICS Meetings:** Shri Bhupender Yadav, Hon'ble Minister of Environment, Forest and Climate Change, participated in the 9th BRICS Environment Ministers Meeting, 28th June, 2023, which was held virtually under Presidency of South Africa. The theme of the Meeting was "Advancing Environmental Cooperation Among BRICS towards the attainment of the 2023 Agenda for Sustainable Development". Ministers and delegates from Brazil, Russia and China also participated in the Meeting. The Joint Statement for the 9th BRICS Environment Ministers Meeting was adopted in the Meeting after hectic deliberation among the BRICS Nations. It was preceded by the Senior Officers' Meeting on 27th June 2023 to finalise the Joint Ministerial Statement.

4. **United Nations Environment Programme:** The United Nations Environment Programme (UNEP) is the leading global



authority on the environment. UNEP works closely with its 193 Member States and representatives from civil society, businesses, and other major groups and stakeholders to address environmental challenges through the UN Environment Assembly, the world's highest-level decision-making body on the environment. India is a Member of UNEP and provides annual financial contribution of USD 100,000 to UNEP Environment Fund. This year, the Ministry sanctioned USD 3,00,000 towards its annual contribution for the year 2021, 2022 and 2023.

5. International Union for Conservation of Nature and Natural Resources (IUCN):

Established in 1948, IUCN is an international organization working in the field of nature conservation and sustainable use of natural resources. Mission of the IUCN is to influence, encourage and assist societies throughout the world to conserve nature and to ensure that any use of natural resources is equitable and ecologically sustainable. It was previously called the International Union for Protection of Nature (1948-1956) and the World Conservation Union (1990-2008). IUCN has observer and consultative status at the United Nations, and plays a role in the implementation of several international conventions on nature conservation and biodiversity. It was involved in establishing the World Wide Fund for Nature and the World Conservation Monitoring Centre. IUCN is a membership Union uniquely composed of both government and civil society organizations. This Ministry is nodal for IUCN and supports IUCN in achieving goals of conservation of nature, natural resources and biodiversity.

6. South Asia Cooperative Environment

Programme (SACEP): The South Asia Cooperative Environment Programme (SACEP) was set up in 1982 with headquarters in Colombo, Sri Lanka. India is a founder member of SACEP. Afghanistan, Bangladesh, Bhutan, Maldives, Nepal, Pakistan and Sri Lanka are the other members of this programme. It aims to promote Regional Cooperation in South Asia in the field of environment, both natural and human, in the context of sustainable development and on issues of economic and social development. The Governing Council (GC) is the principal deliberative and review body responsible for determining policies, strategies and programmes of the SACEP. The Governing Council of the SACEP consists of Environment Ministers from all 8 Member States. Secretaries of the Ministries of Environment of SACEP Member States are the designated National Focal Points. For SACEP, our Annual Contribution is USD 31,850. The last meeting of the 15th Governing Council was held in Dhaka, Bangladesh from 3-6 November 2019. The Indian Delegation was led by the then HMEFCC.

7. G20: The G20 or Group of Twenty is an intergovernmental forum comprising 19 countries, the African Union, and the European Union (EU). It works to address major issues related to the global economy, such as international financial stability, sustainable development, environmental and climate change issues etc. The 19 countries are: Argentina, Australia, Brazil, Canada, China, Germany, France, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, United Kingdom, and United States. The Invitee countries which attended ECSWG meetings



included Bangladesh, Egypt, Denmark, Mauritius, Netherlands, Nigeria, Oman, Singapore, Spain, UAE. The International Organizations that attended the meetings include United Nations Convention to Combat Desertification (UNCCD), United Nations Framework Convention on Climate Change (UNFCCC), Convention on Biological Diversity (CBD), United Nations Development Programme (UNDP), Food and Agriculture Organization (FAO), United Nations Environment Programme (UNEP), Coalition for Disaster Resilient Infrastructure (CDRI), International Solar Alliance (ISA), World Bank, International Renewable Energy Agency (IRENA), Asian Development Bank (ABD), Green Climate Fund (GCF) and International Union for Conservation of Nature (IUCN).

The G20 Countries represent a spectrum of developed and emerging economies at different stages of growth and development. Collectively, they support 85 per cent of global GDP and 75 per cent of global trade. However, they are also responsible for around 80 per cent of the current annual greenhouse gas (GHG) emissions and facing the detrimental impacts of changing climate and environmental degradation.

India assumed the Presidency of the G20 for the period of one year from 01 December 2022 to 30 November 2023, taking over from Indonesia.

As the largest democracy in the world, and the fastest growing economy, India's G20 presidency played a crucial role in building upon the significant achievements of the previous 17 presidencies. India's presidency focused on the theme of Vasudhaiva Kutumbakam - 'One Earth, One Family, One Future', with the agenda being inclusive, ambitious, action oriented and decisive in nature. The theme affirms the value of human, animal, plant, and microorganisms

and their interconnectedness on planet Earth and in the wider universe.

Under G20 India, there was a Joint WG of Environment and Climate Sustainability, as in the case of G20 Presidency under Indonesia. The Environment and Climate Sustainability Working Group is one of the thirteen under the Sherpa Track, which identified the below thematic priorities for deliberation during the India Presidency.

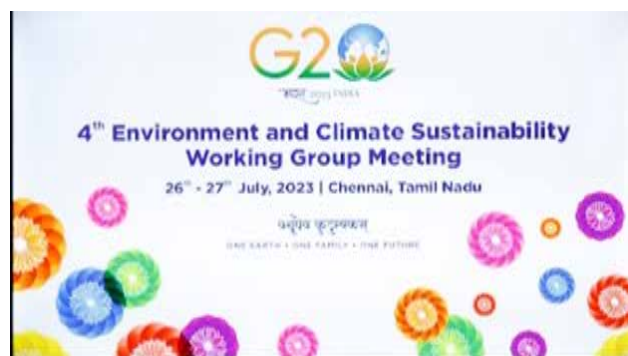
- Preventing, reducing and reversing land degradation; accelerating ecosystem restoration and halting and reversing biodiversity loss
- Protecting and conserving the ocean, promoting a sustainable and resilient blue/ocean-based economy
- Promoting resource efficiency and circular economy, preventing pollution and minimizing its risks

The Indian Presidency also put spotlight on Lifestyle for Environment (LiFE), with an emphasis on environmentally sustainable and responsible choices at both the individual lifestyle and the national development level, with the aim of achieving a cleaner, greener, and bluer future. Accelerating climate action and sustainable lifestyles spotlighting the India led Lifestyle for Environment (LiFE) were cross cutting elements that were mainstreamed across the three thematic priorities.

Cooperation amongst G20 Countries is essential to build economic resilience through resource security, achieve sustainable development, improve ecosystems and biodiversity via conservation and restoration, and combat climate change. The G20 Countries during the proceedings of this working group exhibit a spirit of renewed multilateralism, linking energy,

development, and climate action priorities to deliver jobs, growth, and sustainability. The same was reflected at the Summit wherein the countries unanimously adopted the Green Development Pact, rendering consensus on key matters of climate and environment.

Four Environment and Climate Sustainability Working Group (ECSWG) Meetings were held across India and deliberated on the issues of Promotion of blue economy along with coastal sustainability; Restoration of degraded lands and ecosystems and enhancement of biodiversity; Industry transition of hard to abate sectors; and Strengthening of Circular economy. The Environment and Climate Sustainability Ministers' Meeting was held on July 28, 2023, following the successful conclusion of the 4th ECSWG meeting that was held from July 26th-July 27th, 2023, in Chennai, Tamil Nadu. The details of ECSWG meetings are given in Chapter 2 of this Report .



Under the G20 India Presidency, four meetings were held and ECSWG has demonstrated an unwavering commitment towards ensuring environmental sustainability, which resonates with the vision of the Indian government to tackle the interconnected issues of climate and environment in an ambitious and decisive manner. The outcomes of the ECSWG were included in the New Delhi Leaders' Declaration and Green Development Pact. The deliberations during the four scheduled meetings reached at concrete, implementable action points to foster the sustainable development, climate action and protection of the environment.

8. **G7:** The G7 Summit is an international forum held annually for the leaders of the G7 member states of France, the United States, the United Kingdom, Germany, Japan, Italy, and Canada (in order of rotating presidency), and the European Union (EU). The G7 Ministers' Meeting on Climate, Energy and Environment is one of the ministerial meetings held



in conjunction with the G7 Summit, and its significance is that it forms the basis for discussions at the Summit. India participated as one of the Guest Countries in the G7 Ministers' Meeting on Climate, Energy and Environment under the presidencies of UK and Japan during 2021 and 2023 respectively. For the G7 Ministers' Meeting on Climate, Energy and Environment, 2023, Japan, the Indian delegation was led by Hon'ble Minister of Environment, Forest and Climate Change, Shri Bhupender Yadav. Bilateral meetings were also held on the sidelines of the meeting.

- 9. BIMSTEC Joint Working Group on Environment and Climate Change:** The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is a regional organization that was established on 06 June 1997 with the signing of the Bangkok Declaration. Being a sector-driven grouping, cooperation within BIMSTEC had initially focused on six sectors in 1997 (trade, technology, energy, transport, tourism, and fisheries) and expanded in 2008 to incorporate agriculture, public health, poverty alleviation, counter-terrorism, environment, culture, people-to-people contact, and climate change.

The First Meeting of the BIMSTEC Joint Working Group on Environment and Climate Change was held on 06 December

2022 in Thimphu, Bhutan virtually. All Member States participated in the meeting hosted and chaired by the Lead Country for Environment and Climate Change, Bhutan. The 2nd Meeting of the JWG and the workshop was held during 9-12 Oct, 2023. The Indian delegation was led by Senior Economic Adviser, Shri Lalsanglur.

- 10. GEF Assembly Meeting:** India is a founder member of the Global Environment Facility (GEF). Set-up in 1991, GEF is a designated multilateral funding mechanism of 185 countries to provide incremental finance for addressing global environmental benefits that are also identified as national priorities. The Ministry of Environment, Forest and Climate Change is India's GEF Operational Focal Point (OFP) responsible for all in country coordination. The Department of Economic Affairs (DEA) is India's GEF Political Focal Point.

India is both a donor and recipient of GEF grants. Total contribution made by India, since 1991 upto GEF-8 is USD 96 million (Pilot Phase-USD 6 million; GEF 1 to 5 cycle-USD 9 million; GEF 6 cycle-USD 12 million; GEF 7 –USD 15 million; and GEF 8-USD 18.75 million). Since the fourth cycle GEF funding is available under broad sectors of Climate Change, Biodiversity and Land Degradation. The sector wise broad categorization of the funding received by India are as follows:

(In USD)

GEF Cycle	Biodiversity	Climate Change	Land Degradation	Total
GEF-4	30,000,000	74,976,990	0	104,976,990
GEF-5	30,580,000	93,390,028	5,073,300	129,043,328
GEF-6	36,873,287	59,080,068	5,832,822	101,786,177
GEF-7	34,016,343	47,237,955	4,357,244	85,611,542
GEF-8	43,779,206	41,654,229	3,890,594	89,324,029
Total	175,248,836	316,339,270	19,153,960	510,742,066

In GEF-7 cycle (2018 -2022), the total allocation to India was USD 85.62 million. GEF-8 cycle (July 2022 to June 2026), India has received USD 89.32 million in STAR allocation, about 4.32% increase over the last GEF replenishment cycle.

GEF has supported implementation of 82 national projects in India. In addition, GEF has also supported 26 regional and global projects. Out of the 82 national projects, 46 projects have been implemented by MoEFCC and about 36 projects have been implemented by other line ministries.

GEF Assembly is the only governing body of the GEF in which representatives of all 185 member countries meet every three to four years and is responsible for reviewing and evaluating the GEF's general policies, the operation of the GEF and its membership. The 6th GEF Assembly were held in Da Nang Vietnam from 27-28 June, 2018. The 7th GEF Assembly meeting was held from 22-26 August 2023 in Vancouver, Canada. Three high-level plenary sessions were held on August 24-25, 2023 and 11 interactive roundtables running across the two days focused on a wide range of topics from closing the nature funding gap, to transforming food systems, building climate resilience, and more.

Important bilateral activities

1. **Japan:** A bilateral Meeting between Hon'ble Minister of Environment, Forest and Climate Change, ShriBhupenderYadav and Hon'ble Minister of Environment, Japan, Mr. Akihiro Nishimura was held on 12th January, 2023 discussing G7/ G20 Collaboration, Focus on Lifestyle, Oceans/Plastic, Adaptation/Disaster Risk Reduction, Article 6/Market Mechanism etc. HMEF&CC also attended the India-



Japan Environment Week, 12-13 January, 2023, New Delhi.

2. **Germany:** A meeting of Hon'ble Minister of Environment, Forest and Climate Change, ShriBhupenderYadav with H.E. Mr. Ralph Brinkhaus for the German-Indian Parliamentary Group of the German Federal Parliament (Bundestag) took place on 31.01.2023 discussing issues like Indo-German Partnership on Green and Sustainable Development, Biodiversity, Wetlands and Water, Forest and Ecosystem Restoration, G20 Presidency and Environment and Climate Change including LiFE.



3. **Sri Lanka:** A meeting was held between Hon'ble Minister of Environment, Forest and Climate Change, Shri Bhupender Yadav and H.E Mr.NaseerAhamed, Minister of Environment, Sri Lanka on 24.02.2023 having discussions on issues such as Financial and Technical Assistance for implementing Sri Lanka National



Environment Action Plan, Investments to reduce emissions specifically in areas such as e-mobility, Renewable Energy etc.

4. **France:** Union Minister of Environment, Forest and Climate Change, ShriBhupenderYadav had a meeting with Delegation of the Parliamentary Standing Committee on Foreign Affairs of the French National Assembly led by Mr Jean-Louis Bourlanges on 13.03.2023 discussing issues like Biodiversity, Waste and Pollution, including Maritime Litter and Plastic, Wetlands and Water (Blue Economy), G20 Presidency, etc.



5. **FIJI:** Union Minister of Environment, Forest and Climate Change, ShriBhupenderYadav met with Hon'bleJovesaVocea, Assistant Minister for Rural, Maritime Development and Disaster Management, Fiji on 03.4.2023, and discussed issues like Project on Solarisation, ISA, CDRI, Mission LiFE.
6. **USA:** Union Minister of Environment, Forest and Climate Change, ShriBhupenderYadav had a meeting H.E Mr. Eric M Garcetti, Ambassador of USA on 11.07.2023 in Indira ParyavaranBhawan, and discussed issues on India-US Bilateral Initiatives and Major Proposals, Mission LiFE, Climate Finance, Carbon Market, Fossil Fuels and Clean Energy etc.
6. **UN Deputy Secretary General:** Union Minister of Environment, Forest and

Climate Change, ShriBhupenderYadav met with Deputy Secretary-General of the UN H.E. Ms.Amina J. Mohammed on 04.07.2023 in Indira ParyavaranBhawan and discussed various issues relating to the SDGs, G-20, social protection, planetary crisis, South-South Cooperation, climate finance etc.

7. **ED UNEP:** In order to discuss the World Environment Day, sustainable lifestyles, LiFE-Lifestyle for Environment, and other related matters of UNEP,a video conference was held on 18th May, 2023 between Mr BhupenderYadav, Hon'ble Minister of Environment, Forest and Climate Change and Ms Inger Anderson, Executive Director, UNEP.
8. **UNICEF:** Union Minister of Environment, Forest and Climate Change, ShriBhupenderYadav had a meeting Ms. Catherine Russell, ED, UNICEF on 02.10.2023. In the meeting, they discussed India's G20 Presidency, UNICEF activities in India, Mission LiFE, UNICEF CPD 2023-2027, etc.



9. **Meetings with Secretary:** Ms. Leena Nandan, Secretary, Minister of Environment, Forest & Climate Change had bilateral meetings with Ambassador of Republic of Cuba Mr. Alejandro Simancas Marin on 02.05.2023; German delegation led by Ms. Christine Toetzke,

Director General, BMZ on 12.06.2023; ADB delegation led by Mr. Kenichi Yokoyama, Director General, SARD on 19.06.2023; Mr. In-Chang Song Korean G-20 Sherpa on 20.06.2023; Danish Ambassador Freddy Svane on 11.07.2023; and Finland Ambassador Mr. Kimmo Lahdevirta on 27.10.2023.

10. **Canada:** The 1st Meeting of India-Canada Joint Committee on Environment was held on 06.04.2023 at Indira Paryavaran Bhawan on issues like Circular Economy and Plastics Pollution including Marine Plastics, Sustainable Lifestyle for Environment (LiFE), Climate Change, Sustainable Development and Management of Water Resource etc.

10.2 Externally Aided Projects

Externally Aided Projects (EAP) Division of the Ministry deals with Forestry, Biodiversity and Natural resource management related Externally Aided Projects in coordination with the State Governments, donor agencies (JICA, French Development Agency (AFD), GIZ, KfW, World Bank etc.) and other line ministries in the

Government of India such as Ministry of Finance, Ministry of Home Affairs, Ministry of External Affairs, NITI Aayog, Ministry of Development of North Eastern Region, etc.

Objective of these forestry projects are increasing forest cover, biodiversity conservation, rehabilitation of degraded forest areas, Soil & Moisture Conservation measures, augmentation of Agro-forestry component, Capacity Building of Forest Officials and other stakeholders, creation of income & livelihood opportunities to fringe area forest village people, other measures for Sustainable Management of Forest and its resources and climate change impacts for sustainable livelihoods.

At present, there are 17 Externally Aided Projects dealt by this division which are under implementation in 15 States. These are Assam, Sikkim, Manipur, Nagaland, Tripura, Meghalaya, Odisha, Uttarakhand, Himachal Pradesh, Uttar Pradesh, Madhya Pradesh, Tamil Nadu, Gujarat, Rajasthan and West Bengal.

b. Activities undertaken

- National Conference was organised at

S. No	Name of the Ongoing projects	States	Project Duration	Doner Agency
1.	Uttarakhand Forest Resources Management Project/ Japanese Technical cooperation Project for Natural Disaster Management in Forest Areas of Uttarakhand	Uttarakhand	2014-15 to 2023-24	JICA
2.	Himachal Pradesh Forest Ecosystem Management & Livelihood Project	Himachal Pradesh	2018-19 to 2030-31	JICA
3.	Odisha Forestry Sector Development Project Phase- II	Odisha	2017-18 to 2026-27	JICA
4.	Nagaland Forest Management Project	Nagaland	2018-19 to 2026-28	JICA
5.	Sustainable Forest And Catchment Management in Tripura	Tripura	2018-19 to 2027-28	JICA
6.	Project for Community-Based Forest Management and Livelihoods Improvement in Meghalaya	Meghalaya	2020-21 to 2033-34	JICA



S. No	Name of the Ongoing projects	States	Project Duration	Doner Agency
7.	Tamil Nadu Biodiversity and Greening Project for Climate Change Response	Tamil Nadu	2022-23 to 2032-33	JICA
8.	Sikkim Biodiversity Conservation and Forest Management Project	Sikkim	2010-11 to 2023-24	JICA
9.	Project for Ecosystem Management in Gujarat	Gujarat	2020-2026	JICA
10.	The project for Forest and Biodiversity Conservation for Climate Change Response in West Bengal	West Bengal	2023-2031	JICA
11.	Himachal Pradesh Forest Eco-System Climate Proofing project	Himachal Pradesh	2016-17 to 2020-21 till December 2022. Extension	KfW
12.	Component—Community-based Sustainable Forest Management for Water Resources Conservation in Manipur (COSFOM- KfW)	Manipur	1 September 2018 —31 August 2025 for loan Phase-I	KfW
13.	Climate Resilience of Forest Landscape Ecosystems, Biodiversity and Adaptive Capacities of Forest Dependent Communities, Tripura (CREFLAT): Climate change adaptation in the Himalaya -Component II	Tripura	2020-2027	KfW
14.	Forest and Biodiversity Management in the Himalaya – Nagaland	Nagaland	2018-2027	KfW
15.	Assam Project on Forest and Biodiversity Conservation Phase II	Assam	2019-20 to 2024-25	AFD
16.	Rajasthan Forest and Biodiversity Development Project	Rajasthan	2021-2029	AFD
17.	Sustainable Management of Forest Ecosystem Services	UK, HP, MP and UP	2021-22 to 2023-24	GIZ

Srinagar on “National Working Plan Code, 2023” which was chaired by DGF&SS, MoEF&CC.

c. Progress/ Innovations

- Knowledge Co-Creation Program on **“Sustainable Program on “Sustainable Forest Management and Forest Management and Integrated Watershed Management under Management under Counterpart Training Counterpart training program”** was held in Japan from August 16th, 2023 to September 8th, 2023; A similar senior level program was held in

Japan from 4th Dec to 13th Dec, 2023.

- Exposure Visit to Kruger National Park, South Africa for the Assam Government Officers from 9th September to 18th September 2023 under Assam Project on Forest and Biodiversity Conservation (APFBC) funded by French Development Agency (AFD).
- MOD has been signed between Rajasthan Government, JICA and MoEF&CC dated 14th November 2023 For the Project on **“Rajasthan Climate Resilience Enhancement and Ecosystem Services Improvement Project (RC-ESIP)”** for a



period from 2023-2031. The project total outlay is Rs. 1774.3 crores and will be implemented over a period of 8 years.

d. Achievements

DPR of following projects to be implemented in Meghalaya, Manipur and Punjab have been reviewed and comments have been furnished to the Department of Economic Affairs (DEA)

- i. Protection of Vulnerable Catchment Area in Meghalaya seeking Financial Assistance from KFW".

- ii. Community-based Sustainable Forest Management for water Resources Conservation in Manipur (COSFOM) Phase II" from Government of Manipur to be Funded by KFW.
- iii. Enhancing Livelihood through Community based Watershed Development in Manipur JICA ODA Loan.
- iv. Punjab Biodiversity and Natural Resources Conservation Project with the Assistance of JICA.



CHAPTER - 11

RESEARCH



11.1 Research in Environment

Environmental Research and Development Program (ERDP)

The Environment Research and Development Programme is under the revamped Scheme “Environment Education, Awareness, Research and Skill Development” which was erstwhile known as “Decision Support System for Environmental Awareness, Policy, Planning and Outcome Evaluation”. Under the new revamped Programme, the main objective would be to promote Environmental Research on critical areas/gaps, as identified by the Ministry, through reputed institutions; Government funded institutions and professional organizations (including NGOs) along with the existing thematic areas of R&D Scheme. This would facilitate decision making for policy and planning of the Ministry’s programmes and activities.

The ERDP is open to all institutions in the country with expertise in identified thematic areas to undertake specific projects on specific areas of concern and priority and/ or urgency of the Ministry in meeting Ministry’s objectives of environmental protection and conservation of natural resources. Institutions availing such funding under the Scheme will be provided a grant for the project duration.

The major thematic areas for funding are:

- i. Biodiversity Conservation including Issues of Alien and Invasive Species and Human-Wildlife Interface.
- ii. Ecosystems Conservation & Management (Mountain, Forest, Coastal, Wetlands, Pastoral, etc.) and Evaluation of Ecosystem Services.
- iii. Socio-economic issues of environment and Sustainable Development.
- iv. Conservation and Management of

Landscapes and Ecologically sensitive areas including issues of sustainable livelihoods

- v. Sustainable Management of Natural Resources.
- vi. Climate Change: Vulnerability & Risk Assessment, Process, Mitigation and Adaptation.
- vii. Pollution Prevention Clean Technologies and Processes, Cleaner Production, 3Rs, Resource Efficiency, Waste Minimization and Management, etc.
- viii. Use of remote sensing technology for inventorisation, assessment and monitoring of country’s natural resources such as land, water, forests, wetlands, glaciers etc. and for environmental conservation and protection on areas given above.
- ix. Taxonomy.

Major objectives:

- i. Promotion of Research & Development in various facets of ecology and environment for the conservation and protection of environment and natural resources of the country. To plan, support and coordinate environmental research in public interest for enhancing the understanding of environment and ecology and devising strategies and solutions for environmental protection and management for achieving the overarching objectives of sustainable development.
- ii. The research projects will enable the Ministry to build database of Research projects and their findings in identified problem areas for finding practical solutions to issues concerning environmental protection and management and to generate information and knowledge from



outcome of R&D projects for developing policies, strategies, action plans, and integration of such outputs in Ministry's on-going Schemes and Programmes and in better management and conservation of natural resources.

Activities/ Progress/ Achievements:

- Organised 01 reconstituted Technical-cum-Financial Appraisal Committee (TFAC) Meetings.
- Technical cum Financial Appraisal Committee has been reconstituted.
- Steering Committee (SC) have also been reconstituted.

11.2 G.B. Pant National Institute of Himalayan Environment

The CS-I (Mountain) Division has been established in MoEF&CC to ensure better coordination on issues for conservation of mountain ecosystem and ensuring sustainable livelihood options for communities in the region and beyond along with effective networking/ collaboration with relevant organizations. The major activities under this Division are as follows:

- i. Coordination of activities (administrative/ establishment matters) for Govind Ballabh Pant National Institute of Himalayan Environment (NIHE) to achieve physical and financial targets.
- ii. Monitoring of physical and financial targets for successful implementation of the National Mission on Himalayan Studies (NMHS) along with organising consultations/ review meetings under guidance of Scientific & Technical Advisory Group (STAG)/ Steering Committee (SC).

- iii. Coordination with International Centre for Integrated Mountain Development (ICIMOD) for their activities in India along with support in preparation of ICIMOD's Strategy and Action Plans in consonance with MoEF&CC's mandate; organising consultations for monitoring their work in India.

Activities undertaken:

NIHE:

- Institute has been implementing demand-driven projects on: (i) assessment of glacier-climate functional relationships across the Indian Himalayan region through long-term network observations; (ii) mainstreaming passive solar heated buildings in the IHR: Integrating science with traditional practices to enhance climate resilience; (iii) Exploring the use of treated wastewater for vegetation cultivation through hydroponics in Ladakh UT; and (iv) Cultivation of medicinal plants for rural livelihood improvement in Hawalbaghtaluk, Almora, from different funding agencies like DST, NABARD, NMHS, etc.
- Initiated developing and implementing working frameworks for climate-smart villages towards sustainable rural development in the Indian Himalayan region.
- Long-term in-situ monitoring of glaciers of Kali Basin (Chipa and Neola Glaciers) and Rulung glacier in the Ladakh region for mass balance, snout dynamics, and hydrology has been initiated.

NMHS:

- The 11th Steering Committee meeting was convened on Dec 15, 2023 under Chairship of the Secretary, MoEF&CC to



review progress of NMHS and approve new projects. The consecutive three (03) meetings, i.e. 19th, 20th, and 21st meetings of Scientific and Technical Advisory Group (STAG) were organized on September 5, November 3, and November 10 in Year 2023-24, which were Chaired by the Joint Secretary, MoEF&CC for assessment and recommendation of new projects as well as mission progress and activities.

- The 7th Monitoring & Evaluation (M&E) Workshop was organized through Hybrid Webinar Mode on August 17–18, 2023. Under the guidance of the Chief Guest the Joint Secretary, MoEF&CC, the invited Chair and eminent members, subject experts evaluated 35 NMHS-supported projects in two technical sessions.

ICIMOD:

- The 54th meeting of Board of Governors of ICIMOD was held during 21-23 May 2023 in Dhaka, Bangladesh with representation from all Regional Member Countries including India. The Annual Progress Report 2022; Draft results framework and funding forecast for MTAP-V; Audit Report 2022; and Annual Plan and Budget 2024 were finalized during the meeting.
- 2nd meeting of the National Coordination Committee on Transboundary Landscape and Hindu-Kush Himalaya (HKH) Call to Action Initiatives was held on 24th August 2023 at Indira Paryavaran Bhavan, MoEF&CC, New Delhi to review ICIMOD's activities in India and to discuss the possible areas of engagement under NMHS and other ICIMOD initiatives.

Progress/Innovations:

NIHE:

- Prepared 13 district-level Environmental

Management Plans for Uttarakhand as per the Hon'ble NGT guidelines and submitted them to the State Pollution Control Board, Uttarakhand.

- A greywater treatment system is installed in the NIHE Kosi campus; it is based on fixed bed experiments and is functional at both lab and pilot levels. This experiment is expected to be beneficial at the commercial level while applying the greywater treatment process.
- A mobile app – 'Jaldhara' has been developed under the Jal Abhayaanya project to have wider applications for in-situ data acquisition of springs and other water sources.
- Hydro-geological assessment viz. hydrographs, flow duration, master recession curves analysis, univariate and bivariate analysis supported by geological investigation of Manadunga springs cluster (total 8 springs) in Champawat district has been carried out, which has a potential for wider implementation in other parts of the IHR for spring revival studies.
- A new species of Balsaminaceae (*Impatiens rajibgogoi*) from Sikkim was discovered, and 2 new records of orchids, each from Sikkim and West Bengal, India, were recorded. The first report of *Dothiostroma pini* stain DPE01 causing leaf spots on *Ageratina adenophora* in India is reported.
- A sanctuary of 5 species of Berberis and Mahonia (*B. asiatica*, *B. lycium*, *B. jaunsarensis*, *B. Aristat* and *Mahonia jaunsarensis*) has been developed in Surykunj, Almora towards their conservation.
- A custom-made Hydroponics system was developed and successfully installed at



different hotels in Leh.

- Technical support to the Biodiversity Boards of Arunachal Pradesh, Himachal Pradesh, Sikkim, Uttarakhand and Leh was provided to prepare the 75 People Biodiversity Registers.
- The Institute developed Eco-restoration plans for the Gangotri-Govind and DarmaByans landscapes, its campuses like Surya Kunj in Katarmal, MohalKhad and Dohranala in Kullu Valley, Banswara in Kedarnath Valley, etc.
- Re-assessment of GLORIA summits established in western Himalaya (Chaudas and Byas valley, district-Pithoragarh, Uttarakhand) revealed a significant increase of 4.4% in mean species richness and 8.9% in plant cover per m² quadrat. Plant cover for species such as *Danthonia cachemyriana* (Grass), *Juniperus communis* (Shrub) increased by 4.41 and 1.72 percent, whereas it decreased for *Kobresia nepalensis* (Sedge), *Potentilla argyrophylla* by 3.83 and 1.86 percent, respectively.
- The germplasm (seed) of 80 landraces of *Phaseolus vulgaris*, 25 landraces of *Macrotyloma uniflorum* and 30 landraces of *Glycine max* collected from different locations of Uttarakhand. A good diversity has been observed among landraces of target species based on plant morphology and Phyto-chemical traits.

Achievements:

NIHE:

- Various databases have been strengthened, including spring discharge, water quality, rainfall and GIS-based thematic maps of 12 sites of spring rejuvenation covering 32 springs across IHR.

- Towards spring rejuvenation, 1030 water augmentation structures, 5 rooftop rainwater harvesting systems and ~4000 plantations have been done, which shows promising results at 7 sites in Uttarakhand, Sikkim, West Bengal, Meghalaya, Tripura, Arunachal Pradesh and J&K sites in the initial assessment.
- To facilitate spring rejuvenation activities, 1156 para-hydrogeologists were trained through different programmes/training/workshops.
- Sanctuaries of threatened and high-value species like *Berberis* spp., *Zanthoxylum armatum*, *Meizotropis pellita*, and *Pittosporum eriocarpum* developed towards their conservation and large-scale propagation.
- Demand-based technical inputs/guidelines w.r.t. springshed management/spring rejuvenation to Ministry of Rural Development, Jal Shakti, NIH Roorkee, KRC's of JJM and PMKSY for enhancing water security in hilly areas.

11.3 National Mission on Himalayan Studies (NMHS)

Objectives:

- To build a body of scientific and traditional knowledge through demand driven action research and technological innovations along with institutional strengthening & capacity building;
- To strengthen technological innovations leading to sustainable management of natural resources of Himalaya for ensuring the ecological, water, livelihood security at the local, regional and national levels;
- To create science-policy-practice connect through a network of policy makers and

practitioners (individual and institutions) engaged in working solutions to problems in the thematic areas;

- To demonstrate workable/implementable/replicable solutions to the problems in the priority thematic areas.

Progress/Achievements:

- The Biodiversity Park developed at Bhullah, Mandi, Himachal Pradesh by the Nachan Forest Division, Himachal Pradesh under NMHS project was awarded with the "Environment Leadership Award 2021-22".
- The newly invented, state-of-the-art "Mobile Cold Mixer-cum-Paver (MCMP)" machine, developed under the NMHS-funded project, was handed over to the Border Road Organization (BRO) by the CSIR-IHBT, Palampur, Himachal Pradesh towards facilitating the high-altitude roads pavement in the Indian Himalayan region.
- Through an NMHS-funded project under the thematic area "Handling of Waste", a "Compost Booster" was supplied to the

Municipal Corporation (MC), Palampur, HP by the CSIR-IHBT, Palampur, HP along with imparting the technical training for proper handling of segregated organic waste and pit-composting for the generation of quality compost Solid Waste Management.

- Overall, Knowledge Products under the Mission NMHS include: Success Stories (25), Technical Reports (15), Policy Briefs (17), Books/Chapters (37), Research Articles (492 with IF 961.26), Newsletter (07), Fliers (123), Manuals (23), Bulletins (17) among other key publications.
- In addition, an extensive database of the IHR is also being updated, inclusive of (i) 6124 Springs inventory online database; (ii) 14,683 Floral species and 31,705 Faunal species databases; (iii) 265 Geospatial databases; (iv) DNA Barcoding/ Molecular profiling database of 1415 threatened flora and 1595 faunal species; (v) 1,119 Agro-biodiversity Accession conserved, among others.

Grant-in-aid released to Institutions/organisations including NGOs:

S.No.	Name of Organisation	Purpose	Total Amount Released
1	NIHE	To fulfil the above mentioned Objectives	Rs. 14.35 crores
2	NIHE (For Implementation of NMHS Scheme)	To fulfil the above mentioned Objectives	Rs. 10.04 crores



CHAPTER - 12

ENVIRONMENTAL INFORMATION, EDUCATION AND AWARENESS



12.1 Environmental Education and Awareness and Training:

Environment Education Division

The Environment Education Division implements the 'Environment Education Programme (EEP)' - one of the components of the revamped Central Sector Scheme - 'Environment Education, Awareness, Research and Skill Development (EEARSD)'. This Scheme was approved for continuation till the year 2025-26. Additionally, the Division acts a link between the various Divisions of this Ministry and the Eco-club network for facilitating organization of educational activities for children. The Division also acts as the Nodal Division in the Ministry for matters related to National Education Policy (NEP), 2020.

Environment Education Programme

The Environment Education Programme (EEP) aims to supplement the efforts of the Ministry of Education in the formal education front, through varied pedagogical initiatives to impart non-formal environment education. This programme leverages on the key sectoral strength of Eco-clubs already formed under National Green Corps programme, in addition to targeting Youth Clubs and other such clubs/ units/ groups formed under various programmes/ schemes of the Government. Psychological interventions to behaviour change like education, enablement, incentivization, modelling, persuasion, training, etc. would be the building blocks of this programme laid on the foundation of principles envisaged in the National Education Policy, 2020.

The objective of the programme is to sensitize children/ youth on issues related to environment and to motivate them to adopt sustainable lifestyle through varied pedagogical initiatives like workshops, projects, exhibitions, campaigns, competitions, nature camps, summer vacation programmes, etc.

The Implementing Agencies of this Programme could be either at Central or State level, such as-

- Any agency or autonomous body/ institutes of Central or State Government/ UT Administration having a mandate related to education/ environment and are nominated by the respective Central or State Government.
- Nehru Yuva Kendra Sangathan or any such body under Department of Youth Affairs, Kendriya Vidyalaya Sangathan, Navodaya Vidyalaya Samiti or other such body under the Ministry of Education, National Museum of Natural History under this Ministry, Panchayati Raj institutions/ Urban Local Bodies, etc.

Under the programme, Sustainable Lifestyle Workshops/ Projects/ Exhibitions/ Campaigns/ Competitions/ Nature Camps/ Summer Vacation Programmes, etc. are organized by the Implementing Agencies for children/ youth that give target beneficiaries a platform for developing scientific temper and critical thinking, display creativity and nurture values like compassion and empathy, in addition to strengthening of concepts and opportunity to experiment and experience sustainable solutions, which use minimal resources, cause minimal pollution and generate minimal waste. Detailed Guidelines of the Programme were issued in October 2022.

Activities undertaken:

During the LiFE Mass mobilization drive in May 2023, the Implementing Agencies of EEP and Eco-clubs together organized 44,866 action and awareness events with total participants of 19.8 lakh children/ youth. Around 19.5 lakh pledges were also taken during these events.

- **Workshop/ training programs** were organized by various Implementing Agencies of EEP on topics like, zero waste initiatives, Green School programme, reducing plastic waste and Single Use Plastic (SUP), vermi composting, healthy lifestyle, sustainable food system, developing kitchen gardens, eco-friendly Ganesha idol making, etc. These programmes aimed at nurturing the right attitude among students towards environment conservation and developing them as responsible citizens for a greener world.

Students with Idols made up of clay for celebration of Ganesh Chaturthi festival in eco friendly manner.

- **Campaigns :-** World Environment Day, International Day for the preservation of the Ozone Layer, International Coastal Cleanup Day, Earth Day, International Day of Clean Air for Blue Skies, Van Mahotsav, National Wildlife Week etc. were celebrated by the eco clubs across the country by organizing rallies, painting/ slogan/ poster competitions, cleanliness drives, etc. In several States, Eco-clubs celebrated Rakshabandhanas VrukshRakshabandan

by tying Rakhi to trees and by making eco-friendly Rakhi from colourful papers.

- **Nature Camps :-** Under Environment Education Programme, 20 states have been given grants for conducting nature camps during the FY 2023-24. Nature camps aims at creating greater awareness, understanding and empathy among children for the environment.

Budget Allocation and Financial Performance

The total budget allocated for the Financial Year 2023-24 is Rs. 55 Crores (Budget Estimate) and Rs. 53.6 Crores (Revised Estimate). The expenditure till date (15.11.2023) is Rs. 18.18 Crores. The amount is being released in tranches this year to Implementing agencies.



Students of Eco club promoting the significance of ozone layer on Ozone Day in Tamil Nadu



Eco-club students at a nature camp organized at ReiekTlang in Mizoram



Eco-club students at a nature camp organized at ReiekTlang in Mizoram

Table: State-wise release of grant-in-aid under EEP during FY 2023-24 (as on 15-11-2023):

S. No.	State(s)	Funds Released (Rs.)
1	Andhra Pradesh	1,54,19,664
2	Assam	1,78,75,000
3	Bihar	10,21,141
4	Chhattisgarh	1,02,46,250
5	Goa	15,28,244
6	Gujarat	1,05,26,518
7	Himachal Pradesh	39,05,348
8	Karnataka	31,50,382
9	Kerala	68,63,204
10	Madhya Pradesh	2,17,40,000
11	Maharashtra	98,50,000
12	Mizoram	36,72,796
13	Nagaland	20,01,250
14	Odisha	1,71,39,876
15	Punjab	1,35,57,984
16	Rajasthan	91,40,000
17	Sikkim	48,55,000
18	Tamil Nadu	1,03,50,000
19	Telangana	91,40,000
20	Tripura	22,26,940
21	West Bengal	58,70,000
	Total	18,00,79,597

12.2 National Museum of Natural History:

The National Museum of Natural History (NMNH), a subordinate office of Ministry of Environment, Forest and Climate Change, Government of India, was open to public on 5th June, 1978 at Mandi House with an objective to create environmental awareness on nature and environment through non formal medium such as thematic galleries, exhibitions, film shows and educational activities to all masses of society in respect to promote environmental awareness.

NMNH, New Delhi has its four Regional Museums of Natural History (RMNH) in different parts of the country viz. Mysuru, Bhopal, Bhubaneswar and RGRMNH, SawaiMadhopur. Another RMNH at Gangtok is under construction to cover the North-East region..

Objectives:

- to develop the NMNH in the country's Capital to achieve the highest level of quality to promote environmental education at the national level;
- to develop Regional offices (regional museum of natural history) in various regions of the country in order to extend its activities at the regional/local levels;



- to develop museum-based educational projects at the level so as to help school curriculum on environmental education (EE);
- to develop EE resource materials (such as audio-visual aids, low-cost teaching aids, school loan kits, etc.) to promote environmental education (EE);
- to undertake museum and collection based research consonant with the scope and resources of the museum;
- to extend professional help to other agencies/organizations regarding natural history collections /museums;
- to develop national and international cooperation/collaboration with other organizations/professional bodies/museums related to natural history/EE.

Activities undertaken:

- The NMNH and its Regional centres have been undertaking Environmental educational programmes/ activities throughout the year to all sections of the society such as online Summer Vacation Programme, World Wetlands Day, World Water Day, World Forestry Day, Earth Day, International Day of YOGA, International Tiger Day, Van Mahotsav, World Elephant Day, International Day for Disabled, World Environment Day, International Ozone Day, and Wildlife Week, Orientation Workshop for Teachers, Awareness programmes on Mission LiFE, Swachhata Hi Sewa Special Campaign, Cheetah Reintroduction Awareness Campaign, Awareness Programme on Combating Air Pollution from Vehicles, various online/ offline national level competitions like Painting competitions, NukkadNatak Competition, Story Writing Competition, workshops

on Climate Change for MCD Schools, and collaborative programmes with other organisations, etc.

- NMNH and its regional centres set up thematic/temporary exhibitions such as Coral Realm, Life of House Sparrow, Hornbills of India - Social Bird, Meri LiFE – Lifestyle for Environment. The winning entries of the Inter-School Painting Competition were displayed at Juhu Beach, Mumbai during G20 Mega Beach Clean-up and MotaAnaj – Healthy Food, An Exhibition of Paintings at Vigyan Bhawan during celebration of World Environment Day, “Millets – A Healthy Lifestyle”. Selected best Paintings of National Level Painting Competition were also displayed during “Global Tiger Day 2023” Celebration Event at Corbett Tiger Reserve, participation in state level exhibitions and under Exhibit of the month by regional museums displaying different animal species of interest for general public to enhance their knowledge on environmental awareness and sensitisation.

In addition to the above, there was also participation in

- The MoEF&CC Pavilion on #Mission LiFE at “BHARAT PARV 2023” – Red Fort (26th to 31st January, 2023) :
- The National Climate Conclave 2023 at Lucknow (10th & 11th April, 2023) and collaborated with Directorate of Environment, Government of Uttar Pradesh in organizing The Youth Conclave (11th April, 2023)
- Mega Beach Clean-up Event for 3rd Environment and Climate Sustainability Working Group Meeting (ECSWG) at Mumbai on 21st May, 2023

- 'Ek Tareekh Ek Ghanta EkSaath' (One Date, One Hour, Together)
- Swachhata Hi Sewa Campaign – Garbage Free India (1st October, 2023)
- Shramdaan for Swachhata

Progress/Innovations:

A total number of 3,08,362 people visited the Regional Centers (Mysore, Bhopal, Bhubaneswar and Sawai Madhopur) during the reference period.

Important Cumulative achievements

- NMNH, and its regional museums located at Mysuru, Bhopal, Bhubaneswar, Sawai Madhopur have organised 18 Temporary/ Thematic Exhibitions, 5 Teacher Training Workshops, 40 Competitions, 54 Talks/ Lectures, 22 Mass Awareness Campaigns, 21 Exhibits of the month, 4 Series of Workshops on Climate Change.

Major publications:

Information Desk Calendar on "Lifestyle for Environment".



National winners of DhartiKare Pukaar, Nukkad Natak, Kikani Vidhya Mandir, Coimbatore, Tamil Nadu

12.3 Media Cell:

Media Cell of MoEF&CC is mandated with taking up awareness campaigns using print, electronic

and other mass media to enhance awareness about various environmental issues and issues related to climate change which would in turn facilitate better compliance with environmental regulations.

Objectives:

- Creation of Environmental awareness at all levels.
- Information dissemination about all Environment, Forest and Climate Change programmes and Biodiversity conservation.
- Awareness generation regarding people's responsibilities towards environment.

Activities undertaken:

A. Celebration of World Environment Day:

Ministry of Environment, Forest and Climate Change celebrated World Environment Day on 5th June, 2023 at Vigyan Bhawan, New Delhi. This year the theme was "Solutions to Plastic Pollution" under the campaign #BeatPlasticPollution.

B. Social Media:

Ministry has social media accounts on Twitter, Facebook, Instagram, YouTube, Koo and LinkedIn.

S. No.	Social Media Handle	Followers on 23rd November, 2023
1	Facebook	2,17,000
2	Instagram	1,00,000
3	X(Twitter)	275000
4	YouTube	10,400
5	Koo	73,200
6	LinkedIn	17,615

Efforts have been made to ensure optimum utilization of social media for spreading awareness about the major achievements/breakthroughs of the Ministry and its Subordinate Offices/



Regional Offices/Autonomous Organisations towards protecting environment.

12.4 Swachh aur Swastha Bharat Cell:

Swachh aur Swastha Bharat Cell- Swachhta Action Plan:

To accelerate the efforts to achieve universal sanitation coverage and to put focus on sanitation, the Prime Minister of India had launched the Swachh Bharat Mission on 2nd October 2014. The mission was implemented as nation-wide campaign/Jan andolan which aimed at eliminating open defecation in rural areas during the period 2014 to 2019 through mass scale behaviour change, construction of household-owned and community-owned toilets and establishing mechanisms for monitoring toilet construction and usage.

Swachhta Action Plan (SAP) is an inter-Ministerial initiative of Government of India; it was initiated in the year 2017-18 on the directions received from Cabinet Secretariat and Department of Drinking Water and Sanitation (DDWS), Ministry of Jal Shakti (MoJS). Accordingly, all Ministries/ Departments of Government of India started preparing and implementing the Swachhta Action Plan.

A separate budget head was created for this scheme in the year 2017-18 as per the directions received from Department of Expenditure, Ministry of Finance to enable central monitoring for expenditures made under SAP. To oversee, execute and monitor the programmes under Swachhta Action Plan, the Swachh aur Swastha Bharat (SSB) Cell was established in the Ministry in the year 2017-18.

Initially, during the period 2018-21, SAP was implemented as a non-scheme programme wherein funds were disbursed from Other Administrative Expense Object head towards meeting the expenditure incurred on SAP

activities. A “Grant-in-Aid-General” Object head was created in year 2021-22 and SAP was mainstreamed under the awareness component “Environmental Information, Awareness, Capacity building and livelihood Programme” (EIACP) of the revamped scheme “Environment Education, Awareness, Research and Skill Development”.

Objective of Swachhta Action Plan:

The scope of the program includes building of bio-toilets at National Parks and Sanctuaries to educate visitors regarding Cleanliness. The budget for establishment of Bio-Toilet under the Swachhta Action Plan has been kept at Rs 30.00 lakh (maximum) for each National Park/ Sanctuaries etc. as per the approved guidelines.

• Implementation Plan

In the current financial year, special focus of the Swachhta Action Plan is on:-

- i. To raise awareness by building Bio-Toilets at National Parks and Sanctuaries.
- ii. To educate visitors/ stakeholders regarding cleanliness and thereby encouraging citizens to use toilets which will enhance the motto of the Swachh Bharat Mission.

Activities undertaken:

Swachh aur Swastha Bharat Cell organized an awareness programme under SAP, which was focused on ‘Awareness on curbing the Single Use Plastics’. Under the SAP, following tools of awareness were used during the Swachhta Pakhwada: -

- Cleanliness Drive.
- Slogan Writing.
- Essay Writing.
- Distribution of Copper Bottle with cotton bags.
- Certificate Distribution.



Progress/Achievements: Guidelines of the Swachhta Action Plan have been approved.

An amount of Rs 3.60 Crore has been allocated for setting up of bio-toilets at different Tiger Reserves (TRs). As on date, six (06) numbers of bio-toilets have been constructed in the different TRs.

12.5 Economic Division:

Economic Division in the Ministry is responsible for the following areas of work:

1. Nodal Division to deal with references received from M/o Commerce & Industry relating to Trade & Environment including Cabinet/ Cabinet Committee/ Committee of Secretaries matters/Ministry of Corporate Affairs.
2. Coordination of Ministry's position on trade-related matters referred by other Ministries, including Regional/ Bilateral/ Multilateral Trade Agreements on environmental, ecology, wildlife and forestry issues; Trade Policy Review of India by WTO; Free Trade Agreements (FTA); Comprehensive Economic Cooperation Agreements; bilateral investment agreements/ investment protection agreements etc.
3. Coordination of matters related to relevant areas considered/reviewed by National Committee on Trade Facilitation (NCTF) headed by the Cabinet Secretary, wherein Secretary, EF&CC is a Member.
4. Nodal for matters related to DBT including coordination with the DBT Mission, Cabinet Secretariat to on-board/off-board schemes of the Ministry on DBT Bharat portal.

Activities undertaken:

- Prepared comments on various themes of trade and environment of WTO and forwarded to Department of Commerce.
- Provided comments for Pillar-I (Trade) and III (Clean Economy) of Indo Pacific Economic Framework (IPEF), Draft IPEF Ministerial statement, and proposal of India being a member of the Steering Committee for the inaugural Investor Forum etc.
- Furnished comments on United Kingdom (UK) Government's consultation paper on CBAM.
- Prepared comments on pending issues related to Articles X.1 clause a (ii), Article on General Principles and Article X.6 of Environment Chapter, on Services incidental to agriculture and manufacturing and Environmental Services under India-Australia Comprehensive Economic Cooperation Agreement (CECA).
- MoEF&CC prepared a "Non-paper clarifying India's position on supportive measures" and shared it with Department of Commerce in connection with India-Australia CECA.
- Prepared comments on Trade and Sustainable Development/ Environment Chapter for the India-UK, India-EU, India-Australia CECA and India-EFTA TEPA negotiations.
- Prepared comments/inputs on various matters of Environmental Services, Trade and Sustainable Development, Most Favoured Nation (MFN) Treatment as part of Chapters in India-UK FTA, Goods Chapter and Energy and Raw Material Chapter under India-EU FTA, Stakeholder



Consultations under India-Korea CEPA negotiations, Tariff lines for India GCC FTA, Environmental Services under India-Peru FTA and Market Access offers in the Trade in Services Chapter of Early Progress Trade Agreement (EPTA), India-Oman FTA Services.

- Prepared comments/inputs on matters relating to tariff lines w.r.t. India-Peru, India-EFTA.
- Furnished comments of MoEF&CC on the Draft Cabinet Notes on Amendment of "The Special Economic Zones Act, 2005, Re-enactment of Explosives Act, 1884, Signing/Ratification of International Coffee Agreement, 2022, Draft EFC Memorandum on "THRIVE (Transforming the North East- Holistic Regional Industrial Vision Execution Scheme), 2022" of DPIIT etc.
- Furnished reply to the Questionnaires shared by Department of Commerce in respect of Vision document on India's Foreign Trade Policy
- Furnished comments of MoEF&CC on Inter-Ministerial Consultation on Investment Liberalization Chapter under Free Trade Agreements to DPIIT.
- Prepared material for Economic Survey 2022-23.
- Reported Monthly Progress and Annual Progress reports on achievements of DBT schemes to DBT Mission, Cabinet Secretariat.

Scheme/Programme:

Environmental Information, Awareness Capacity Building and Livelihood Programme (EIACP) Programme under EEARSD

The Environmental Information System (ENVIS) came into existence as a plan programme in

1983. ENVIS is a comprehensive network of environmental information Centres located across the country for environmental information collection, collation, storage, retrieval and dissemination to different users, which include decision-makers, researchers, academicians, policy planners, research scientists and public, etc. The Centres are located in autonomous bodies under the Ministry and in the State Government Departments/ Organizations as also in notable Non-Governmental Organizations (NGOs) and institutions of excellence in higher education and research. The ENVIS Scheme, which was previously under the umbrella scheme 'Decision Support System for Environmental Awareness, Policy, Planning and Outcome Evaluation' has been subsumed within the revamped scheme of Environment Education, Awareness, Research and Skill Development (EEARSD), which has been approved for F.Y 2021-22 to 2025-26 in June 2022. The revamped scheme has three components and one of the components is Environmental Information, Awareness Capacity Building and Livelihood Programme (EIACP).

Activities/Events/ Workshops conducted under the EIACP

1. Workshops:

National Workshop on LiFE (NWL): A NWL was organized on January 30, 2023 at the Indira Paryavaran Bhawan, JorBagh, New Delhi. The workshop aimed at orientation and sensitization of EIACP Centres on Mission LiFE. About 60 EIACP Programme Centres from all over India attended a day long workshop. Shri Bhupender Yadav, Hon'ble Minister, EF&CC, inaugurated an exhibition-cum-sale, where the eco-friendly products prepared by trainees under Green Skill Development Programme were displayed. During the inaugural session, HMEFCC released the booklet 'Lexicon of LiFE - A to Z of Sustainable Lifestyle', designed and developed in-house by

the EIACP Division. Various knowledge products like Publications, LiFE game, interactive model of water footprint calculator, working models to save energy, and organic products like honey, herbal skin cream, essential oils, vermicompost, best out of plastic waste items etc., were also displayed during the workshop.

- **Seminar on Livelihood Opportunities from Climate Resilient Solutions for a Carbon Neutral Ladakh:** TERI-EIACP RP organized a seminar on Green Livelihood opportunities for a carbon-neutral Ladakh in collaboration with Himalayan Institute of Alternatives, Ladakh (HIAL) and G.B. Pant National Institute of Himalayan Environment (GBPNIHE) on September 24-25, 2023. In this workshop, sessions on Policy and Financial Systems for the promotion of Solar Energy, Role of Academic Institutions for Creating

Necessary Skills, Agriculture and Ecology Entrepreneurship Opportunities in Ladakh and Sustainable and Responsible Tourism Opportunities in Ladakh were held. One of the highlights of the seminar was lecture on Livelihood Opportunities from Passive Solar Heated Buildings in Ladakh given by Shri Sonam Wangchuk, Founding Director, HIAL.

- **Regional Evaluation Workshops:** Regional Evaluation Workshops were organized in six different regions of India viz. North Zone (Chandigarh), East Zone (Chhattisgarh), West zone (Mumbai), South Zone (Thiruvananthapuram), Delhi based (Mukteshwar) and North-East (Guwahati) in which total 58 centres participated. Various subject matter experts were invited to evaluate the Centres' performance during the last four years i.e. F.Y 2019-20 to F.Y 2022-23.



National Workshop on LiFE at IPB



Glimpses from Seminar on Livelihood Opportunities from Climate Resilient Solutions for a Carbon Neutral Ladakh



The Region wise centres, Participant Centres and number of participants are tabulated below:

Regions	Participant Centres	Total No. of Participants
North Zone	Himachal Pradesh Council for Science, Technology and Environment (HIMCOSTE), Shimla	45
	Wildlife Institute of India (WII), Dehradun	
	Forest Research Institute (FRI), Dehradun	
	Uttarakhand Pollution Control Board (UKPCB), Dehradun	
	G.B. Pant National Institute of Himalayan Environment (GBPNIHE), Almora	
	Institute for Wildlife Sciences (IWS), University of Lucknow	
	National Botanical Research Institute (NBRI), Lucknow	
	Department of Environment – Chandigarh	
	Punjab State Council for Science and Technology (PSCST), Chandigarh	
	Directorate of Environment & Climate Change Department (DoE&CCD), Panchkula	
East Zone	Asian Development Research Institute (ADRI), Patna	35
	Centre for Mining Environment (CME) IIT-Indian School of Mines, Dhanbad	
	Forests & Environment Department, Govt. of Jharkhand, Ranchi	
	Chhattisgarh Environment Conservation Board (CECB), Raipur	
	Centre for Environmental Studies (CES), Government of Odisha, Bhubaneshwar	
	Zoological Survey of India (ZSI), Kolkata	
	Botanical Survey of India (BSI), Kolkata	
	Department of Environmental Sciences - Kalyani University (DESKU), Kalyani	
South	Department of Environment, Govt. of Tamil Nadu, Chennai	60
	Centre of Advanced Study in Marine Biology (CASMB), Chennai	
	Department of Zoology - University of Madras (DzUM), Chennai	
	Institute for Ocean Management (IOM), Anna University, Chennai	
	Institute of Forest Genetics and Tree Breeding (IFGTB), Coimbatore	
	Thiagarajar College of Engineering (TCE), Madurai	
	Amrita Vishwa Vidyapeetham (AVV), Coimbatore	
	CPR Environmental Education Centre (CPREEC), Chennai	
	Salim Ali Centre for Ornithology and Natural History (SACON), Coimbatore	
	Kerala State Council for Science, Technology and Environment (KSCSTE), Thiruvananthapuram	

	Centre for Ecological Sciences - Indian Institute of Science (IISc), Bengaluru	
	Environment Management & Policy Research Institute (EMPRI), Bengaluru	
	Puducherry Pollution Control Committee (PPCC), Puducherry	
	Environment Protection Training and Research Institute (EPTRI) (HUB and RP), Hyderabad	
	Environment Protection Training and Research Institute (EPTRI) (RP), Hyderabad	
	Indian Institute of Chemical Technology (IICT), Hyderabad	
	Department of Environment & Forests – Kavaratti,	
West	Gujarat Cleaner Production Centre (GCPC), Gandhinagar	40
	Gujarat Ecology Commission (GEC), Gandhinagar	
	Consumer Education and Research Centre (CERC), Ahmedabad	
	National Institute of Occupational Health (NIOH), Ahmedabad	
	Bombay Natural History Society (BNHS), Mumbai	
	Indian Institute of Tropical Meteorology (IITM), Pune	
	Rajasthan State Pollution Control Board (RSPCB), Jaipur	
Delhi Based	Central Arid Zone Research Institute (CAZRI), Jodhpur	25
	School of Planning and Architecture (SPA), New Delhi	
	Central Pollution Control Board (CPCB), New Delhi	
	School of Environmental Sciences Jawaharlal Nehru University (JNU), New Delhi	
	The Energy and Resources Institute (TERI), New Delhi	
	World Wide Fund for Nature – India (WWF), New Delhi	
	International Institute of Health and Hygiene (IIHH), New Delhi	
North East	Department of Ecology, Environment and Remote Sensing, UT of J&K	25
	Assam Science, Technology and Environmental Council (ASTEC), Guwahati	
	Forest and Environment Department, Gangtok, Sikkim	
	State Council of Science and Technology for Sikkim (SCSTS), Gangtok	
	Department of Environment & Forests – Itanagar, Arunachal Pradesh	
	Mizoram Pollution Control Board (MPCB), Aizawl	
	Nagaland Pollution Control Board (NPCB), Kohima	
	Tripura State Pollution Control Board (TSPCB), Agartala	
	Directorate of Environment & Climate Change, Imphal, Govt. of Manipur	



2. EIACP Events:

- Programme on Save Wetland under LiFE Mission:** ADRI- EIACP PC RP organized a programme on the subject 'Save Wetlands under Mission LiFE' in Buxar, Bihar. Shri Ashwini Kumar Choubey, Hon'ble MoS, EF&CC graced the event. The event started with LiFEathon Run followed by inauguration of an Exhibition on LiFE and felicitation of winners of LiFEathon. Around 550 participants from different parts of Bihar participated. Similarly, the exhibition on LiFE also saw participation from EIACP Centres located in six states namely Assam, Bihar, Jharkhand, Sikkim, Uttarakhand and Delhi, who displayed various products developed as part of the Green Skill Development Programme (GSDP).



Programme on Save Wetland under LiFE Mission

- Mass Awareness Programme to promote Mission LiFE:** EIACP PC-RPs/Hubs located at Delhi, Uttarakhand and Punjab conducted a five-day mass awareness programme promoting Mission LiFE. The awareness drive at the Clock Tower, wherein the local communities and devotees present on the day were explained about the Mission LiFE and encouraged to take the pledge on LiFE. The day concluded with an awareness March held at Clock Tower, Har-Ki-Pauri. Approximately 50,000 people participated in the event.

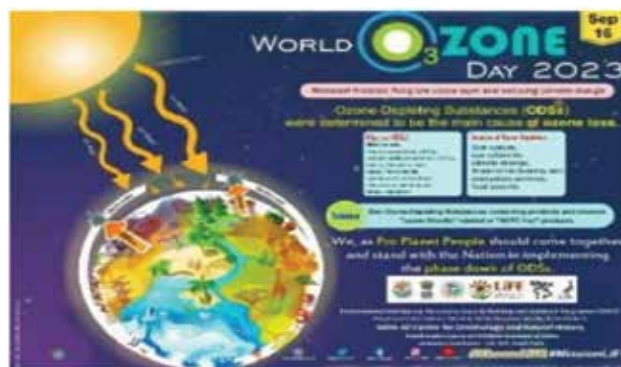


Mass Awareness Programme to promote Mission LiFE

- Youth Parliament:** IIFM, Bhopal conducted the Youth Parliament on LiFE in collaboration with the EIACP Centres in which the university students from all over India participated. The winners were felicitated World Environment Day by the Hon'ble Minister, EF&CC.

3. Celebration of various Environmental Days:

- World Environment Day, 2023 - 5th June 2023:**
The pan India network of EIACP Programme Resource Partners and Hubs organized various activities namely mass plantation drive, awareness rally, poster publication, environment quiz, etc.
- World Ozone Day, 2023 - 16th September:**
The theme for World Ozone Day 2023 was "Montreal Protocol: Fixing the Ozone Layer and Reducing Climate Change". On this day, EIACP Programme Centres created awareness about Ozone and its importance.



Poster created by the EIACP Centres on Ozone day



Mass Rally in World Environment Day 2023 & Sit & Draw Competition of students

- EIACP Hubs/RPs also celebrated other environmental days like World Wetland Day, World Earth Day, International Biodiversity Day, Wildlife Week, Lion Day, Mosquito Day and conducted various awareness activities on the respective themes assigned for these days etc.

4. Mission LiFE Activities:

Under Mission LiFE, all EIACP PC Hubs/RPs prepared standees and banners to create awareness on ban of identified Single-use plastic items and displayed in the subordinate and attached offices, bodies and organizations of MoEF&CC. Some of the major activities are tabulated below:

Sl. No.	Name of the Activity	EIACP Centre Name	Highlights
1	Awareness campaign on management of Single Use Plastic (SUP)	NPCB, BSI West Bengal, EPTRI, TERI, ICFRE-FRI and MPCB	Awareness campaign to manage the Single Use Plastic Waste and the reuse of Single Use Waste Plastics in the construction of Road, Plastone Block and other useful products.
2	Van Mahotsav	GBPNIHE, EMPRI, IIHH	Plantation drives at various places were organised on the occasion of Van Mahotsav such as in Nanda Van forest (ex-situ conservation site) drive was organized by GBPNIHE, Almora, in which more than 200 plants of 5 species were planted.
3	Awareness workshop on 'Save water' and 'Save energy'	TERI, FRI, BSI, EPTRI	The Centres had conducted awareness workshops on the Mission LiFE with the theme 'Save Water' and 'Save Energy'. Also, information related to disasters (types, causes, and prevention) was provided in these workshops.



4	Lecture session on Adoption of Healthy Lifestyle Practices	CERC, SACON	The centres conducted lecture sessions on Mission LiFE, healthy eating habits and Sustainable food systems for the students. CERC had put up a stall on “Eat Right Millet” in the FSSAI Millet Expo (inaugurated by the Director General of WHO, Dr Tedros Adhanom Ghebreyesus). SACON team briefed A-Z sustainable lifestyle practices and conducted elocution competition to the students.
5	Swachh Bharat Abhiyaan	All EIACP Hubs/ RPs	EIACP Centres had undertaken various activities during this period like cleanliness and sensitization drives, plantation of tree saplings, collection of garbage, litter and trash, administering the Green Pledge, etc.
6	Awareness programme on Bird watching	BNHS	BNHS organized an awareness programme on birdwatching for the students of SIES (DR. APJ Abdul Kalam) Memorial High School, Mumbai.
7	LiFE Pledge and installation of Selfie points under Mission LiFE	All EIACP Hubs/ RPs	The selfie booths were installed at various prominent locations of EIACP centres, where people took selfies and were administered LiFE pledge.

LiFE Report: EIACP is actively involved in Mission LiFE activities. All activities conducted by EIACP Hubs and RPs are compiled in LiFE report and submitted to LiFE Cell every month.



School Students participated in different LiFE Activities

5. Knowledge products released during the year:

EIACP regularly brings out value-added information products relating to Environment, Forest, Wildlife and Climate Change which include theme-based newsletters, special publications, e-newsletters, thematic bulletins, technical reports, mobile apps, thematic maps, etc. Some of the important knowledge products are mentioned below:

Publications:

Sl. No.	EIACP Centre Name	Title	Publication type
1	WII, Dehradun	An Illustrative Profile of Tiger Reserves of India	EIACP Bulletin
2	TCE, Madurai	International Day of Climate Action 2023	Graphical Information Booklet
3	WWF, Delhi	1. Assessing high conservation value areas for rare, endemic and threatened (RET) species: A study in high altitude Changthang landscape of India 2. Prediction of potential habitat suitability of snow leopard (<i>Panthera uncia</i>) and blue sheep (<i>Pseudois nayaur</i>) and niche overlap in the parts of western Himalayan region	
4.	Kerala Hub	The field guide for aquatic plants	Field guide
5.	Tamil Nadu Hub	Ramsar sites in Tamil Nadu	EIACP newsletter

Mobile app - SPA-EIACP PC RP developed 'Precycle X' app during the FY 2023-24. The app was released on 03 July 2023.

6. Grants-in-aid released to Institutions/ organizations including NGOs:

The details of Grants-in-Aid released for mandated activities of EIACP Cell in the Ministry and EIACP Hubs/ RPs during F.Y. 2022-24 (as of 30.11.2023) to various organizations are as follows:

Sl. No.	Name of Organisation	Purpose	Total Amount Released (in ₹)
1	Asian Development Research Institute (ADRI), Patna	Recurring Grant for FY 2023-24	22,79,578.00
2	Department of Environment & Forests – Arunachal Pradesh	Recurring Grant for FY 2023-24	12,02,000.00
3	Assam Science, Technology and Environmental Council (ASTEC), Guwahati	Recurring Grant and Mega Event for FY 2023-24	70,43,110.00
4	Amrita Vishwa Vidyapeetham (AVV), Coimbatore	Recurring Grant for FY 2023-24	13,88,573.00
5	Bombay Natural History Society (BNHS), Mumbai	Recurring Grant and Regional Evaluation for FY 2023-24	19,83,000.00
6	Botanical Survey of India (BSI), Kolkata	Recurring Grant for FY 2023-24	24,04,000.00
7	Centre of Advanced Study in Marine Biology (CASMB), Parangipettai	Recurring Grant for FY 2023-24	16,43,825.00
8	Central Arid Zone Research Institute (CAZRI), Jodhpur	Recurring Grant for FY 2023-24	12,02,000.00
9	Chhattisgarh Environment Conservation Board (CECB), Raipur	Recurring Grant for Regional Evaluation Workshop	39,92,806.00



Sl. No.	Name of Organisation	Purpose	Total Amount Released (in ₹)
10	Consumer Education and Research Centre (CERC), Ahmedabad	Recurring Grant for FY 2023-24	12,03,431.00
11	Department of Environment - Chandigarh	Recurring Grant for FY 2023-24	12,02,000.00
12	Central Pollution Control Board (CPCB), Delhi	Recurring Grant for FY 2023-24	12,02,000.00
13	CPR Environmental Education Centre (CPREEC), Chennai	Recurring Grant for FY 2023-24	24,04,000.00
14	Department of Environmental Science, University of Kalyani (DESKU), Nadia	Recurring Grant for FY 2023-24	24,04,000.00
15	Department of Zoology - University of Madras (DzUM), Chennai	Recurring Grant for FY 2023-24	13,39,031.00
16	Environment Management & Policy Research Institute (EMPRI), Bengaluru	Recurring Grant for FY 2023-24	24,04,000.00
17	Environment Protection Training and Research Institute (EPTRI-Hub), Hyderabad	Recurring Grant for FY 2023-24	12,02,000.00
18	Environment Protection Training and Research Institute (EPTRI-RP), Hyderabad	Recurring Grant for FY 2023-24	12,02,000.00
19	Forest Research Institute (FRI), Dehradun	Recurring Grant for FY 2023-24	12,27,549.00
20	G.B. Pant National Institute of Himalayan Environment (GBPNIHE), Almora	Recurring Grant for FY 2023-24	12,02,000.00
21	Gujarat Cleaner Production Centre (GCPC), Gandhinagar	Recurring Grant for FY 2023-24	12,02,000.00
22	Gujarat Ecology Commission (GEC), Gandhinagar	Recurring Grant for FY 2023-24	13,17,189.00
23	Directorate of Environment & Climate Change Department (DoE&CCD), Haryana	Recurring Grant for FY 2023-24	12,02,000.00
24	Himachal Pradesh Council for Science Technology & Environment (HIMCOSTE), Shimla	Recurring Grant for FY 2023-24	12,02,000.00
25	Institute of Forest Genetics and Tree Breeding (IFGTB), Coimbatore	Recurring Grant for FY 2023-24	27,66,421.00
26	Indian institute of Chemical Technology (IICT), Hyderabad	Recurring Grant for FY 2023-24	27,51,933.00
27	International Institute of Health and Hygiene (IIHH), Delhi	Recurring and Mega Event Grant for FY 2023-24	53,80,550.00
28	Indian Institute of Sciences (IISc), Bengaluru	Recurring Grant for FY 2023-24	24,04,000.00



Sl. No.	Name of Organisation	Purpose	Total Amount Released (in ₹)
29	IIT-Indian School of Mines (ISM), Dhanbad	Recurring Grant for FY 2023-24	30,34,794.00
30	Indian Institute of Tropical Meteorology (IITM), Pune	Recurring Grant for FY 2023-24	24,04,000.00
31	Institute for Ocean Management (IOM), Chennai	Recurring Grant for FY 2023-24	13,54,320.00
32	Institute for Wildlife Sciences, University of Lucknow, Lucknow	Recurring Grant for FY 2023-24	32,42,672.00
33	Department of Ecology, Environment and Remote Sensing, State Government of J&K	Recurring Grant for FY 2023-24	12,02,000.00
34	Forest & Environment Department, Govt. of Jharkhand, Ranchi	Recurring Grant for FY 2023-24	12,02,000.00
35	School of Environmental Science, Jawaharlal Nehru University (JNU), New Delhi	Recurring Grant for FY 2023-24	12,03,496.00
36	Kerala State Council for Science, Technology and Environment (KSCSTE), Thiruvananthapuram	Recurring Grant for FY 2023-24	21,35,500.00
37	Department of Environment & Forests (DoE&F), Kavaratti, Lakshadweep	Recurring Grant for FY 2023-24	12,62,000.00
38	Directorate of Environment, Dept. of Forests and Environment, Govt. of Manipur, Imphal	Recurring Grant for FY 2023-24	24,04,000.00
39	Mizoram Pollution Control Board (MPCB), Aizawl	Recurring Grant for FY 2023-24	24,04,000.00
40	Nagaland Pollution Control Board (NPCB), Dimapur	Recurring Grant for FY 2023-24	24,04,000.00
41	National Botanical Research Institute (NBRI), Lucknow	Recurring Grant for FY 2023-24	12,02,000.00
42	National Institute of Occupational Health (NIOH)	Recurring Grant for FY 2023-24	14,39,885.00
43	Centre for Environmental Studies (CES), Forest & Environment Department, Government of Odisha	Recurring Grant for FY 2023-24	24,04,000.00
44	Puducherry Pollution Control Committee (PPCC), Puducherry	Recurring Grant for FY 2023-24	12,02,000.00



Sl. No.	Name of Organisation	Purpose	Total Amount Released (in ₹)
45	Punjab State Council for Science and Technology (PSCST), Chandigarh	Recurring and Regional Workshop Grant for FY 2023-24	24,43,657.00
46	Rajasthan State Pollution Control Board, Rajasthan	Recurring Grant for FY 2023-24	20,53,882.00
47	Salim Ali Centre for Ornithology and Natural History (SACON), Coimbatore	Recurring Grant for FY 2023-24	24,04,000.00
48	Forests, Environment & Wildlife Management Department, Sikkim-Hub, Gangtok	Recurring Grant for FY 2023-24	13,01,550.00
49	State Council of Science and Technology Sikkim -RP (SCSTS), Gangtok	Recurring Grant for FY 2023-24	12,02,000.00
50	School of Planning and Architecture (SPA), New Delhi	Recurring Grant and reimbursement for FY 2023-24	29,76,723.00
51	Department of Environment, Govt. of Tamil Nadu	Recurring Grant for FY 2023-24	12,02,000.00
52	Thiagarajar College of Engineering (TCE), Madurai	Recurring Grant for FY 2023-24	15,64,019.00
53	The Energy Resources Institute (TERI), New Delhi	Recurring and Regional Workshop and Mega Event Grant for FY 2023-24	32,14,186.00
54	Tripura State Pollution Control Board (TSPCB), Agartala	Recurring Grant for FY 2023-24	24,04,000.00
55	Uttarakhand Pollution Control Board (UKPCB), Dehradun	Recurring Grant for FY 2023-24	12,42,120.00
56	Wildlife Institute of India (WII), Dehradun	Recurring Grant for FY 2023-24 and Reimbursement for FY 2022-23	32,85,407.00
57	World Wide Fund for Nature-India (WWF), New Delhi	Recurring and Mega Event Grant for FY 2023-24	60,77,802.00
58	Zoological Survey of India (ZSI), Kolkata	Recurring Grant for FY 2023-24	12,02,000.00

7. Other Activities:

- **The Iconic Experience Show (TIES) Exhibition:** TIES organized an exhibition on Sustainability at Hyatt Regency, New Delhi. EIACP PC-HUBs/RPs located at HIMCOSTE,



GBP(NIHE) and ADRI participated as exhibitors in this exhibition. The Centres displayed various products like Organic food products, handicrafts and paintings, which were readily sold out.



Organic food products, handicrafts and paintings displayed by EIACP centres at The Iconic Experience Show (TIES) Exhibition

12.6 Statistics Division:

- The Statistics Division in the Ministry of Environment, Forest and Climate Change liaisons with all the divisions of the Ministry and, where necessary, its subordinate offices and autonomous institutions to strengthen the process of collection, validation processing and interpretation of statistical data.
- Statistics Division also works as SDG coordination Unit in the Ministry. It presents the Ministry's consolidated proposals for SDG indicator refinement- in High Level Steering Committee of MoS&PI (HLSC) in which Secretary EF&CC is a member.
- It is the nodal Division for coordination with the Ministry of Statistics and Programme Implementation on issues relating to data, indicator and methodology for Environmental Accounts and international Classifications (like the System of National Accounts) having implications for GDP

calculations impinging upon environmental aspects.

- It is the nodal Division for preparing the Annual Report of MoEF&CC. The Annual Report of the Ministry for the year 2022-23 was compiled and submitted to the Parliament.

Statistics Division of the Ministry undertakes various tasks as follows :-

I. Activities undertaken in respect of Sustainable Development Goals, SDGs in the Ministry

MoEF&CC is implementing Sustainable Development Goals (SDGs) relevant to the Ministry and is in particular responsible for SDG Goals 12,13 and 15. Statistics Division acts as the nodal division for SDG and coordinates for the implementation of SDGs and related frameworks in the ministry. The following is the role of the SDG Coordination unit-

- Coordination with NITI Aayog, MoS&PI and Custodian Agencies of SDG Global

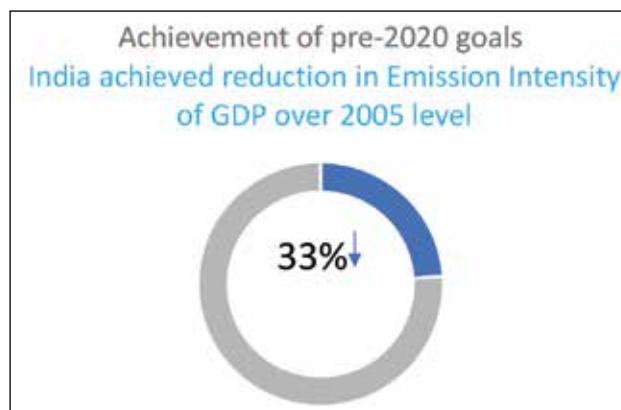


Indicators like the Inter-agency and Expert Group on SDG Indicators (IAEG-SDGs).

- ii. The division coordinates with the divisions and various line ministries for the metadata, baseline data and data flow in the field of environmental SDGs
- iii. Works on the data gaps and suggests alternate methodology for computation of various indicators for SDGs.
- iv. Provides technical support for metadata and refinement of indicators.
- v. The following work was undertaken in respect of the National Indicator framework of the SDGs-
 - a. Under goal 6 of the SDGs which aims to “Ensure availability and sustainable management of water and sanitation for all”, the Ministry of Jal Shakti is assigned the task of country reporting to United Nations Environment Program (UNEP) on progress on Integrated Water Resource Management (IWRM) with SDG Indicator 6.5.1. Information was provided on several paras of SDG 6.5.1 survey Instrument to the Ministry of Jal Shakti.
 - b. Inputs were also provided on SDG indicator 6.6.1 on Water Related Ecosystems as a part of third cycle of global data collection to UNEP.
 - c. Comments on proxy sub-indicators proposed by FAO for SDG indicator 2.4.1 were provided to MoS&PI along with the detailed justification stating that the MoEF&CC does not support such indicators:
 - d. Coordinated with the Ministry of Panchayati Raj on environmental

datasets at disaggregated level during the development of Panchayat Development Index by the said Ministry

- e. Provided all required detailed inputs for SDG 14 including state and district indicator framework as required for clarification under Audit of Coastal Ecosystems
- vi. India has shown reduction of 33% in Emission intensity of GDP between 2005 and 2019 as per third National Communication submitted by India to UNFCCC. The corresponding NIF is SDG 13.2.1: Pre 2020 action: Achievement of pre-2020 goals as per country priority (percentage reduction in emission intensity of GDP, over 2005 level)



II. Activities undertaken in respect of Environmental Statistics:

- i. To liaise with all divisions of MoEF&CC and, where necessary, its subordinate offices and autonomous institution to strengthen the process of collection, validation processing and interpretation of statistical data.
- ii. The State of Environment Report (SoER) aims to provide concrete guidance for environmental action planning, policy setting and resource allocation for the



coming decades, based on a sound integrated analysis of the state and trends of the environment. The division coordinates with the States for preparation of SoER for States and UTs and undertakes the process for preparation of SoER at National level. The work of SoER at National level and for Chandigarh UT and states of Uttarakhand and Punjab is under progress.

- iii. Coordinates with the Ministry of Statistics and Programme Implementation (MoSPI) to provide technical inputs on development of Official Statistics in line with Framework of Development in Environmental Statistics (FDES); The division supported the Ministry of Statistics and Programme Implementation (MoS&PI) for publication of 'EnviStats' I publications on Environment Statistics. Statistics Division coordinated with the Divisions to provide inputs on behalf of the Ministry for the publication on data related to forests, climate change, wild life and pollution for the publication of EnviStats-India 2023; Volume I. The publication consists of six distinct chapters viz. Environmental Conditions and Quality, Environmental Resources and their Use, Residuals, Extreme Events and Disasters, Human Settlements and Environmental health, and Environmental Protection, Management and Engagement.
- iv. A committee was constituted by National Statistical Commission (NSC), MoS&PI to examine various surveys being done by Government of India and their redundancies. Division provided information on various surveys and administrative datasets of MoEF&CC to the National Statistical Commission, MoSPI.

III. Activities pertaining to Environmental Accounting

- a) The division is also responsible for coordination as regards developments in Natural Capital Accounting and the SEEA (System of Environmental Economic Accounting) and Ecosystem Accounting within MoEF&CC and with other Ministries and UN
- b) The division supported the Ministry of Statistics and Programme Implementation (MoS&PI) in providing data and information for Environment Accounts in particular Solid Waste Accounts.
- c) Expert group on Ocean Ecosystem Accounts in India was constituted by MoS&PI for compilation of Ocean Ecosystem Accounting where DDG (Statistics) represented MoEF&CC. Coordination with respective Divisions like Sustainable Coastal Management is under way as regards data etc for these accounts

IV. Global Indices for Reform and Growth Dashboard related Work of EPI and CCPI

In reference to the ongoing activities under the directions of Cabinet Secretariat and NITI Aayog on various global indices in the Government of India, Ministry of Environment, Forest and Climate Change has been designated as the nodal Ministry for Environment Performance Index (EPI) and Climate Change Performance Index (CCPI).

Analysis of global data sets being used for EPI 2022 was undertaken and Indian data sources being used for these datasets were examined in terms of their linkages to Indian data sets, time lag of publication and data transformations undertaken on them.



For the upcoming edition EPI 2024, detailed meetings in respect of “Control of Pollution”, “Biodiversity” and “Climate Change” category of indices were undertaken. Data discrepancies & methodological flaws were examined in depth and shared with Publishing Agency and NITI Aayog. In particular, the biasedness in the construction of indicators like “Projected Green House Gas Emissions”, problem with weighting diagram and suggestions for Alternate indicators have been provided to the Publishing Agency.

The analysis for the data sets used in CCPI was done and the points observed were shared with the publishing agency. CCPI 2024 report was released recently and India secured 7th position in the index which is 1 position up from the last edition. CCPI has 4 components under which 14 indicators are identified which are used to rank 67 countries. Since no country was strong enough in all index categories to achieve an overall very high rating, thus the top three places i.e 1-3 are vacant. Thereafter India is amongst the top 4 countries. With India (7th), Germany (14th) and European Union (16th) only three G20 countries are among the high performers in CCPI 2024.

Rank	Rank change	Country
1*	-	-
2.	-	-
3.	-	-
4.	0 -	Denmark
5.	4 ▲	Estonia
6.	6 ▲	Philippines
7.	1 ▲	India ▲
8.	5 ▲	Netherlands
9.	-2 ▼	Morocco
10.	-5 ▼	Sweden

V. Data Governance Quality Index

Data Governance Quality Index (DGQI) is built by Development Monitoring & Evaluation Office (DMEO) for ranking the ministries on the basis of level digitization, security, quality and sound use

of data generated and handled under Central Sector Schemes, Centrally Sponsored Schemes and Non Scheme Interventions. A dashboard is prepared wherein the schemes of the ministry are pre populated. The division in coordination with other divisions of ministries has submitted the filled in questionnaire for CS/CSS schemes and Non-scheme interventions of the ministry on the dashboard of DMEO. The Ministry's score was 3.08 in the beginning of DGQI 2.0 during 2021-22. The score of the Ministry has improved to 4.53 in the fourth quarter of 2022-23 from 4.11 in the third quarter of the same year.

VI. Vision 2047 and Vision 2024 under SGoS-3 (Sectoral Group on Secretaries-Resources) and VIKSIT Bharat.

The Division coordinated with all Divisions of the Ministry through SGoS Cell for finalizing issues related to Draft Vision 2047 in respect of MoEF&CC as part of Vision for Sectoral Group of Secretaries 3 on Resources. The Cell also enabled regular monitoring of Key Performance Indicators of MoEF&CC derived from recommendations of 5 Year Vision 2024 of SGoS-3. The NITI Aayog conducted the Viksit Bharat exercise in August to November 2023 and the SGoS Cell provided detailed inputs clearly bringing out lack of suitability of some indicators and KPIs introduced by NITI when it shared its report with SGoS-3 in November 2023. Alternative indicators were proposed. -The connection with the original Vision of Resources Group and domains of other SGoS groups was carefully analysed to bring out a consistent set of KPIs that may be included in Viksit Bharat Vision 2047 based on SGoS documents of all Groups.

VII. Indo Pacific Economic Framework for Prosperity: Clean Economy Pillar

The Indo-Pacific Economic Framework for Prosperity (IPEF) was launched jointly by the USA and other partner countries of the Indo-



Pacific region on May 23, 2022 at Tokyo. IPEF has 14 partner countries including Australia, Brunei, Fiji, India, Indonesia, Japan, Republic of Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, Vietnam & USA. It seeks to strengthen economic engagement among partner countries with the goal of advancing growth, peace and prosperity in the region.

DDG(S) in coordination with the Economic Division and with the assistance of all concerned Divisions provided the required inputs for negotiations of Clean Economy Pillar of the Indo Pacific Economic Framework for Economic Prosperity from the fourth sub round of negotiations onwards . Important implications of provisions relating to Scope of the Agreement ,Preamble Paras with implications for net zero pathways, Clean Energy Technology Development and Capacity Expansion, Energy Sector Methane Abatement, Sustainable Forest Management, Greenhouse Gas Removal, Strengthening Demand-Side Measures etc. were analysed in consultation with respective Divisions especially the Climate Change Division to arrive at an agreed text that is to be further considered by all stakeholders.

12.7 Non-Governmental Organization (NGO) Cell:

A Non-Governmental Organisation (NGO) Cell has been set up in the Ministry to handle various

policy matters relating to the NGOs working in diverse fields of environment. It may be noted that the Cell does not disburse funds to NGOs as these are expended by respective scheme Divisions of the Ministry.

The basic functions of the Cell is to liaison with the NITI Aayog and other Government Ministries in respect of various guidelines/directions concerning NGOs.

As per the direction received from NITI Aayog and their proposed Darpan 2.0 version, NGO portal is being developed for the Ministry to function as single window counter for all NGO related activities, being carried out by different divisions of the Ministry.

The proposal of NIC for the Development of Web based NGO portal for processing, evaluating and monitoring grants under the different schemes of the Ministry for NGO Cell including Security Audit has been approved and first instalment has been released. The project is being executed through manpower support from National Informatics Centre Service Inc. (NICSI). As of now, forms for NGO and Scheme Administrator log in have been developed along with a user manual . These have to be tested by respective Scheme Divisions for finalization and to enable further integration with DARPAN portal of NITI Aayog and PFMS portal of DoE.



CHAPTER - 13

ADMINISTRATION AND CIVIL CONSTRUCTION



13.1 Administration:

There are three sections in Administration Viz. P-I, P-II and P-III. Section-wise brief description is given hereunder:

P. I – Section

P.I Section of the Administration Division is mandated to do the following tasks:

- Cadre Management of Scientific posts of the Ministry and 19 Regional Offices, creation of Scientific posts of Ministry. Establishment/service matters of all Scientific posts of the Ministry (Main) viz. appointment, promotion, work allocation, court cases, leave, and retirement benefits (only of those posted in Ministry Main).
- Disciplinary proceedings of Group 'A', 'B' and 'C' officials of Ministry other than IFS officers under Central Staffing Scheme of the Ministry;
- Cadre management of Technical Posts of the Ministry viz. creation, appointment, promotion, work allocation, establishment/service matters, Recruitment Rules, court cases, retirement benefits and leave (only of those posted in Ministry Main);
- Cadre management of Canteen Staff of the Ministry viz. creation, appointment, promotion, establishment/service matters, Recruitment Rules, leave cases, retirement benefits, court cases, etc.;
- Maintenance of ACRs/APARs of Group 'A', 'B' and 'C' officials of MoEF&CC but other than IFS officers of the Ministry;
- Processing of LTC, GPF, House Building Advance, Computer Advances of all personnel of the Ministry;
- Issue of Foreign Deputation Orders in

respect of Environment Wing of the Ministry;

- Processing of medical advance and reimbursement cases of Scientific, Technical and Canteen staff;
- Recruitment & Framing of Recruitment Rules of technical posts of the Ministry;
- Internship Scheme of Ministry of Environment, Forest and Climate Change; and Review of services under FR 56(j).
- Updation of data on Representation of Reserved Categories in Posts and Services in GOI (RRCPS) portal

P. II – Section

P.II Section of the Administration Division is mandated to do the following tasks:

- Cadre management of CSSS/CSS/CSCS, Central Staffing Scheme, IES and ISS officers posted in MoEF&CC;
- Establishment/service matters of Secretariat Group 'A', 'B' and 'C' posts (except officers working on the strength of IFS and NAEB) viz. appointment, review cases, leave cases, retirement and retirement benefits, medical claims, tuition fee reimbursement, leave encashment, children education allowance, court cases, etc.;
- Recruitment & Framing of Recruitment Rules of non-technical ex-cadre posts of the Ministry (Environment & Forest) Wing;
- Training Programme of AIS and all Secretariat officers;
- Matters relating to Minister's staff;
- Outsourcing (deployment and policy matters);



- Election work;
- Work allocation among all officers/ staff other than Scientific/Technical officers; and Nodal Division of MoEF&CC of eHRMS.
- Updation of AVMS Portal.
- Monitoring of filling up of vacancies by all organizations of Ministry of Environment, Forest and Climate Change under Mission Mode Recruitment.
- Processing of Pension cases and disbursal of retirement benefits.
- Review/assessment of Group 'A' Scientists in the Ministry including its Regional, Attached and Subordinate Offices for promotion under Flexible Complementing Scheme (FCS) as per the relevant Recruitment Rules.
- Framing/Amendment/interpretation of recruitment rules relating to the Ministry of Environment, Forest and Climate Change, Scientific Group 'A' Posts;
- Personnel Policy of Scientific Group 'A' posts.

(A) Promotion

Total 55 cases of promotion of Scientists of the Ministry including its subordinate offices under Flexible Complementing Schemes as on 1.1.2023 and 1.7.2023 were assessed by the Internal Screening Committees (ISC). Out of 55 Scientists, 38 Scientists were further interviewed by the Departmental Assessment Committees (DAC)/ Departmental Peer Review Committees (DPRC). Remaining 17 Scientists are to be considered by the DPRC/DAC. Details are as under –

Grade	Assessed as on 1.1.2023	Recommended as on 1.1.2023	Not recommended as on 1.1.2023	Remarks
F to G	01	Submitted for approval of ACC		17 Scientists for review as on 1.7.2023 have been considered by the ISC for further assessment by the DPRC and DAC.
E to F	14	12	02	
D to E	03	03	00	
C to D	09	09	00	
B to C	11	11	00	
TOTAL	38	35	02	

(B) Recruitment

Process for filling up of 50 posts of Scientists in various grades in the MoEF&CC and its Subordinate Offices through Direct Recruitment is under process.



13.2 Indian Forest Service (IFS) Cadre Management:

Mandate:

- Ministry of Environment Forest and Climate Change is the Cadre Controlling Authority for the Indian Forest Service (one of the three All India Services).
- IFS division deals with all cadre Management related matters of the service.
- The total authorized cadre strength of the Indian Forest Service (IFS) as on 1st January, 2023 is '3193' (Three Thousand One Hundred Ninety-Three) which includes '2242' Direct Recruits and '951' Promotion posts. The Total Senior Duty Posts (SDP) in the Indian Forest Service is 1960 and remaining under various reserves. Besides serving the 36 Forest Departments in the States and Union Territories managing the country's natural resources, a large number of the IFS officers are posted on deputation in various Ministries and institutions both in the States and at the Centre.

Activities undertaken:

- Appointment of Direct Recruit IFS Officers recommended by Union Public Service Commission.
- Determination of vacancies and framing of rules for Direct Recruitment through Union Public Service Commission and allocation of cadres to IFS probationers.
- Determination of vacancies for induction of State Forest Service Officers by promotion into Indian Forest Service, Coordination of Selection Committee Meetings, Notification of Select List and year of allotment to officers inducted in Indian Forest Service.

- Review of cadre and revision in the composition and strength of IFS in various cadres.
- Selection/ appointment of IFS officers to various posts under Central Staffing Scheme of the Ministry and cadre clearance for appointment to various autonomous bodies including Indian Council of Forestry Research & Education, Dehradun, Indian Institute of Forests Management, Bhopal and Wildlife Institute of India, Dehradun etc.
- Facilitation of Selection/ Appointment of IFS officers against the Central Staffing Scheme of Department of Personnel & Training (DoP&T).
- Finalization of various service matters like inter-cadre transfers, Inter cadre deputation, Cadre clearance for placements/training and post-retirement benefits to the officers.
- Management of AGMUT cadre including promotions, transfers, postings and other service matters.
- Publication of Civil List of IFS Officers.
- Confirmation of IFS officers in Service.

Achievements:

- Indian Forest Service (Probationers' Training and Evaluation) Rules, 2023 have been notified w.e.f. 23-11-2023. The main purpose of these rules is to introduce reorganised structure of training- sandwich pattern, to provide contemporary inputs and orientation for current and emerging challenges, empowering Academic Council to facilitate flexibility, rationalize the weightage of Professional Training at IGNTA vis-a-vis marks in UPSC Examination.



- Relevant provisions of IFS Probation rules was also amended vide Indian Forest Service (Probation) Amendment, Rules, 2023 notified on 23-11-2023 to make it in line with Indian Forest Service (Probationers' Training and Evaluation) Rules, 2023.
- Vacancies for induction of State Forest Service (SFS) officers into Indian Forest Service (IFS) have been determined in respect of 23 cadres during the year 2023.
- Walking and Medical Test of 147 candidates recommended by Union Public Service Commission (UPSC) in Indian Forest Service Examination, 2022 was convened and the offer of appointment were issued to 140 candidates. The Cadre Allocation in respect of Indian Forest Service Examination, 2022 was done timely.
- Cadre review of Indian Forest Service in respect of States of Rajasthan, Tripura, Kerala, Nagaland, Chhattisgarh, Maharashtra, Tamilnadu, and Jharkhand have been proposed which is under consideration in consultation with DOP&T.
- Two Meetings of Joint Cadre Authority of AGMUT have been organized.
- Ministry has decided to prepare Prospective Plan for Indian Forest Service. For this purpose, stakeholder consultation meetings of the Committee constituted to formulate the Prospective Plan for Indian Forest Service was organised.
- 25 IFS officers has been selected at various levels under the Central Staffing Scheme of the Ministry in the year 2023.
- The proposal for revising guidelines of CSS-MoEF&CC Scheme was sent to DoP&T.
- 48 IFS officers were empanelled /appointed at various levels under the Central Staffing Scheme of DoP&T.
- 71 State Forest Service (SFS) officers have been inducted into Indian Forest Service during 2023.
- A total of 169 RTI application and 96 CPGRAM applications were disposed-off during the year 2023.

13.3 Vigilance Division:

- Disciplinary proceedings (involving vigilance angle) against all serving and retired IFS officers of AGMUT Cadre and other Officers and officials under the MoEF&CC.
- Examination and Processing of cases of imposition of major penalties of dismissal/ compulsory removal etc. (involving vigilance angle) on IFS officers referred to by State Governments.
- Appeals (including appeals against suspension)/ Review preferred by officers/ officials under the MoEF&CC including all IFS officers.
- Conducting and appointing of Inquiry Officer (I.O.) and Presenting Officer (P.O.) for Preliminary Information and Inquiry.
- Handling of vigilance complaints regarding misconduct of Officers and officials (including all IFS officers) under MoEF&CC received from the General Public/Organisations/Central Vigilance Commission (CVC/CVC portal)/ PMO's office etc. During the period 01.01.2023 to 06.11.2023, Approx. 99 complaints were received from CVC/CVC portal and directly in the Ministry and examined and 63 complaints were closed/ filed including old ones.

- Sanction of Prosecution including those under the Prevention of Corruption Act (PC Act), 1988 against IFS Officers and Officers/officials serving/retired from service under the MoEF&CC. Two (02) cases of sanction for prosecution were granted during the period.
- Interaction with Central Bureau of Investigation (CBI) in various matters and facilitate in obtaining the information/documents from various Divisions of the Ministry.
- Identification of Sensitive Posts and to ensure periodical rotation of staff holding such sensitive posts.
- Receipt and Scrutiny of Annual Immovable Property Returns (AIPRs) of all officers and officials (including IFS officers) of MoEF&CC.
- According clearance from vigilance angle in respect of officers and officials of the Ministry. Approx. 1128 vigilance clearance were accorded during the period.
- All Court cases having vigilance angle.
- Permission/ Intimation of Movable/ Immovable property under Conduct Rules, 1964 and All India Service (Conduct) Rules, 1968.
- Preventive Measures to check corruption.
- Organizing Vigilance Awareness Week as per CVC directions.

This year Vigilance Awareness Week was observed in the Ministry from 30th October to 5th November, 2023 and the DGF&SS, MoEF&CC administered the pledge on 30.10.2023 in the Ministry. A Debate Competition on the theme "Can Government machinery alone eradicate corruption?" was held on 01.11.2023. Also

a Slogan Writing Competition and a Quiz Competition was held on 02.11.2023.



(The DGF&SS, MoEF&CC administering the pledge on 30.10.2023 during Vigilance Awareness Week 2023).

13.4 Parliament Section:

The Parliament Division is responsible for co-ordination of all Parliament matters related to the Ministry of Environment, Forest and Climate Change (MoEF&CC).

I. Parliament Questions:

During the year 2023, at the end of the Monsoon Session on 11th August, 2023, 648 Parliament Questions were answered by the Ministry pertaining to various aspects of Environment, Forest and Climate Change. In the Rajya Sabha, total 341 Questions were replied, out of which 31 were Starred and 310 were Unstarred. In the Lok Sabha, 307 Questions were replied, out of which 26 were Starred and 281 were Unstarred.

The Questions covered a wide range of issues with which this Ministry is concerned with and prominent among them were the Questions relating to Pollution, Climate Change, Wildlife Conservation, Forest Conservation, Biodiversity, Environment Impact Assessment, Wetlands, Environmental Education, Environmental Health, Hazardous Substances Management etc.

Graphical Representation of the Parliament Questions replied by the Ministry in 2023, during Budget and Monsoon Sessions, both in Rajya Sabha and Lok Sabha is given below in Figure 'A' and Figure 'B':

1. Rajya Sabha:

Question	Budget Session	Monsoon Session	Special Session	Grand Total
Starred	16	15	No Question Hour	31
Unstarred	178	132	No Question Hour	310
Total	194	147	No Question Hour	341

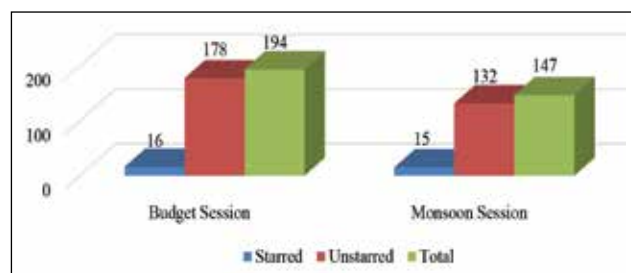


Figure 'A' Number of Questions replied by the MoEF&CC during Budget and Monsoon Sessions of Rajya Sabha during 2023

2. Lok Sabha:

Question	Budget Session	Monsoon Session	Special Session	Grand Total
Starred	14	12	No Question Hour	26
Unstarred	191	90	No Question Hour	281
Total	205	102	No Question Hour	307

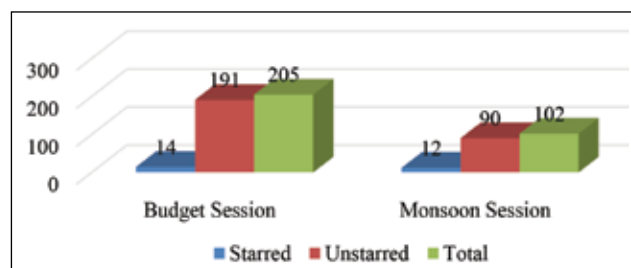


Figure 'B' Number of Questions replied by the MoEF&CC during Budget and Monsoon Sessions of Lok Sabha during 2023

II. Parliamentary Standing Committee and Consultative Committee Meetings:

Parliament Division, during the year 2023, as on 16.11.2023, has coordinated three meetings of the Department related Parliamentary Standing Committee on Science & Technology, Environment, Forest & Climate Change and three meetings of Consultative Committee of the Ministry where following subjects were discussed:

1. Challenges and approaches for sustainable development of National Parks, Sanctuaries, Biosphere Reserves and protection of Marine Bio-diversity
2. Demands for Grants (2023-24)
3. Environment and Public Health: Steps to be taken

The subject matters of three Consultative Committee meetings were: -

1. Project Cheetah
2. 75 @ 75 Ramsar Sites
3. Project Dolphin

13.5 Information Technology and e-Governance:

Government working is based on intensive knowledge and information sharing. Effective communication and sound Information and Communication Technology (ICT) go hand in hand. For speedy implementation and monitoring of various programmes/ schemes and to make most of ICT to secure efficiency in working, Ministry has embarked up on a comprehensive exercise to implement various e-Governance activities/ projects.



Activities undertaken:

- Implemented eOffice in Botanical Survey of India (BSI), Kolkata; Zoological Survey of India (ZSI), Kolkata; Central Academy for State Forest Service, (CASFOS) Burnihat; G.B. Pant National Institute of Himalayan Environment (GBPNIHE), Almora, Uttarakhand; Commission for Air Quality Management in NCR and Adjoining Areas (CAQM), New Delhi and National Centre for Sustainable Coastal Management (NCSCM), Chennai and provided offline/ Online training.
- VPN Access provided all eOffice users in the Ministry and its attached / sub-ordinate offices.
- All meetings are organised through Video Conferencing (VC) including EAC meetings.
- Creation of Meeting IDs and moderated Video Conferencing System using Webex VC System.
- Created email IDs in @gov.in domain for all the users of eOffice.

Progress/Achievements:

- Continued the implementation of e-Office in the Ministry under Digital India Programme (collected details of officers and staff, registered 2664 Users in eOffice portal, Posting and Promotion, Role Post, Setting of Workflow, Updation of Leave Balance details, Provided Training, updation in Notice Board).
- Provided training for Reskilling/upskilling of the existing support Staff under the Increasing Efficiency in Decision making in Government' programme and also provided training on eOffice to 55 officials of NCSCM, Chennai, 11 officials of CASFOS, Burnihat and 10 officials of Commission for Air Quality Management in NCR and Adjoining Areas (CAQM), New Delhi.
- Digital Signature Certificate (DSC) made for 40 Access provided all eOffice user in the Ministry and its attached / sub-ordinate offices.



- Handled IT Related Services in G20 Meetings at Bengaluru, Gandhi Nagar, Mumbai and Chennai.
- Continued the Management of Wi-Fi System at Indira Paryavaran Bhawan including addition/ deletion of users, configuration in mobile phones, and installation of certificates in iPhones.
- Continued the Management of Budget Expenditure Management System for IFD, PAO, B&A, PC and other Divisions.
- Continued the Management of Online Stationary Request Management System for submitting the request for stationary.
- Continued the Management of Smart Performance Appraisal Report Recording Online Window (SPARROW) for online submission of APAR of Scientists, IAS, IFS, IES, ISS, IPS, CSS & CSSS Officers.
- Continued the Management of Website of the Ministry.
- Continued the Management of Internship, eSamikSha, PRAYAS, eVisitor and various other portals in the Ministry.
- Assisted for development of Meri LiFE Website and also provided online training on Meri LiFE Portal to all Nodal Ministries, Central and State Government departments, Schools and other organisations.
- Examination of all policy issues pertaining to Information Technology.

Online Consent Management & Monitoring System:

Online Consent Management & Monitoring System (OCMMS) developed for State Pollution Control Boards (SPCBs)/ Pollution Control Committees (PCCs) to automate the existing workflow which allows the industries for the online submission of application for Consent to Establish (CTE)/ Consent to Operate (CTO), authorization for various categories of Industries/ Institutions/ Hotels/ Hospitals. This system helps the officials of SPCB for online processing of industries application for CTE/CTO, Authorization as well as monitoring of various activities of SPCBs/PCCs.



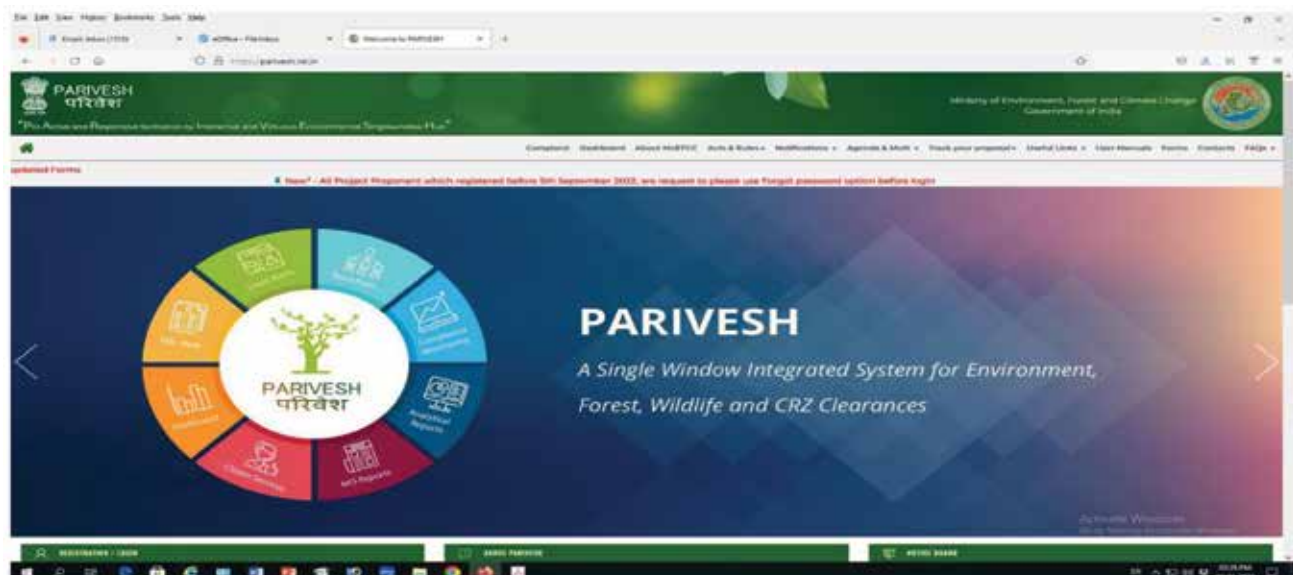
OCMMS has been implemented in 26 States/UTs viz. Arunachal Pradesh, Andhra Pradesh, Bihar, Chhattisgarh, Chandigarh, Daman & Diu, Haryana, Jharkhand, Jammu & Kashmir, Kerala, Meghalaya, Odisha, Punjab, Puducherry, Telangana, Tripura, Tamil Nadu, Uttar Pradesh, Sikkim, Delhi, Goa, Himachal Pradesh, Assam, Uttarakhand, West Bengal and Andaman & Nicobar. The OCMMS is integrated with DIPP/ State Government Single Window System for Sixteen (16) States/UTs viz. Andhra Pradesh, Assam, Chhattisgarh, Haryana, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Kerala, Odisha, Puducherry, Punjab, Tamil Nadu, Telangana, Uttarakhand, Uttar Pradesh and West Bengal. The mobile version of OCMMS is implemented in Twelve (12) States/UTs viz. Andhra Pradesh, Assam, Bihar, Chandigarh, Delhi, Haryana, Jharkhand, Kerala, Punjab, Tamil Nadu, Chhattisgarh and Himachal Pradesh the same are made available under Play Store. The mobile app for Public Grievance System has been developed for the 5 States/UTs of Bihar, Chandigarh, Delhi, Jharkhand and Punjab.

PARIVESH: In pursuant to the spirit of 'Digital India' initiated by Shri Narendra Modi, Hon'ble Prime Minister of India and capturing the essence of Minimum Government and Maximum

Governance, a Single-Window Integrated Environmental Management System named PARIVESH (Pro-Active and Responsive facilitation by Interactive, Virtuous and Environmental Single window Hub) has been launched by Ministry in August 2018.

Based on the concept of web architecture, a workflow based application has been rolled out for online submission, monitoring and management of proposals submitted by Project Proponents to the MOEF&CC, Government of India as well as to the State Level Environmental Impact Assessment Authorities (SEIAA) to seek various types of clearances (e.g. Environment, Forest, Wildlife and Coastal Regulation Zone Clearances) from Central, State and district-level authorities. It automates the entire process of submitting the application and tracking the status of such proposals at each stage of the processing. This system has been designed, developed and hosted on cloud environment by NIC, New Delhi.

This web-based application is unique amongst all such portals of regulatory agencies. After the introduction of e-communication in the first phase, this is the second phase of reforms towards e-Governance in its real spirit.





Enhancements and revamp of PARIVESH, to meet the evolving needs of the Ministry and the stakeholders has been in progress.

Objectives of PARIVESH:

- Enhance efficiency, transparency, and accountability in the Environment, Forest, Wildlife and CRZ clearance processes.
- Sound and informed decision-making
- Enhance responsiveness through workflows automation
- Real time information about the status of applications with alerts at each of the stages through SMS and email
- Efficient and expeditious processing and decision-making leading to reduction in turnaround time
- Standardization in processing and decision-making across the states / UTs
- Enhance ease and convenience of citizens and businesses in accessing information and services
- Real-time monitoring and adherence to timelines for verification
- User-friendly and environmentally sustainable application processes
- Improve environmental monitoring and compliances
- Leading to the era of Mobile Governance with maximum transparency
- KYC Authentication for Existing proponent
- Unique-id for all types of clearances required for a particular project
- Single Window interface for the proponent to submit applications for getting all types of clearances (i.e. Environment, Forests, Wildlife and CRZ clearances)
- Helps the user to apply, view, track, interact and respond to the queries whenever he wants and wherever he is through web-based system. No physical interaction with the officers
- Facility to download the e-signed approval letter
- Supplemented by mobile app “PARIVESH” for Android and iOS based smart phones. The status of the application, replies to queries, agenda & minutes of meetings, approval letters can also be accessed/downloaded anytime on a smart phone through this App
- Dashboard for accessing various analytical reports including charts/ graphs indicating pendency of information, time taken by processing authorities at each level, etc.
- SMS and email alerts at all levels of application processing
- Facility for uploading the compliance reports for clearances. Facility for uploading of geo-tagged images on GIS maps

Benefits:

a. For Project Proponent/User Agency:

- Single registration using NSDL PAN services and single sign-in for all types of clearances (i.e. Environment, Forest, Wildlife and CRZ)
- Alerts through SMS and emails in case of non-compliances. This will help ensuring timely compliance of clearance conditions
- Improved public image through improved environmental compliances



- Form Rationalization - Elimination of duplicate and erroneous entries and Reduce effort for validation of same information at multiple points
 - Know Your Approval and DSS module has been launched
 - Standardization of Agenda & MoM templates - Time reduction in Agenda & MoM finalization and thus in clearance
 - Change in registration process of applicants - Ability to map multiple projects to a unique business entity
 - Enhancement has been done in all Forms
 - Integration of PARIVESH with NSWS is in progress
- b. For Processing Authorities:**
- A Single Window System for Central, State and District level clearances
 - Auto generation of agenda (based on first come first served principle), minutes of the meetings and online generation of approval letters through digital signatures/ e-Sign by competent authorities resulting in ease and uniformity in processing of clearance applications
 - Accessing of information about the pendency and timeline fulfilments of various applications under consideration
 - Online submission and monitoring of compliance reports including geo-tagged images of the site by regulatory body / inspecting officers even through the Mobile App for enhanced compliance monitoring
 - Integration with single window clearance systems launched by DIPP and various other state governments
- Processing of files through mobile app will facilitate for expeditious decision-making
 - Geographic Information System (GIS) interface for the Appraisal Committee, to help them in analysing the proposal efficiently
 - Dashboard for providing various analytical reports. Help in self-assessment and improved performance
 - Efficient and real time review of pendency by higher authorities with facility to review the performance of the processing officers
 - Automatic alerts (via SMS and emails) at important stages to the concerned officers, committee members and higher authorities to check the delays, if any
 - Automatic alerts in case of non-compliances for clearance conditions – would result into enhanced compliance leading to sustainable development
 - Improved public image – from merely a regulator to more of a facilitator
 - Enhanced system generated Agenda for EC has been developed and made live
 - New authority process workflow for FC has been made
- c. For Citizens:**
- Enhance ease and convenience of citizens and businesses in accessing information and services
 - Availability of details of each project in public domain
 - Access to various technical and impact assessment reports, approval letters, etc. through web portal as well as through mobile app



- Timeline for each stage is available in the public domain to bring in transparency and accountability in the system
- Data base sharing will facilitate in research and development activities
- Improved compliance, better environmental quality
- Integration with Green Skill Development Programme-search engine for Green jobs
- Know Your Approval (KYA) & Decision Support System (DSS) module to get better understanding of approvals required

Modules of PARIVESH:

- Online Registration of Proponent/User Agency
- Workflow / file processing and approval management
- E-File Noting
- Alerts& Notification (SMS and email)
- GIS based Appraisal and Geo-tagging
- Compliance Monitoring for project proponents and regulatory authorities
- Analytical Reports
- Online Agenda Management
- Online Minutes of Meeting
- Query Module for Essential/Additional Details Sought (EDS/ADS)
- Generation of Approval letters for TOR/EC/FC/Wildlife/CRZ clearances
- Dashboard for project proponents, processing authorities and citizens
- E-Green skilled jobs
- Audit Trail

- FAQ
- KYA & DSS

Android and iOS based Mobile Application

“PARIVESH”: The web portal is supplemented by Android and iOS based mobile application named “PARIVESH” to facilitate the user Agencies/ Project Proponents to easily track and view the current status of their proposals, reply the queries of processing authorities, accessing the agenda and minutes of the appraisal meetings as well as accessing to the clearance letters, etc. at their palm.

This app also helps in compliance monitoring by the processing authorities, which can be done by uploading geo-tagged images of the location of the project which would help in appraisal process.

13.6 Right to Information Cell (RTI)

As per the RTI-MIS portal, during a period from 01.01.2023 to 10.12.2023, MoEF&CC has received 3035 RTI applications out of which 2948 applications were disposed of and 280 RTI appeals were received out of which 264 appeals were disposed of under RTI Act, 2005 during the year 2023-24.

The Ministry has 86 Central Public Information Officers (CPIO) and 67 First Appellate Authorities (FAA) to dispose of the above RTI's.

Both online and offline applications/ appeals that are received in the Ministry as well as in the designated counter at MoEF&CC, IPB, New Delhi are regularly updated and up-linked and forwarded to the respective CPIO/FAA based on the subject matter.

The CPIOs and FAAs have been designated for effective implementation of the RTI Act, 2005. The notifications designating CPIOs/ FAAs are revised periodically as and when there are



changes in the allocation of work among CPIOs/FAAs.

During the year, an online training programme was organized on 2nd and 3rd February, 2023 for CPIO's and FAAs on RTI matter.

Directions from the Central Information Commission (CIC) and the Nodal Ministry/Department DoP&T were also circulated to the CPIOs/FAAs to implement the RTI Act.

13.7 General Administration (GA) Section:

The General Administration (GA) Division of the Ministry is entrusted with the responsibility of providing logistics and support services to senior officers and staff for discharging their duties and smooth functioning of the Office. It includes procurement and supply of stationery, maintaining stores, disposal of obsolete materials, equipment, support services to the officials of the Ministry including provision of transport, communication and general upkeep etc. The Ministry is housed in a new building at Jor Bagh Road, New Delhi which is a green building. It has the unique distinction of getting LEED India Platinum & GRIHA-5 Star Green Building ratings.

Activities undertaken:

- Cleanliness of the premises of Indira Paryavaran Bhawan (IPB) during Special Swachhta Campaign 3.0.
- Online Auction—
 - a. e-waste and obsolete furniture items were disposed off, vacating an area of about 2123 sq ft.
 - b. Six Staff Cars were also e-auctioned through Metal Scrap Trade Corporation Limited (MSTC), vacating an area of about 420 sq. ft.
- Revenue earned through e-auction was Rs. 7.11 lakh.

Innovative work on cleanliness activities:

- Scanning facilities were provided at IPB for all Divisions for scanning of Maps, files and Records.
- Shredding machine was installed for shredding of papers, files etc.
- About 200 kg of garbage was disposed off vacating an area of about 100 sq. ft.
- Special care was taken on cleaning of entire premises (Washrooms, corridors, atrium, Canteen area, Terrace Garden, Record Room, basement) of IPB.

GeM Expenditure:

- As per the instructions of Department of Commerce to increase the expenditure for procurement through Government E-Market (GeM) place, efforts were made to increase the expenditure through GeM.
- All the Divisions & Officers/ institutions under the administrative control of the Ministry were regularly requested to incur expenditure for procurement through GeM.
- Regular meetings of Standing Committee on GeM were being held to review the progress of expenditure under GeM.

13.8 Public Grievance Cell:

- The Public Grievance Cell has been functioning in the Ministry to attend to the complaints from general public regarding various issues like environment, pollution, wildlife, forestry and other environmental matters.



- During the period 1st January, 2023 to 31st December, 2023 the PG Cell had received total 5,923 Public Grievances. Out of 5923 grievances, 479 cases are bought forwarded from last year and 5444 cases are received during this year.
- During the period, 5,640 grievances have been disposed and only 283 grievances are pending for disposal. As on date, no COVID-19 related grievance is pending in the Ministry.
- During the Period, 748 Appeals have been received in the Ministry out of these 707 Appeals have been disposed off and only 48 Appeals are pending for disposal.
- The rate of disposal of Grievances and Appeals received is 96% (approx.) Efforts are being continued by the PG Cell to raise the disposal rate to 100% by issuing periodic reminders to the Divisions/ Sections concerned for early disposal of pending grievances, and to strive towards Zero pendency of grievances.
- Weekly review meetings are being conducted regularly by both Hon'ble Minister and Secretary, EFCC for the importance of redressal of all Public Grievances, COVID-19 related case and Appeals raised against disposed grievances received in the Ministry to achieve 100% disposal of Public Grievances and Appeal well within the stipulated time frame.

13.9 Implementation of Official Language Policy:

The Official Language Division of MoEF&CC implements Official Language Policy of the Union as prescribed in the Constitution of India, Official Language Act, 1963 (as amended 1967), Official Language Rules, 1976 (as amended 1987, 2007 and 2011), Annual Program and orders

issued by the Government of India from time to time. This includes translation of documents and implementation of Official Language policy in the Ministry.

Activities undertaken:

- **Meeting of Official Language Implementation Committee –**

During the period, 03 quarterly meetings of the Official Language Implementation Committee were held to review the status of implementation of Official Language Policy in the Divisions/Sections of the Ministry as well as in the Subordinate Offices of the Ministry located in Delhi-NCR.

- **Hindi Workshops-**

During the period, 03 Hindi workshops were organized to enable the officers and employees of the Ministry and offices under its control to do their day-to-day work in Hindi.

- **Inspections-**

In order to review the status of implementation of the Official Language Policy of the Union, the Committee of Parliament on Official Language inspected 10 attached/ subordinate offices of the Ministry of Environment, Forest and Climate Change. Keeping in mind the target set in the Annual Program 2023-24, the officers/ officials of the Official Language Division of the Ministry conducted official language inspection of 07 regional/ subordinate offices and issued guidelines to the officers and employees of the concerned offices for proper compliance of the orders related to the official language. The Ministry also conducted official language inspection of its 14 divisions/ sections as per the target set and resolved the deficiencies found.

- **Publication of “Paryavaran” magazine:**
The 71st issue of the Ministry’s ‘Paryavaran’ magazine has been published and articles will be invited for the upcoming issue soon.
- **Organization of Meetings of Hindi Salahkar Samiti**
The first and the second meeting of the reconstituted Hindi Advisory Committee of the Ministry was held under the

chairmanship of the Hon’ble Minister of Environment, Forest and Climate Change Shri Bhupendra Yadav on January 04, 2023 and June 20, 2023 at New Delhi. The meetings were attended the Hon’ble Minister of State, Hon’ble MPs and non-official members of the Committee and senior officers of the Ministry along with Heads of Departments and representatives of all the offices under its control.



Meetings of Hindi Salahkar Samiti chaired by Hon’ble Minister, MoEF&CC

- **Participation in the 12th Vishwa Hindi Sammelan**
Director (Official Language) participated in the 12th Vishwa Hindi Sammelan organized by the Ministry of External Affairs in collaboration with the Government of Fiji from 15 to 17 February, 2023 at Denarau Island Convention Centre, Nandi City, Fiji and represented the Ministry of Environment, Forest and Climate Change.
- **Participation in the 3rd All India Official Language Conference, Pune.**
Officers and employees of MoEF&CC participated in the Conference organized by the Department of Official Language, Ministry of Home Affairs from 14 to 15 September, 2023 at Pune.
- **Organisation of Hindi Mah:**
Like every year, this year Hindi Mah was organized in the Ministry from 01.09.2023



to 30.09.2023. During this period, 07 Hindi competitions were organized. Large numbers of officers and employees of the

Ministry and CCU had participated in the Competitions.



Officials participating in Hindi competition during Hindi Mah 2023

13.10 Civil Construction Unit (CCU):

The Government of India decided that each major scientific department with substantial annual civil work budget should have Civil Engineering Unit of its own for expeditious implementation of work connected with plan schemes. Accordingly, Civil Engineering Wing (now CCU) was created in March, 1987 in the Ministry of Environment Forest and Climate Change. CCU headed by Chief Engineer is a division under the Administrative control of the MoEF&CC. Main roles of CCU are:

- i. Planning of work including preparation of estimate in house and vetting of estimate prepared by other PWOs.
- ii. To construct major work in house or getting these constructed through other PWOs.

- iii. Technical advisor in the construction works of the Ministry.

The Provision of CPWD code/ work manual apply to such work. All proposals relating to policy matter are submitted to the Secretary, MoEF&CC.

Function of the division:

The CCU is engaged in execution of Civil and Electrical works of the MoEF&CC, its attached, subordinate and autonomous offices. These include BSI, FSI, ZSI, DFE, NMNH, IGNFA, ICFRE, NZP, IIFM, GBPIHED, IIPRTI, CPCB, WII and CZA. Most of the construction works where CCU has its own set up are executed by CCU. However, construction works at other locations are executed through CPWD. The co-ordination and budget management of work executed by CPWD is being done by CCU.

Activities undertaken during 2023-24: -**A. Works Completed:**

S.No.	Name of work	A/A & E/S amount (in Lakhs)
1	Construction of National Museum & State of art auditorium in the premises of ZSI/EBRC, Gopalpur.	1343.00
2	Construction of Multipurpose Hall at IGNFA Dehradun.	531.00
3	Construction of (T II-04), (T III-06), (T IV-02) & (T V-02) Nos. residential quarters at AZRC, Jodhpur.	521.00
4	C/o Staff quarters at Rajiv Gandhi Regional Museum of National History, Sawai Madhopur (Raj.)	274.00
5	Construction of visiting scientist hostel and guest house for ZSI at Port Blair.	271.00
6	Improvement of Unfiltered water supply network in National Zoological Park, New Delhi.	198.00
7	C/o Faunal Repository Building of ZSI, Port Blair.	176.00

B. Works in progress:

S.No.	Name of work	A/A & E/S amount (in Lakhs)
1	Construction of Auditorium building at Regional Museum of RMNH at Gangtok, Sikkim	6941.00
2	Construction of New hostel block G + 2 for IGNFA at FRI Campus, Dehradun	5261.00
3	Construction of New Academic Block of IGNFA at Dehradun	1790.00
4	Construction of Ladies Hostel for CASFOS at Coimbatore	858.00
5	Reconstruction of damaged boundary wall from Sundar Nagar Side Entry Gate No.2 towards African Elephant Enclosure at National Zoological Park New Delhi. (Phase-I)	629.00
6	Construction of 12 Nos. Type-II Quarters at National Zoological Park, New Delhi.	474.00
7	C/o campus boundary wall & guard room for the land allotted to Nauni. Solan (HP)	441.00
8	Construction of backside boundary wall in Assam side for the CASFOS Academy Campus at Burnihat, Assam	437.00



9	Remodeling of Regional Office of MoEF&CC at Sector 31 C Chandigarh	387.00
10	Upgradation of office building in the complex of ZSI, Risa Colony, Shillong, Meghalaya	298.00
11	Reconstruction of damaged boundary wall from Bhairon Marg towards beat No. 1 at NZP, New Delhi.	260.00
12	Extension and upgradation of auditorium building of BSI at NRC, Dehradun.	186.00
13	Construction of boundary wall for the Residential Campus (Type-III-10 Nos, Type-V-04 Nos & Type-VI- 01 No. quarters) for CASFOS, Burnihat in Meghalaya side.	180.00





CHAPTER - 14

DEVELOPMENT MONITORING & EVALUATION, BUDGET AND ACCOUNTS



14.1 Development Monitoring & Evaluation Division:

The work of Development, Monitoring and Evaluation Division (DMED) is associated with the Development, Monitoring and Evaluation Office (DMEO) in NITI Aayog.

Mandate

The work of DMED is detailed as under:

- i. To carry out monitoring and impact Evaluation of the Ministry's funded schemes.
- ii. To focus on outcomes and take them into account during appraisal for continuation of the ongoing schemes.
- iii. To constitute Evaluation Monitoring Committee (EMC)
- iv. Coordination with NITI Aayog
- v. Nodal Division for coordination with Ministry of Panchayati Raj (MoPR)

Progress:

NITI Aayog in collaboration with respective Ministry/ Department has been preparing Output-Outcome Monitoring Framework (OOMF) for all CS/CSS schemes, with a view to bring focus on outcomes in addition to output and same has also been institutionalized through its incorporation in Union Budget since Financial Year 2019-20.

- i. To facilitate the monitoring of progress of all Schemes, NITI Aayog had developed a dashboard and its online access had been given to all Ministries/ Departments in May, 2018 to regularly update the progress against the targets.
- ii. DMED coordinated with Scheme/ Programme Divisions and ensured that the progress report of quarterly targets for

FY 2023-24 in respect of schemes under OOMF are updated in the OOMF portal.

- iii. DMED has collected information from Scheme/Programme Divisions for preparation of OOMF for FY 2023-24. The compiled OOMF 2023-24 prepared in respect of MoEF&CC was sent to NITI Aayog. Hard copies of the same were printed and supplied to Rajya Sabha Secretariat and Lok Sabha Secretariat for circulation to respective Members of the Committee.
- iv. The quarterly break-up of targets in respect of schemes of MoEF&CC was coordinated with Schemes/Programme Divisions and sent to NITI Aayog.

14.2 Budget and Accounts

The Office of Chief Controller of Accounts advise and assist the Ministry on matters relating to Budget, Expenditure Management, Accounting, Establishment Matters and Personal claims of the employees. The Accounting Organization in the Ministry under Chief Controller of Accounts includes one Controller of Accounts, the Principal Accounts office, 02 Pay and Accounts Offices (PAOs) located at New Delhi and Kolkata, six Sr. Accounts Officers and 64 Drawing and Disbursing Offices (DDOs): 47 CDDOs and 17 NCDDOs.

The Principal Accounts Office (Pr.AO) is entrusted with the responsibility of maintaining various accounts of the Ministry viz. Finance Accounts, Appropriation Accounts and Monthly Account as well, monitoring expenditure to ensure adherence to Month/Quarterly Expenditure Plan based on DDG, conducting Internal Audit and Scheme Audit, and monitoring of compliance to the instructions issued by Ministry of Finance, O/o CGA and CPAO from time to time, has been ensured.



The Internal Audit Wing (IAW) conducts Internal Audit of PAOs, DDOs, Autonomous Bodies and performance audit of schemes of the Ministry. In the Financial Year 2022-23, regular audit of 19 units and 1 Scheme Audit was conducted. During the FY 2022-23, a number of 65 audit paras were settled whereas 221 fresh paras were raised. Out of these fresh paras, 25 paras involving non-recovery/ over-payment/ infructuous/ irregular expenditure/irregular purchase/ non-adjustment of contingency advance/ blocking of government money amounting to Rs. 1793.07 crores. Recently six consultants were hired for conducting the Internal Audit of various Organizations/ Offices of Ministry of Environment, Forest & Climate Change.

The PAO is responsible for processing payments while ensuring adherence to budgetary and expenditure ceiling and norms of financial propriety. It is also responsible for ensuring just-in-time release of funds digitally through PFMS to all beneficiaries/vendors/agencies, while ensuring that no idle money remains parked with grantee bodies. PFMS has also been implemented in all CDDOs of the Ministry. Further, online collection on non-tax receipts through Non-tax Receipts portal (NTRP) has eliminated delay and digitized the receipts.

Pension processing has been digitized through linkage of online Pension Sanction and Payment Tracking System- BHAVISHYA with PFMS. This has facilitated the retiring employee to fill the forms online and the Administrative Authority to process the online claim and Communicate to PAO for issuance of Pension Payment Order (PPO) to CPAO.

Employee Information System (EIS) has been successfully implemented in NCDDOs/ CDDOs under the Ministry for processing Personnel payments.

GPF module of PFMS has been successfully implemented in the Ministry which has made it convenient to monitor GPF accounts by subscriber themselves. Advance and withdrawals taken by the employees are being monitored smoothly.

The roll-out of Expenditure, Advance & Transfer (EAT) module for implementing agencies receiving Grants -in-aid, has enabled better monitoring of unspent balances and outstanding UCs. SNA, CNA and TSA has been implemented successfully in this Ministry and now one scheme has been chosen by Ministry of Finance for SNA SPARSH from this Financial Year.

Accounting of CAMPA fund is also being carried out in the Principal Accounts Office with the help of CAMPA Authority.

Budget Division is entrusted with the planning and coordination of all Schemes and Non-schemes of the Ministry. It functions as the nodal Division for issues and matters related to Ministry of Finance (Department of Economic Affairs' Budget Division and the Department of Expenditure). The work handled in the Division covers preparation, monitoring and review of the Ministry's Annual Plans and the tasks associated with the Union Budget of the Ministry. The responsibility of monitoring of the progress in utilization of allocated funds released for implementation of various Schemes is also assigned to the Division. The work of the Budget Division is detailed as under:

- Preparation of Statement of Budget Estimates (SBE), Revised Estimates (RE), Supplementary and Re-appropriation proposals
- Preparation of Detailed Demands for Grants (DDG)
- Preparation of Explanatory Notes on



Saving/ Excess within the Grant.

Government Servants

- Coordination with Department-related Parliamentary Standing Committee
- Compliance of Cash Management MEP/ QEP
- Monitoring of Expenditure
- Allocation of funds under Advances to

Annual Plan 2023-24

The Ministry has been allocated an outlay of Rs. 3079.40 crore in the Budget Estimates (BE) for the Financial Year 2023-24.

The financial outlays and expenditure during 2023-24 is given in the following table:

Umbrella Scheme-wise Allocation (2023-24)

(Rs. in Crores)

Sl. No.	Name of the Scheme	BE 2023-24	AE 2023-24 (upto 31.10.2023)
1	Environmental Knowledge and Capacity Building (CS)	92.86	60.01
2	National Coastal Management Programme (CS)	12.50	5.18
3	Environmental Education, Awareness, Research and skill development (CS)	87.40	25.23
4	Control of Pollution (CS)	756.00	376.61
5	National Mission for a Green India (CSS)	220.00	117.09
6	Integrated Development of Wildlife Habitats (CSS)	491.80	165.62
7	Conservation of Natural Resources and Ecosystems (CSS)	47.00	13.04
	Total	1707.56	762.78

Umbrella Non Scheme-wise Allocation (2023-24)

(Rs. in Crores)

Sl. No.	Name of the Scheme	BE 2023-24	AE 2023-24 (upto 31.10.2023)
1	Secretariat	355.44	129.19
2	Attached/ Subordinate offices	558.00	275.44
3	Assistance to Autonomous Bodies	309.00	199.23
4	Statutory & Regulatory Bodies	1021.25	80.48
	Total	1365.84	684.34

List of Pending C&AG Paras (upto 9 November 2023)

(Rs. in Crores)

Sl. No.	Report No. & Year	Para No.	Subject
1	27 OF 2014	6.3	Wasteful Expenditure on hiring of office accommodation.
2	26 Of 2022	2.1 (ii)	Deficiencies in Internal Controls in Central Autonomous Bodies
3	26 Of 2022	2.1 (iii)	Deficiencies in Internal Controls in Central Autonomous Bodies
4	21 Of 2022	5.3	Unfruitful expenditure of Rs. 73.35 lakh on a demonstration project
5	26 Of 2022	2.2 (ii)	Common deficiencies noticed in the accounts of CABs
6	26 Of 2022	2.3.4 (Sl. No. 48)	Current Assets, Loans, Advances: Rs. 83.32 crore
7	4 of 2022	Entire Report	Performance Report on 'Conservation of Coastal Ecosystems'
8	26 Of 2022	2.3.4 (Sl.No. 47)	Current Assets (Schedule 11): Rs. 16.79 crore
9	21 Of 2022	5.4	Short recovery of rent of Rs. 96.72 lakh from a bank
10	21 Of 2022	5.2	Pollution Caused by Plastic
11	26 Of 2022	2.1 (i)	Deficiencies in Internal Controls in Central Autonomous Bodies
12	21 of 2022	5.1	Assistance to Botanic Gardens Schemes



Website : <http://www.moef.gov.in>

Facebook : <https://www.facebook.com/moefcc>

Twitter : <http://www.twitter.com/moefcc> | Email : moefcc@gov.in

395

**Government of India****Press Information Bureau****International Year
of Cooperatives****Cooperatives Build
a Better World****Ministry of Environment, Forest and Climate Change**

Generation of plastic waste

Posted On: 27 JUL 2023 3:42PM by PIB Delhi

Unmanaged and littered plastic waste including plastic packaging waste has adverse impacts on terrestrial and aquatic ecosystems. The Plastic Waste Management Rules, 2016, provides the statutory framework for plastic waste management in an environmentally sound manner throughout the country. Considering the adverse effect of littered single use plastic items on terrestrial, aquatic and marine ecosystems, the Ministry notified the Plastic Waste Management Amendment Rules, 2021, on 12th August 2021, prohibiting identified single use plastic items, which have low utility and high littering potential, from 1st July 2022. The Ministry of Environment, Forest and Climate Change has also notified the Guidelines on the Extended Producer Responsibility for plastic packaging vide Plastic Waste Management Amendment Rules, 2022, on 16th February, 2022.

As per Annual report of Central Pollution Control Board (CPCB) on the implementation of Plastic Waste Management Rules, 2016, the plastic waste generated in the country during the last five years are given below:

S. No.	Year	Plastic Waste Generated (Tonnes Per Annum-TPA)
1.	2016-17	1,568,714
2.	2017-18	660,787
3.	2018-19	3,360,043
4.	2019-20	3,469,780
5.	2020-21	4,126,997

The plastic waste generated state-wise and year-wise as per Central Pollution Control Board Annual reports have been provided in Annexure I.

The total Extended Producer Responsibility (EPR) of registered producers, importers and brand owners for plastic packaging is around 3 million tonnes for the year 2022 – 23, under EPR Guidelines. The EPR certificates generated by registered plastic waste processors after processing of plastic packaging waste including recycling is 2.5 million tonnes.

Annexure I

Year wise data for Plastic Waste Generation as per CPCB Annual Reports*

(* consolidated based upon information provided by State Pollution Control Board / Pollution Control Committee)

	States/UTs	

S. No.						
		2016-17	2017-18	2018-19	2019-20	2020-21
1.	Andhra Pradesh	82863	NA	66314	46222	39626.45
2.	Arunachal Pradesh	NA	6	3787.37	2721	3755.9
3.	Assam	24030	NA	32277.87	24971	58765
4.	Bihar	2280	2280	68903.328	41365	74263.69
5.	Chhattisgarh	7300	NA	6000	32850	47450
6.	Goa	NA	NA	32580.52	26068	29441
7.	Gujarat	269294.88	269808	356873	408201	337693.96
8.	Haryana	23369.09	NA	68735.26	147734	185168
9.	Himachal Pradesh	255	NA	3672	13683	6206.78
10.	Jammu & Kashmir	NA	27870	34367.37	74826.33	51710.6
11.	Jharkhand	NA	NA	51454.53	43332	20263.45
12.	Karnataka	419600	NA	272776	296380	368080

13.	Kerala	NA	NA	133316	131400	120063.87
14.	Madhya Pradesh	50457.07	61037	72327.39	121079	138483.58
15.	Maharashtra	21420.33	NA	409630	443724	311254
16.	Manipur	NA	24	12453.8	8293	10303
17.	Meghalaya	13.265	15.096	1263	5043	
18.	Mizoram	NA	NA	13.306	7909	1514.51
19.	Nagaland	NA	14052.5	268.18	565	4785.94
20.	Odisha	6890.805	12092.205	90138.98	45339.4	51269.9
21.	Punjab	163423.4	54066.1	119414.64	92890	108332.06
22.	Rajasthan	NA	NA	104704.383	51966	66324.57
23.	Sikkim	102.7	NA	5.66	69	82.75
24.	Tamil Nadu	79114.792	NA	401091	431472	430107
25.	Telangana	NA	NA	183014.65	233655	472675
26.	Tripura	30	28.5	26.2	32	61.65
27.	Uttar Pradesh	152492.644 5	206733.45 05	254401.8	161148	375950
28.	Uttarakhand	NA	NA	31093	25203	18647.75

29.	West Bengal	NA	NA	300236.12	300236	417925
30.	Andaman and Nicobar Islands	365	NA	1850	387	492.342
31.	Dadra and Nagar Haveli and Daman and Diu	NA	NA	1947.7	1948	4726
32.	Chandigarh	21516.75	12775	11715.4	6746	13107.15
33.	Lakshadweep	NA	NA	148	46	523.54
34.	Delhi NCR	232732	NA	224810	230525	345000
35.	Puducherry	9252.25	NA	8433	11753	12754

This information was given by Union Minister of State for Environment, Forest and Climate Change Shri Ashwini Kumar Choubey in a written reply in the Rajya Sabha.

MJPS/NSK

(Release ID: 1943210) Visitor Counter : 14330

Read this release in: Urdu , Marathi , Tamil



Share your ideas & Suggestions with PM for

Mann की Baat

— on 22nd Feb 2026 —

[Click Here](#)



india.gov.in
national portal of india



RTI and Contact Us

Telephone Nos of PIB Office
rs of Hqrs

Public Grievance Officer

Information Manual

Transparency Audit

Internal Complaints Commit
tee

WHO'S WHO AT PIB

Telephone Number of Regio
nal Branch Offices of PIB

CPIOs Appellate Authority L
ist

Citizen Charter

Allocation Budget

Liaison Officer

Work Allocation

401

Web Information Manager	RTI Transparency Audit Compliance
Delegation of financial powers	Link for RFP uploaded on CBC website for Printing Publishing PIB handbook General Elections 2024
Portal for Public Grievance Submission	Amendment of RRs for Group C Posts
Amendment of RRs for Group A and Group B posts	Transfer Policy for CG-II & MTS of PIB Regional, Branch Offices

[More](#)

GOI Links

[Ministry of Information and Broadcasting](#)
[Ministry of Agriculture & Farmers Welfare](#)
[Ministry of Textiles](#)
[Ministry of Commerce & Industry](#)
[Ministry of Defence](#)
[Ministry of Finance](#)
[Ministry of Health and Family Welfare](#)
[Ministry of Home Affairs](#)
[Ministry of Housing and Urban Affairs](#)
[Ministry of Education](#)

[More](#)

Site is hosted by National Informatics Centre (NIC). Information is provided and updated by Press Information Bureau “A” wing, Shastri Bhawan, Dr. Rajendra Prasad Road, New Delhi – 110001, Phone: 23389338.

Visitor Counter: 7611

**Annual Report 2020-21
on
Implementation of
Plastic Waste
Management Rules,
2016**



**Central Pollution Control Board
Delhi**

Table of Contents

1. Introduction	1
2. Observation	1
2.1 Plastic Waste Generation.....	1
(a) Total Waste generation	1
(b) Per capita waste generation	2
2.2 Status of Submission of Annual Report (AR) by ULBs to SPCBs/PCCs	4
2.3 Complete Ban on Use of Plastic Carry Bags and Implementation of Thickness >50 Microns Carry Bags as per Provisions 4(c & d, thickness criteria condition) of PWMRules, 2018 & (column 3 – form vi) & Partial/Complete Ban on Use of Plastic Carry Bags (through executive order) (column 5 – form vi).	6
2.4 Details of Plastic Waste Management as per Provisions 5, 6 & 9 of PWM Rules, 2016, As Amended, 2018	7
2.5 Details of Registered Manufacturing/Recycling Units.....	9
2.6 Details of Unregistered Plastic Manufacturing /Recycling Units	10
2.7 Status of Marking & Labeling on Carry bags/Multilayered Packaging	10
2.8 Details of Violations & Action Taken on Non-Compliance of Rules.....	11
3.0 STATE- WISE OBSERVATIONS	11
3.1 Andaman & Nicobar	11
3.2 Andhra Pradesh	12
3.3 Arunachal Pradesh.....	13
3.4 Assam	13
3.5 Bihar.....	14
3.6 Chandigarh	14
3.7 Chhattisgarh.....	15
3.8 Daman and Diu & Dadra Nagar Haveli	16
3.9 Delhi.....	16
3.10 Goa	16
3.11 Gujarat	17
3.12 Haryana	18
3.13 Himachal Pradesh.....	19
3.14 J&K	19
3.15 Jharkhand	19

3.16 Karnataka.....	20
3.17 Kerala.....	21
3.18 Lakshadweep.....	21
3.19 Madhya Pradesh.....	22
3.20 Maharashtra.....	22
3.21 Manipur.....	23
3.22 Meghalaya.....	24
3.23 Mizoram.....	24
3.24 Nagaland.....	25
3.25 Odisha.....	25
3.26 Puducherry.....	26
3.27 Punjab.....	27
3.28 Rajasthan.....	27
3.29 Sikkim.....	28
3.30 Tamil Nadu.....	28
3.31 Telangana.....	29
3.32 Tripura.....	30
3.33 U.P.....	30
3.34 Uttarakhand.....	31
3.35 West Bengal.....	31
4. Best Practices in Plastic Waste Management.....	32
5.0 Environmental Performance (PWM) based rating of States/ UTs.....	37
(a) Ranking of States:.....	37
(b) Action Plan.....	39
(c) Compostable plastics:.....	40
(d) Best Practices:.....	40
6.0 Recommendations.....	40

1. Introduction

As per rule “17(3)” of Plastic Waste Management Rule, 2016 (as amended) each State Pollution Control Board or Pollution Control Committee shall prepare and submit the Annual Report to Central Pollution Control Board on the implementation of these rules by the 31st July of each year. Also, as per provision “17(4)” of PWM Rules, 2016 (as amended), the Central Pollution Control Board shall prepare a consolidated report on use and management of plastic waste and forward it to the Central Government along with its recommendation by 31st August of each year.

In accordance with the PWM Rules, 2018 based on information submitted by 35 SPCBs/PCCs, a consolidated annual report for the year 2020-21 has been prepared, including State-wise observations of the current status of implementation of Plastic Waste Management Rules in each State/UT.

2. Observation

2.1 Plastic Waste Generation

(a) Total Waste generation

35 SPCBs/PCCs have provided information on implementation of Plastic Waste Management Rules. The information as per Form VI of PWM Rules has been compiled and is placed at **Annexure I**. As per details provided by 35 States/UTs estimated plastic waste generation during the year 2020-21 is approximately **4126997TPA**. Percentage distribution of plastic waste generation in different States/UTs is illustrated in Fig.1. It is observed that maximum quantity of plastic waste is generated in **Telangana followed by Tamil Nadu, West Bengal & Uttar Pradesh** in that order.

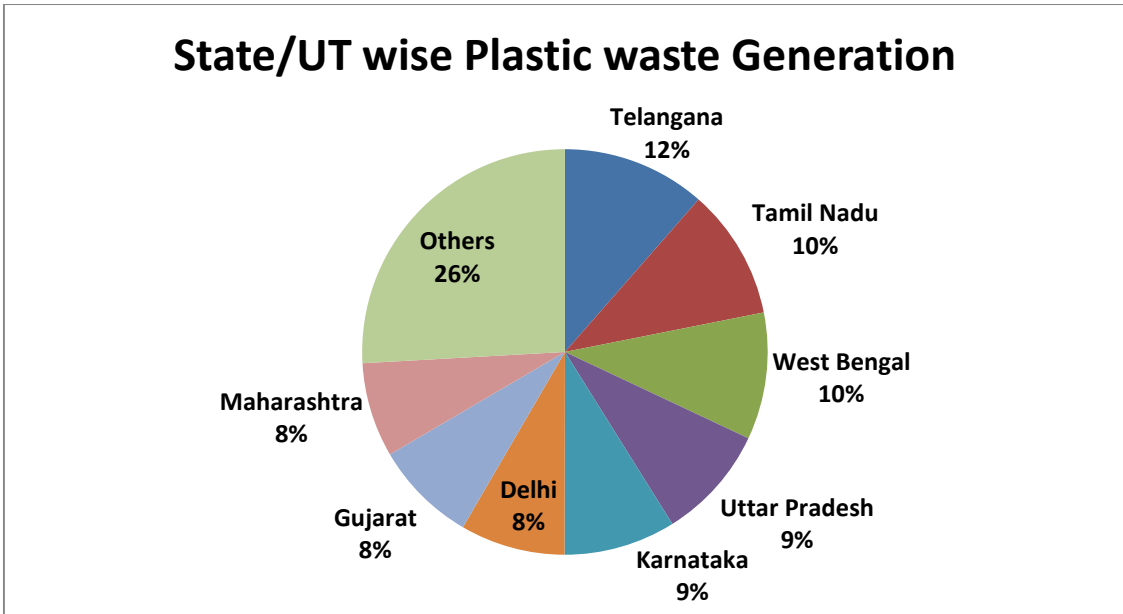


Fig.1: State/UT wise Plastic Waste Generation

(b) Per capita waste generation

Per capita plastic waste generation has been calculated based on the population of the states which have submitted their reports. The trend of per capita waste generation for the last six years (2016-21) is presented in Figure 2. It is observed that the per capita plastic waste generation has almost doubled over the last five years.

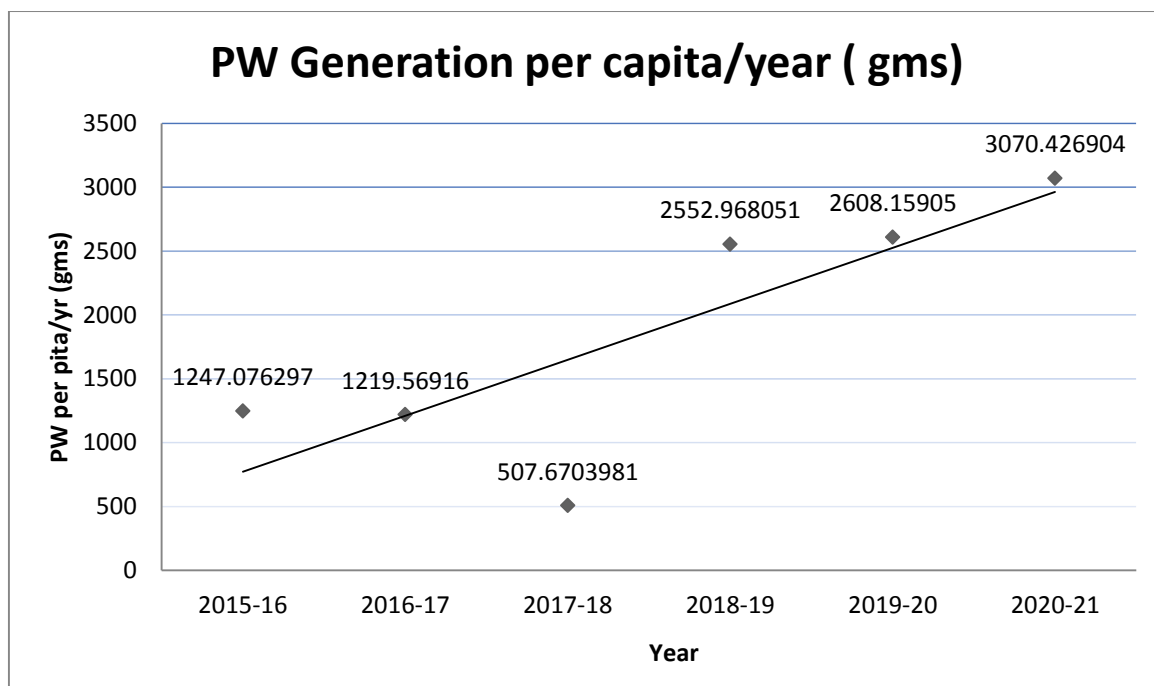


Fig. 2: Year wise Trend in Per capita Plastic Waste Generation trend

Statewise per capita plastic waste generation for the year 2020-21 is illustrated in Figure 3. Delhi, Goa & Telangana have reported the highest per capita plastic waste generation and Sikkim, Meghalaya & Tripura have reported the lowest per capita plastic waste generation.

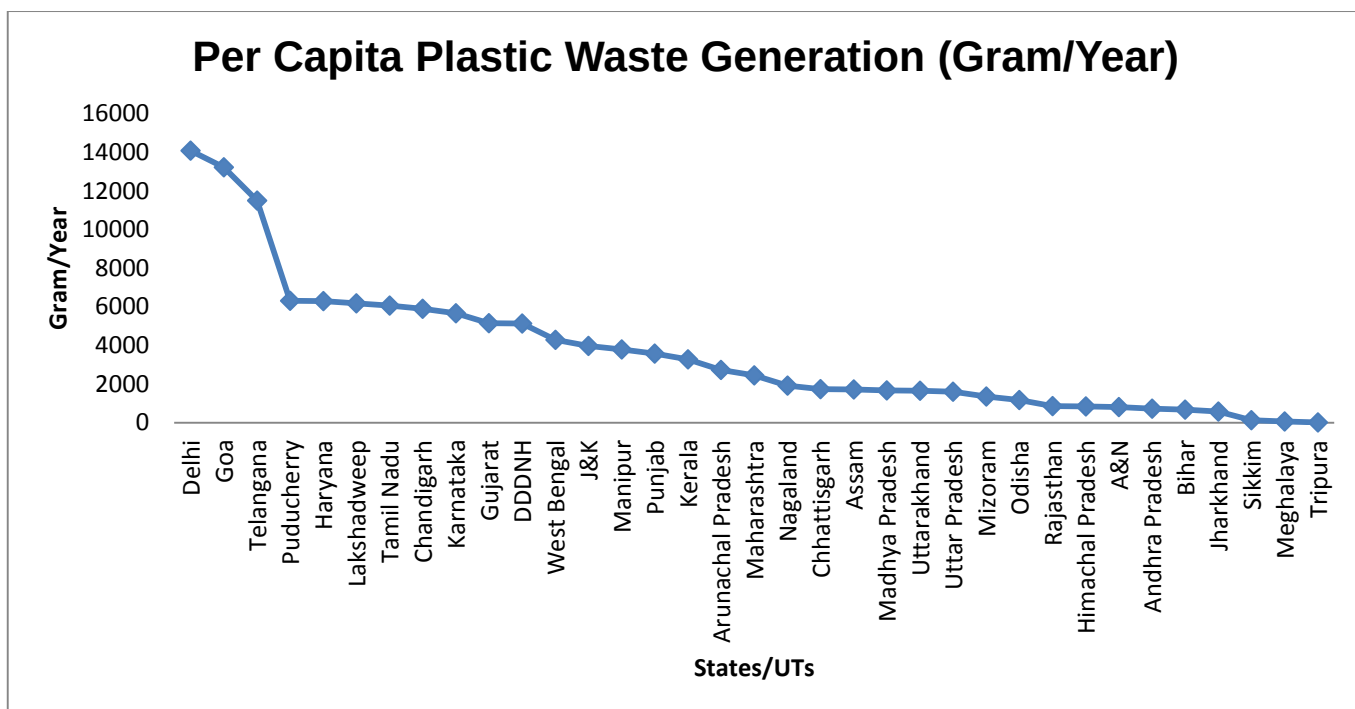


Fig. 3: Per capita State/UT wise Plastic waste generation

2.2 Status of Submission of Annual Report (AR) by ULBs to SPCBs/PCCs

As per provision 17(2) of PWM Rules “Every local body shall prepare and submit an annual report in Form –V to the concerned Secretary-in-charge of the Urban Development Department under intimation to the concerned State Pollution Control Board or Pollution Control Committee by the 30th June, every year”.

In 20 States / UTs (Andaman & Nicobar Island, Andhra Pradesh, Bihar, Chandigarh, Chhattisgarh, Delhi, Daman & Diu and Dadar & Nagar Haveli, Haryana, Jammu & Kashmir, Jharkhand, Karnataka, Manipur, Meghalaya, Nagaland, Odisha, Punjab, Rajasthan, Sikkim, Tamil Nadu, Uttar Pradesh, West Bengal) all ULBs have submitted the Annual Report to concerned SPCB/PCC. Status of submission of Annual report by ULBs and Gram Panchayats in each State/UT is given in the Table 1.0

Table 1.0: Status of submission of Annual Report by ULBs & GPs to SPCB/PCC

S.N o.	States/Uts	ULBs		VPs		Any other	
		Total No.	No. Submitted AR	Total No.	No. Submitted AR	Total No.	No. Submitted AR
1	A&N	1	1	70	GAP	GAP	GAP
2	Andhra Pradesh	110	110	GAP	GAP	GAP	GAP
3	Arunachal Pradesh	2	GAP	GAP	GAP	GAP	GAP
4	Assam	96	45	GAP	GAP	GAP	GAP
5	Bihar	142	142	GAP	GAP	GAP	GAP
6	Chandigarh	1	1	0	0	0	0
7	Chhattisgarh	166	166	GAP	GAP	GAP	GAP
8	DDN	6	6	GAP	GAP	GAP	GAP
9	Delhi	5	5	0	0	GAP	GAP
10	Goa	14	GAP	GAP	GAP	GAP	GAP
11	Gujarat	170	GAP	GAP	GAP	GAP	GAP
12	Haryana	86	86	GAP	GAP	GAP	GAP
13	Himachal Pradesh	54	GAP	GAP	GAP	GAP	GAP
14	J&K	80	80	GAP	GAP	GAP	GAP
15	Jharkhand	42	42	GAP	GAP	GAP	GAP
16	Karnataka	284	284	GAP	GAP	GAP	GAP
17	Kerala	93	66	941	306	0	0
18	Lakshadweep	0	0	10	10	NA	NA
19	Madhya Pradesh	383	381	22814	0	GAP	GAP
20	Maharashtra	403	394	27,891	GAP	GAP	GAP
21	Manipur	27	27	GAP	GAP	GAP	GAP
22	Meghalaya	7	7	GAP	GAP	GAP	GAP
23	Mizoram	23	17	155	141	NA	NA
24	Nagaland	39	39	19	GAP	GAP	GAP
25	Odisha	114	114	GAP	GAP	GAP	GAP
26	Pondicherry	5	3	10	7	GAP	GAP
27	Punjab	153	153	GAP	GAP	GAP	GAP
28	Rajasthan	196	196	GAP	GAP	GAP	GAP
29	Sikkim	7	7	16	0	0	0
30	Tamil Nadu	664	664	GAP	GAP	GAP	GAP

31	Telangana	140	GAP	GAP	GAP	GAP	GAP
32	Tripura	20	20	591	GAP	GAP	GAP
33	Uttar Pradesh	651	651	GAP	GAP	GAP	GAP
34	Uttarakhand	100	67	7791	0	GAP	GAP
35	West Bengal	125	125	3339	0	0	0

NA: Not applicable; GAP: Information not provided

2.3 Complete Ban on Use of Plastic Carry Bags and Implementation of Thickness >50 Microns Carry Bags as per Provisions 4(c & d, thickness criteria condition) of PWM Rules, 2018 & (column 3 – form vi) & Partial/Complete Ban on Use of Plastic Carry Bags (through executive order) (column 5 – form vi).

As per annual report submitted by 35 states/UTs summary of status of implementation of the above provisions of PWM Rules across various States/UTs is given below:

- **Complete ban on plastic carry bags:** 24 States/ UTs namely, Andaman & Nicobar, Bihar, Chandigarh, Chhattisgarh, Daman Diu and Dadar Nagar Haveli, Goa, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Lakshadweep, Madhya Pradesh, Maharashtra, Manipur, Odisha, Punjab, Puducherry, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, Uttar Pradesh.
- **Ban on plastic carry bags of thickness <50microns:** 5 States/UTs namely, Arunachal Pradesh, Jammu & Kashmir, Meghalaya, Mizoram, Nagaland have imposed ban on plastic carry bags of thickness <50microns
- **Status of implementation in remaining 6 states/UT:** Details are as given below:
 - **Andhra Pradesh:** Certain Urban Local Bodies like Tadipatri, Vijayawada, Tirupati&Bobbili have imposed ban on Plastic carry bags irrespective of their thickness. All local bodies have taken stand on ban on their own.
 - **Assam:** Not banned (only carry bags prohibited by rules are banned)
 - **Gujarat:** Complete ban in Gandhinagar City vide Notification No: VN (14)/Env-10-2008-2100-E Dated 28th June, 2011

- **West Bengal:** Orders have been issued by W.B Govt. and WBPCB to restrict the use & sale of plastic carry bags in ecologically fragile areas and in certain heritage & tourist spots.
- **Telangana:** Complete ban on <50-micron thickness plastic carry bags is under implementation.
- **Delhi:** No additional executive orders have been issued.

Details of Orders issued in various States/UTs regarding ban of plastic carry-bags/items is enclosed at **Annexure II**.

2.4 Details of Plastic Waste Management as per Provisions 5, 6 & 9 of PWM Rules, 2016, As Amended, 2018

Plastic waste generated by States/UTs is being utilized for different purposes such as recycling, road construction, Waste to Energy plants, waste to oil plants and in cement plants for co-processing.

Details for Plastic Waste Management have been provided by 25 states/UTs (A&N, Arunachal Pradesh, Assam, Bihar, Chandigarh, Delhi, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Mizoram, Nagaland, Odisha, Puducherry, Rajasthan, Tamil Nadu, Tripura, Uttar Pradesh, Uttarakhand, West Bengal).

However, Action plan for Plastic Waste Management has been submitted by 15 State/UTs (Andaman & Nicobar, Arunachal Pradesh, Assam, Chandigarh, Kerala, Maharashtra, Manipur, Mizoram, Nagaland, Odisha, Puducherry, Sikkim, Tripura, Uttarakhand, West Bengal). Brief summary of Plastic waste management is given in Table 2. Detailed Action plan submitted is placed at **Annexure III (A-H)**.

Table 2. Status of Plastic Waste Management

S. N o.	State/UT	Recycli ng(TP A)	Road Making(TPA)	Co-Processi ng(TPA)	RDF(TPA)	Othe r(TP A)	Pyroly sis	Total Waste processed (TPA)
1	A&N	NP	80.05	NP	NP	3.65	NP	83.7
2	Arunach al Pradesh	90	60	NP	NP	NP	NP	150
3	Assam	NP	NP	9490	NP	NP	NP	9490
4	Bihar	7673.6	NP	NP	NP	NP	NP	7673.6
5	Chandig arh	NP	NP	NP	1544.15	NP	NP	1544.15
6	Delhi	1150	NP	NP	NP	NP	NP	1150
7	Gujarat	NP	NP	65420	NP	NP	NP	65420
8	Haryana	NP	735	NP	NP	NP	NP	735
9	Himacha l Pradesh	828.6	NP	NP	NP	NP	NP	828.6
10	Jharkha nd	9185.2	NP	NP	NP	NP	NP	9185.2
11	Karnatak a	10800	NP	3600	NP	NP	NP	14400
12	Kerala	73000	915	1300.5	NP	NP	NP	75215.5
13	Madhya Pradesh	63400.7	405	55183	NP	NP	NP	118989
14	Maharas tra	29565	13505	25550	124830	NP	4918	198368
15	Manipur	182.5	NP	NP	NP	NP	NP	182.5
16	Mizoram	0.768	NP	5.99	NP	NP	NP	6.758
17	Nagalan d	NP	0.7	NP	NP	NP	NP	0.7
18	Odisha	44165	NP	4380	NP	NP	NP	48545
19	Puduche rry	3869	NP	943	NP	NP	NP	4812
20	Rajastha n	NP	NP	265.84	NP	NP	NP	265.84
21	Tamil Nadu	295482	15875	71200	NP	NP	NP	382557
22	Tripura	55	2.5	NP	NP	NP	NP	57.5
23	Uttar Pradesh	NP	NP	10252	NP	NP	NP	10252

24	Uttarakh and	NP	NP	3115	9058	NP	NP	12173
25	West Bengal	NP	NP	NP	NP	1470 95	NP	147095
	Total	539447	31578.3	250705	1354 32	1470 99	4918	1109180

State wise waste percent of plastic waste processed vis-a-vis plastic waste generated (States/UTs) is illustrated in Figure 4. Odisha, Tripura & Tamil Nadu have reported the highest waste processing and Haryana, Delhi & Nagaland have reported the lowest plastic waste processing.

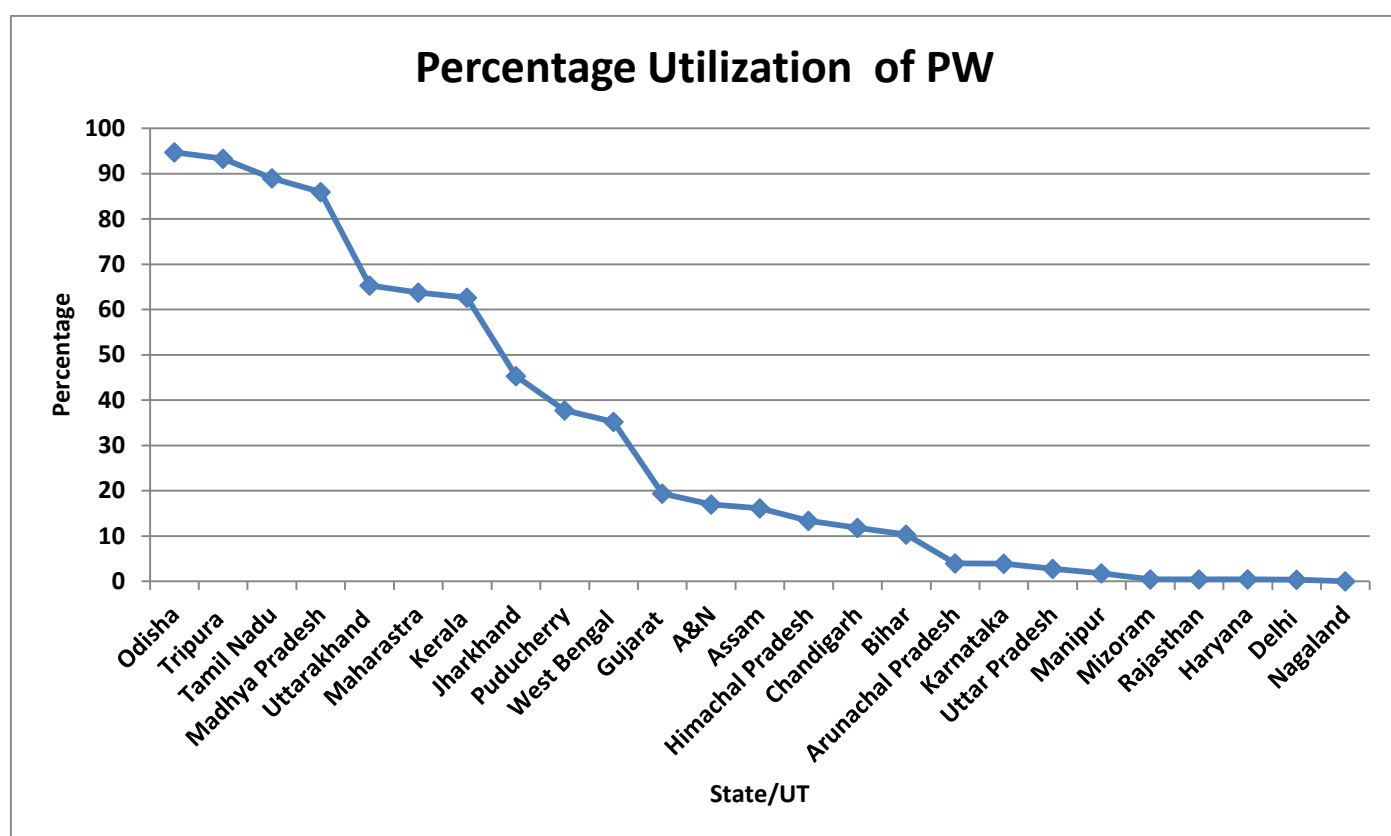


Fig 4.State/UT -wise Plastic Waste Management

2.5 Details of Registered Manufacturing/Recycling Units

As per the provision 13(1) of PWM Rules, 2018, all the plastic manufacturing/ recycling units shall be registered with the concerned SPCBs/PCCs. There are **5939** (3736–Plastic

Manufacturers/producers, 1207-Recyclers., 70-Compostable Mfg., 311-MLP) registered units in 29 States/UTs. There are no plastic carry bag manufacturing units in 5 States/UTs namely Arunachal Pradesh, Andaman and Nicobar, Mizoram, Sikkim, Lakshadweep. No information for DD& DHN provided in this regard.

However, as per provision 4(h) of PWM Rules, 2018 CPCB has issued total 194 certificates to manufacturer/seller for marketing and selling of compostable carry bags/products till now.

2.6 Details of Unregistered Plastic Manufacturing /Recycling Units

There are 615 unregistered plastic manufacturing/recycling units running in 5 States/UTs (Bihar, Punjab, Karnataka, Kerala, Uttarakhand,). No unregistered plastic units have been reported in 24 States/UTs (Andaman and Nicobar, Andhra Pradesh, Arunachal Pradesh, Chandigarh, Chhattisgarh, Goa, Haryana, Himachal Pradesh, Jharkhand, Lakshadweep Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Puducherry, Rajasthan, Sikkim, Tamil Nadu, Telangana, Tripura, Uttar Pradesh,). 6 States/UTs (Assam, Delhi, DDDNH, Gujarat, West Bengal & Tamil Nadu) have not provided the information regarding unregistered units operating in their jurisdiction.

2.7 Status of Marking & Labeling on Carry bags/Multilayered Packaging

Status of implementation is as given below:

13 States/UTs (Andhra Pradesh, Assam, Delhi, Gujarat, Haryana, Jammu and Kashmir, Manipur, Meghalaya, Nagaland, Punjab, Telangana, U.P., West Bengal) have informed that they have complied with the Rule on Marking & Labeling on Carry bags/Multilayered Packaging.

19 States/UTs (Adman and Nicobar, Arunachal Pradesh, Bihar, Chandigarh, Chhattisgarh, Goa, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Lakshadweep, Madhya Pradesh, Maharashtra, Mizoram, Odisha, Pondicherry, Rajasthan, Sikkim, Tamil Nadu,) have informed that the Rule is not applicable in their jurisdiction as complete ban on carry bags has been imposed in the respective State /UT.

The Rule has not been complied with in Daman Diu and Dadar Nagar Haveli, Tripura & Uttarakhand have not provided the information in this regard.

Further, as per Certificate issued by CPCB to manufacturer/seller for marketing and selling of compostable carry bags/products **“Each carrybag shall bear a label “COMPOSTABLE” IS/ISO:17088 titled as Specifications for “Compostable Plastic” in English & regional language and also have printed code and Certificate Number of “MANUFACTURER” on it.”**

2.8 Details of Violations & Action Taken on Non-Compliance of Rules

As per provision „12“ “the prescribed Authorities for implementation of Rules” of PWM Rules, 2018, **27 States/UTs** (Andhra Pradesh, Andaman and Nicobar, Assam, Bihar, Chandigarh, Chhattisgarh, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Mizoram, Odisha, Punjab, Puducherry, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand and West Bengal) have imposed fine, issued notices, closure directions to the defaulters & seized the material in their respective State/UT. Besides, no violations have been reported in **6 States/UTs** (Arunachal Pradesh, Lakshadweep, Meghalaya, Nagaland, Sikkim, Tripura). 2 State/UTs (DD& DNH, Jharkhand) have not submitted the information in this regard.

3.0 STATE- WISE OBSERVATIONS

Highlights of Plastic Waste Management status in different States/UTs have been enumerated in this section.

3.1 Andaman & Nicobar

- The estimated plastic waste generation in the state is approximately 492.34 TPA during 2020-21.
- The A&N Administration has completely banned on use, storage, import, manufacture, transportation, distribution or sale and disposal of plastic carry bags of all types vide A&N Gazette Notification No. 225, dt. 24.09.2019
- There is no plastic manufacturing or recycling unit operates in Andaman & Nicobar Islands. However there is 1 compostable manufacturer in the state.

- Enforcement drives are conducted regularly to implement the notifications and penalty amounting Rs. 306,000.00 was recovered from 1160 inspections.
- Scheme for exemption of freight charge for transportation of plastic, glass & E-waste notified in which 100% freight exemption is provided to transport waste plastic, glass and e-waste for recycling in main land. Approx.1530 tons of plastic waste has been sent to mainland till date.
- Port Blair Municipal Corporation has started 100 % source segregation in all 23 wards.
- 80 MT of plastic waste been used for road construction in the state recycling.
- The Andaman & Nicobar Administration has conducted 02 exhibitions displaying Alternatives to single use plastic in the month of May 2019 and August 2019 for promoting smooth transition to non-plastic alternatives.
- Bamboo straws made by SHG launched by Port Blair Municipal Council (PBMC) as an alternative to Plastic straws (SUP).

3.2 Andhra Pradesh

- The estimated plastic waste generation in the State is 39626.45 TPA (ULBs - 37,446.45 & Census Towns - 2,180) during the year 2020-21.
- Rule 4(c & d) for thickness criteria has been implemented in the state.
- There are 135 plastic manufacturing units (Producers 117& Recyclers- 18), 1 compostable plastic unit and no unregistered unit in the State.
- Certain Urban Local bodies like Tadipatri, Vijayawada, Tirupati & Bobili have put ban on plastic carry bags irrespective of their thickness. All local bodies have taken stand on ban on their own.
- Plastic waste is being collected and segregated by ULBs and sent to recyclers. Most of the Plastic waste is channelized through Kabadiwalas to recyclers. The non-recyclable plastic waste generated from the municipalities and from bio mining operating is being sent to Cement plants and partly for road formations.
- Violation of PWM Rules has been observed. Further State Urban Development Dept., constituted 721 Task force teams 240 tons of plastic carry bags was seized and Rs. 169 lakhs of fines was collected from defaulters.

- Annual Reports furnished by all ULBs & Census Towns.

3.3 Arunachal Pradesh

- The estimated plastic waste generation in the state is approximately 3755.9 TPA during 2020-21.
- There are no plastic manufacturing or recycling & unregistered units in State.
- 91.00 tons per year of plastic waste is channelized for recycling and One of the Towns namely Jairampur Town transports 60.00 MT per year of Plastic waste to Bordumsa for road construction activities.
- Complete ban on usage of plastic carry bags of thickness <50 microns.
- Violations of PWM rules have not been observed in the state.
- Plastic waste segregation is being done at the time of door to door collection.
- Out of (34) ULBs only 9 ULBs have submitted complete Annual Report to SPCB.

3.4 Assam

- The estimated plastic waste generation in the State is approximately 58765 TPA during 2020-21.
- Rule 4(c & d) for thickness criteria has been implemented in the state.
- There are 17 plastic manufacturing units, 5 multilayer plastics units, 5 recyclers and no unregistered units in the State.
- The State Government has imposed ban on plastic carry bags below thickness of 50 microns as well as others single used plastic items. not banned (only carry bags prohibited by rules are banned)
- Some of the ULBs channelize part of plastic waste and disposing non-recyclable plastic waste in cement kiln and Plastic waste sent for co-processing (26 TPD by ULBs and around 120 TPD of legacy waste).
- Status of marking and labeling is observed as per Rules.
- Violations of PWM rules have not been observed in the state
- State is having 6 Single Use plastic manufacturing units
- Out of 90 ULBs on 45 has furnished complete Annual Reports.

3.5 Bihar

- The estimated plastic waste generation in state is approximately 74263.6 TPA during 2020-21.
- Complete Ban has been imposed on plastic carry bags vide Gazette Notification No.943, dated: 24.10.2018 (Urban Area), No. 1043 Dt.11.12.2018 (Rural Area).
- Plastic carry bags (irrespective of thickness and size) banned complete in the State of Bihar vide Gazette Notification No. 943 dt. 24.10.2018 (Urban Area) and 1043 dated. 1.12.2018 (Rural Area). Single Use Plastics are also banned in the state of Bihar vide Gazette Notification No. 525 DT. 24.06.2021
- There are 16 registered plastic manufacturers/Recyclers in the state.
- 225 Producers, 203 Brand Owners & 36 Recyclers have been identified in the state out of which 33 are registered with CPCB, 19 with BSPCB and 16 recyclers registered with BSPCB.
- 7673.6 Tons of Plastic waste channelized for recycling, 74.09 tons of plastic waste channelized for reuse and 42461.15 is being sent to landfill.
- Violation of Rules was observed, proposed direction issued to 36 Recyclers, 225 Producers, & 203 Brand Owners which were not registered under PWM Rules, 2018.
- All 142 ULBs have submitted Annual Report to Bihar SPCB

3.6 Chandigarh

- The estimated plastic waste generation in the UT is approximately 13107 TPA during 2020-21.
- Complete ban has been imposed on plastic carry bags vide Notification no. ED/2019/1684, dated: 27.09.2019.
- Plastic waste in the city informally is going to recyclers. However, as two mechanical MRFs have been made functional, engagement of waste recyclers will be done soon for these facilities. 1544.15 MT RDF has been produced during the period (Jan to Dec 2021).
- Municipality staff collects solid waste from door to door and the segregated plastic waste is sent to RDF processing plant for final disposal.

- There are no registered & unregistered plastic manufacturing units in the UT. Further, there are 7 registered recycling units in the UT and registration for rest is in process.
- The Municipal Corporation Chandigarh has issued 961 nos. of challans issued to Defaulters/Violators (In Calendar year 2021).

3.7 Chhattisgarh

- The estimated plastic waste generation in the state is approximately 47450 TPA during 2020-21.
- Complete ban has been imposed on plastic carry bags vide Notification ED/2019/1648 dated: 27.09.2017.
- There are 22 registered units (10 plastic producers & 12 Plastic Recycling) in the State. However, the information related to unregistered units has not been provided.
- Government of Chhattisgarh has issued directions for ban on manufacture, storage, import, sale, transport and use of plastic carry bags, short life, PVC and chlorinated plastics i.e. advertising and publicity materials (banners, flexs, hoardings and foam boards of PVC etc.) and plastic items used for catering (cups, plates, glasses, bowls and spoons) in the state vide notification dated 27th Sep 2017. Further, vide clarification dated 13.01.2020, the state Government has also clarified that the non-woven carry bags are also banned in the state.
- Violation of Rules was observed, Urban Administration Department has issued notification dated 28.01.2019 for imposition of fine for open burning of solid waste including plastic waste. Total approx Rs. 46.12 Lakhs fine have been collected and 13400 nos. of cases have been filed against violators of the rules as on May 2021.
- 356 SLRM centers (Material Recovery Centers) have been established in 164 ULBs having infrastructure for segregation, collection, storage, disposal of recyclable plastic waste. 02 ULBs namely Ambikapur and Rajnandgaon have used plastic waste in road construction so far. 10 Cement Plants have signed the agreements with 69 ULBs to utilize Segregated Combustible Fraction.
- All 166 ULBs have submitted annual Report to Chhattisgarh SPCB.

3.8 Daman and Diu & Dadra Nagar Haveli

- The estimated plastic waste generation in the state is approximately 4726 TPA during 2020-21.
- Storage, sale & use of all kind of plastic bags are prohibited in the UT.
- 6 ULBs have submitted Annual Report to DDNH PCC.

3.9 Delhi

- The estimated plastic waste generation is approximately 345000 TPA during 2020-21.
- There are total 251 Producers, 315 recyclers and 364 plastic raw material/producer registered units in the UT.
- No executive order regarding ban of plastic carry bags has been issued in UT.
- Door to Door waste collection system from households is done by Municipal Staff, Waste management Agencies like UNDP and the collected waste is channelized to waste to energy plants and recycling units.
- Violation of Rules has been observed, Environmental compensation damages of Rs. 16, 97,500/- was imposed on 14 units found not complying. Out of which, 10 units have deposited EC of RS. 13,17,500/- .
- The information related to implementation of thickness criteria, ban on plastic carry bags, no. of unregistered plastic manufacturing units & proper marking and labeling has not been provided.
- All 5 ULBs have submitted the partial information in Annual Report.

3.10 Goa

- Approximately 29440.9 TPA of plastic waste generated in the state during 2020-21.
- Rule 4 (c&d) of PWM Rules regarding thickness criteria has been implemented in the State.
- Amendment made in the Goa non-biodegradable Garbage Control Act which bans single use plastic.

- There are 64 registered plastic manufacturing units, 1 Compostable plastic unit and no unregistered units in the State.
- Non-biodegradable waste collected by local bodies/ULBs is sent for co incineration in Cement plants through Goa waste management Corporation(GWMC). GWMC has set up three bailing stations i.e. Bicholim, Verna, Cocora. In additions to above bailing stations 11 ULBs and 4 village panchayats have bailing facility and 1 Solid Waste Management facility at Saligao.
- Violation of Rules has been observed, 631 cases have been booked and an amount of Rs. 4, 40,200/- has been collected from the defaulters.
- Information related to proper marking & labeling of as per provision 11 of PWM Rules, 2018 has not been provided.

3.11 Gujarat

- The estimated plastic waste generation in the state is approximately 337693.96 TPA during 2020-21.
- Total 287 plastic manufacturing, 03 Compostable units are registered in the State. There is no unregistered plastic manufacturer/recycler present in the State.
- As per provision '5(b)' of PWM Rules, 2018 approximately 94101.93 MT of plastic waste has been used for co-processing in cement plants.
- The use of plastic carry bags is banned in the city of Gandhinagarvide Notification No. VN (14)/ENV- 10-2008-2100-E, dated: 28.06.2011.
- In case of violation, Board & Local Body take necessary action against violating units. Show-Cause Notices have been issued to 44 plastic units, Direction (Closures) issued to 19 and Notice of Direction issued to 19 plastic units against the violation of Rules.
- 164 ULBs submitted Annual Reports.

3.12 Haryana

- The estimated plastic waste generation is approximately 185167.9 TPA during 2020-21.
- Complete ban imposed on use of plastic carry bags as per order of Govt. of Haryana Urban Local Body Dept. dated: 20.08.2013.
- Door to door waste collection & segregation is being done through private bodies in almost all MCs.
- Out of 88 MCs, 54 MCs have setup the Material Recovery Facility Centre for sorting and storage & Processing of Plastic Waste. Further, all the MCs have been directed to setup the MRF centres as per requirement and to manage their Plastic waste as per SWM Rules-2016 & Plastic Waste Management Rules-2016.
- For plastic waste (including other dry waste) segregation 416 Material Recovery Facilities in 54 ULBs have been set up in the whole State. Apart from Material recovery Facilities, ULBs have also identified 4274 rag pickers and Kabariwalas's and registered 3232 for collection and segregation of plastic waste.
- Directions have also been issued to all the ULBs vide letter memo no. XEN/DGULB/2020/2684 dated 12.08.2020 to start intensive drive for the enforcement of ban on the single use plastic waste along with seizing of plastic waste and imposition of penalty/fines on the violators.
- MC Gurugram has taken initiative Approx. 27km road has been developed and approx. 690 Ton of plastic has been used till date .Approx. 1.5 km road walking/jogging track has been developed at JharasaBundh and Approx.45 Ton plastic used is for interlocking paver tiles.Swap Plastic to grain project developed learning center for waste management under the name "Samadhan HUB" . Four numbers of Plastic bottle collection machines installed at high foot fall area for collection and recycling
-
- There are 63 registered plastic manufacturing units including 51 recyclers, 1 compostable plastic manufacturing unit and 28 MLP manufacturing units in the State.

- Violation of PWM Rules has been observed; 3097 Challans done for amount Rs.3659430 from January to December 2020 from the defaulters.
- Annual Report(AR) submitted by all Urban Local Body Deptt.

3.13 Himachal Pradesh

- The estimated plastic waste generation is approximately 6206.78 TPA during 2020-21.
- Door to Door waste collection system from house-holds is implemented and the collected plastic waste utilized in waste to energy plant, road construction & Co-processing in Cement kilns.
- Complete ban imposed on use of plastic carry bags in the entire State.
- There are 86 registered MLP manufacturing units and 2 registered compostable units, zero plastic carry bag and no unregistered units are present in State.
- 61 ULBs and 7 Cantonments Board have submitted AR to HP SPCB.
- Details regarding no. of violations & action taken on non-compliance of PWM Rules, 2018 have not been provided

3.14 J&K

- The estimated plastic waste generation in UT is approximately 51710.60 TPA during 2020-21.
- Rule 4(c) thickness criteria of carry bags have been complied with. Carry bags below 50 microns is banned.
- There are 254 registered plastics manufacturing units, 28 MLP manufacturing units in the State. There is no unregistered unit in the state.
- Violation of PWM Rules has been observed, 20.17 MT illegal polythene and 1.35 MT Single Use Plastic (SUP) have been seized. Compounding fees of Rs. 4,83,3000 recovered from defaulters.
- All ULBs (80) have submitted the AR to J&K SPCB.

3.15 Jharkhand

- The estimated plastic waste generation in state is approximately 20263.4 TPA during 2020-21.

- Complete ban has been imposed on use of plastic carry bags in the entire State vide Notification letter no. 3900, dated: 15.09.2017.
- Concessionaires have been appointed in 24 ULBs for implementation of Solid Waste Management. Segregation of waste has been initiated in almost all ULBs. Reverse vending machine has been installed at Ranchi, Dhanbad & Jamshedpur cities for recycling of plastic bottles as pilot project. In Chas & Jamshedpur plastic has been used for Road construction, Co-processing in Cement plant.
- There are 59 registered plastic manufacturing units in the State.
- 42 ULBs have submitted AR to Jharkhand SPCB.

3.16 Karnataka

- The estimated plastic waste generation in state is approximately 368080 TPA during 2020-21.
- Government of Karnataka has imposed complete ban on manufacturer, use and sale of carry bags.
- There are 239 plastic manufacturing / recycling units & 128 unregistered plastic manufacturing/recycling units in the State.
- 141 Decentralized dry waste Collection Centre (DWCC) is established at ward level to collect, segregate and recycled the dry waste from households and commercial establishment.
- Informal waste pickers are involved in dry waste collection system.
- Bruhat Bengaluru MahanagaraPalike (BBMP) has collected plastic waste approx. 1,44,000 tonnes during year 2020-21.
- BBMP has established 2 facilities for processing and disposal of plastic waste of capacity 10 TPD each. In addition there are 66 registered plastic recycling units in Bengaluru.
- Around 36000 TPA of low value plastic is supplied cement plants., approximately 1,08,000 TPA is channelized for recycling.
- Approx. 49056 TPA of low value plastic is supplied to cement plants.
- Status of marking and labeling is observed as per Rules.

- Violation of Rules have been observe, Director of Municipal Administration has conducted 2537 raids and Rs. 19.60 Lakhs fine was collected and about 2563 Tons of banned plastics seized during raids.
- 283 local bodies, other than Bengaluru BMP, have submitted the Annual Report to KPCB.

3.17 Kerala

- The estimated plastic waste generation is approximately 120063.87 TPA during 2020-21.
- Complete ban has been imposed on single use plastic items including plastic carry bags irrespective of thickness in the state w.e.f. 01/01/2020 vide G.O.(Ms) No. 6/2019 Env dated 27/11/2019; G.O.(Ms)No. 2/2020/ENVt dated 27-1-2020 and Env t dated 16/02/2020.
- There are 1266 manufacturers, 82 producers, 1 compostable plastic unit and 99 recyclers registered & no unregistered plastic manufacturing/recycling units in the State
- Detail of Plastic waste utilization is as given below:
 - i. Recycling: 3.12 TPD
 - ii. Road Construction: 1552 MT
 - iii. Co-processing: 1551 MT
- Violation of PWM Rules, 2018 have been observed in the state Officials from District PCB inspected various shops and market places throughout the state and identified 93 number of violators. Notice imposing Rs. 10,000/- as fine issued to each violators.
- 257 local bodies (65 urban) have submitted AR to Kerala SPCB.

3.18 Lakshadweep

- The estimated plastic waste generation in the State is approximately 523 TPA during 2020-21.
- The administration has banned the single use plastic items 23 nos as per Notification F.No. 66/33/2019 E&F dated 28.04.2021

- There are no registered/unregistered plastic manufacturing units in the State.

3.19 Madhya Pradesh

- The estimated plastic waste generation in the State is approximately 138483.58 TPA during 2020-21.
- Collected plastic waste is utilized as:
 - Recycling: 63400.651 MT,
 - Co-processing: 55183 MT
 - 405 MT in road construction
- Complete ban has been imposed on plastic carry bags in the State vide Notification No. F-5-2015-18-5, dated: 24.05.2017.
- There are 78 plastic manufacturing and 116 recycling units, 26 MLP and 1 compostable plastic manufacturing unit registered and no unregistered plastic units in the State.
- Violation of PWM Rules, 2018 has been observed. Total 15261 violators have been found and 24 MT of polythene seized and Rs. 42 lakhs penalty has been imposed by ULBs.
- All 381 ULBs have submitted the Annual Report to MP SPCB.

3.20 Maharashtra

- The estimated plastic waste generation in state is approximately 3,11,254 TPA during 2020-21.
- Complete ban has been imposed on certain plastic products like
 - i. Plastic bags with or without handle irrespective of size and thickness
 - ii. Single Use disposable items like cups, plates, straws, spoonsetc.
 - iii. Non-woven Polypropylene bags vide Maharashtra Plastic and Thermocol Products Notification, 2018 dated: 23.03.2018 and amendment dated 11.04.2018, 30.06.2018 & 14.06.2019.
- The efficiency of plastic waste collection and segregation is 81% and disposal is 64%.

- Collected plastic waste is utilized as:
 - Quantity recycled (Tons)- Plastic Granules: 29,485
 - Quantity recycled (Tons)- Pyrolysis: 4,918
 - Quantity recycled (Tons)- Road Construction: 13,513
 - Quantity recycled (Tons)- RDF (Refuse Derived Fuel) : 124,725
 - Quantity of Plastic Waste sent to Landfilling facility (Tons) : 23,237
- There are 6 plastic manufacturing unit out of 6 plastic producing units, 3 manufacture plastic packaging including Multi-layer plastic. Further 7 registered compostable plastic manufacturing units and 111 recycling units are present in the state.
- Violations observed and the following actions have been taken as per Rules:
 - Issued closure directions to 405 plastic and thermocol manufacturing industries
 - Collected fine of Rs. 3.91 Cr from shops/ establishments through joint survey with local bodies as well as independently in FY 2020-21, for non-compliance with the Maharashtra Plastic Notification
 - Around 1425 tonnes of banned plastic items have been seized in FY 2020-21 for non-compliance with the Maharashtra Plastic Notification
- 394 out of 403 ULBs have submitted the Annual Report to Maharashtra SPCB.

3.21 Manipur

- The estimated plastic waste generation in the State is approximately 10303 TPA during 2020- 21.
- Source segregation carried out by the ULBs in their respective jurisdiction and segregated waste are channelized to recycling units.
- There are 4 plastic manufacturing and no unregistered plastic units in the State. 1 unit manufacturing carry bag from virgin raw material, 1 unit of recycling and waste collection center and 2 units of partial recycling unit (waste collection center).

- Status of marking and labeling is observed as per Rules.
- Annual Reports furnished by all 27 ULBs.
-

3.22 Meghalaya

- Plastic waste generation in Resubelpara and William Nagar is 191 TPA whereas details regarding plastic waste generation has not been submitted by other municipal boards.
- Use and sale of Plastic bags less than 50 microns has been prohibited and public notice has been issued regarding compliance of PWM.
- There are 7 no of plastic manufacturing units & no unregistered plastic manufacturing/recycling units in the State.
- Plastic waste is segregated from dry waste at dump site and collected for compaction of bailing. One co-incineration plant of plastic and solid waste is ready. 1 km road has been constructed using plastic waste at west Khasi hills.
- Status of marking and labeling is observed as per Rules.
- Raids/checking/Surveys conducted and no violation has been observed in the State.

3.23 Mizoram

- The estimated plastic waste generation in state is approximately 1514.51 TPA during 2020- 21.
- Complete ban on usage of carry bags less than 50 micron within Municipal Corporation Area already enforced. Govt already banned packaged drinking water in plastic bottles in every government programmes/functions..
- 0.768 MT of recyclable plastic wastes are collected by various Brand Owners through PROs . 5.990 MTA utilized in co-processing
- There are no registered & unregistered plastic manufacturing/recycling units in the State.

- 136 shops found using polythene less than 50 microns for packing, Confiscated & Fine has been imposed.
- Only Aizawl Municipal Corporation and 16 ULBshas submitted the Annual Report to MPCB.

3.24 Nagaland

- The estimated plastic waste generation in the state is approximately 565 TPA during 2020-21.
- Government of Nagaland has issued notification restricting use of all single use plastic <50 microns, especially plastic bags and plastic cutleries including Styrofoam and thermocol disposable plates.
- Status of marking and labeling is observed as per Rules.
- There are 4 registered plastic manufacturing units & no unregistered plastic manufacturing/recycling unit in the State.
- No violation of PWM Rules, 2018 has been observed in the State.
- 3 Municipal bodies and 36 town councils have submitted the Annual Report.
-

3.25 Odisha

- The estimated plastic waste generation in the state is approximately 51269.9 TPA during 2020-21.
- Govt. of Odisha has imposed complete ban on plastic carry bags irrespective of size thickness in all ULBs of the State of Odisha.
- Plastic waste sent for co-processing is 283.132 TPA and Plastic waste use for granules making - 1452 TPA
- There are 20 registered plastic manufacturing units & 6 unit of multilayer packaging units. No unregistered plastic manufacturing/recycling unit in the State.

- All ULBs have been instructed to implement the provision of PWM Rule, 2016. All ULBs have been instructed to send segregated plastic waste in nearby cement manufacturing units for co-processing of the waste in cement kilns.
- State Level Advisory Committee has been constituted under the Chairmanship of Principal Secretary, Housing and Urban Development Department Govt. of Odisha.

3.26 Puducherry

- The estimated plastic waste generation in the state is approximately 12754 TPA during 2020-21.
- Govt of Puducherry has imposed total ban on Single Use Plastics with effect from 02.08.2019.
- All local bodies have identified and established Material Recovery Facility (MRF) within their jurisdiction and collected, segregated and sending Plastic Waste for recycling/reprocessing.
- Some of the ULBs disposing the plastic waste through co-processing in cement Kilns, like Dalmia Cements.
- The Producer Responsibility organizations are collecting the plastic waste from their units and sending it for authorized recycling units and for co-processing. So far, 943 MT of plastic waste is collected and disposed by PROs and Local Bodies.
- There are 49 plastic manufacturing / recycling, 4 MLP manufacturing, 2 compostable plastic registered plastic units & no unregistered plastic manufacturing / recycling units in the State.
- Violation of Rules has been observed, Units which were manufacturing SUP were closed by issuing directions, stockiest, who involved in stocking and storing of banned SUP items were sealed, 2 tons of banned plastic items were seized.
- As per the provision of PWM Rules, 2016, Bye-laws have been framed by the ULBs. As per the report received from the ULBs, Rs. 50,000/- have been received from the violators.

- 5 municipalities and 10 commune panchayats have submitted the Annual Report

3.27 Punjab

- The estimated plastic waste generation in the state is approximately 108332 TPA during 2020-21.
- Government of Punjab has imposed complete ban on sale, recycling, use, manufacturing, stocking & recycling of carrybags in the State w.e.f. 01.04.2016, Notification issued by Dept. of Local Govt. vide notification no. 5/18/2016-4lg4/692717/1 dated: 18.02.2016 and Dept. of Rural Development & Panchayat, vide notification no. S.O.438/P.A.9/1994/S30/2016 dated 29.03.2016.
- All the ULBs of the State have started Door to Door collection and source segregation of solid waste and the segregated recyclable plastic waste is channelized to authorized recyclers waste management agencies/kabaris from 235 Mater Recovery Facilities (MRF), which have been setup in the State till 31.12.2020
- There are 243 plastic manufacturing/recycling units, 2 MLP manufacturing units, 5 compostable plastic units & 35 unregistered plastic manufacturing/recycling units in the State.
- Violation of PWM rules were observed 51 no. of plastic units were issued show-cause notices for not obtaining registration under the Plastic Waste Management Rules, 2016.
- 153 ULBs have submitted the Annual Report to PPCB.

3.28 Rajasthan

- The estimated plastic waste generation is approximately 66324.57 TPA during 2020-21.
- There are 101 plastic manufacturing and 12 Multilayer plastic units registered and no unregistered plastic units in the state.

- State Govt. has imposed complete ban on manufacture, storage, import, sell or transport of plastic carry bags vide notification dt. 21/07/2010 irrespective of thickness.
- Plastic waste Collection is 16437.005 TPA and Co-processing is 265.845 TPA in the state.
- Violations have been observed in the state, total violations – 48 and letter/Notices issued to 48.
- 196 Municipal authorities have submitted the Annual Report.

3.29 Sikkim

- The estimated plastic waste generation is approximately 82.75 TPA during 2020-21.
- There are no plastic manufacturing/ recycling/ Multilayer plastic units registered in the state.
- The Stat Govt. has imposed ban on the sale & use of plastic haing less than 50 microns thickness vide Chief Secretary, Govt. of Sikkim Notification No. 08/RM&DD./San. Dated 09/08/2019
- Plastic carry bags have been banned in Sikkim vide Urban Development Notification no. GOS/UD&HD 97-98/6(85) dated 4th June 1998
- Out of 07 ULBs, Gangtok Municipal Corporation Singtam Nagar Panchayat has disposed plastic waste to NHIDCL for road construction.
- Notice has been issued to al PIBOs through IPR department vide F.NO. 1073/SPCB/527 dated 07/07/2021 for information to general public.
- 07 ULBs have submitted the Annual Report.

3.30 Tamil Nadu

- The estimated plastic waste generation is approximately 430107 TPA during 2020-21. TN Govt. in G.O. (MS). No. 84 dated: 25.06.2018, notified ban on manufacture, store, supply, transport, sale or distribute of use and throwaway Plastics irrespective of thickness including plastic carry bags. w.e.f. 01.01.2019.

- Plastic waste collected is segregated, low value plastic & MLP used for Road laying, recyclable plastic waste sold to recyclers and non-recyclable plastic waste disposed to cement industries for Co-processing.
- There are 305 plastic manufacturing/recycling units (Recycling Units: 230 Nos. Plastic Manufacturing Units: 15 Nos.) , 3 MLP manufacturing units & 14 no. of compostable plastic manufacturing units in the State.
- TNPCB is issuing Consent under Water and Air act to plastic manufacturing (Producers)/recycling units located in industrial and commercial Zones and Consent is not issued to units located in residential areas.
- Violations have been observed, Closure Direction and disconnection of power supply were issued to 6 plastic recycling units who were in operation without obtaining consent from the Board and Registration as per PWM Rules, 2016
- 15 Municipal Corporations, 121 Municipalities and 528 Panchayats have submitted annual report to TNPCB.

3.31 Telangana

- The estimated plastic waste generation in the state is approximately 472675 TPA during 2020-21.
- Complete ban on <50 micron thickness plastic carry bags is under implementation.
- Door to door waste collection done by staff of ULBs and segregated plastic waste utilized for recycling 8912 MT.
- There are 316 plastic manufacturing/recycling units, 2 MLP manufacturing units and 5 compostable unit & no unregistered plastic manufacturing / recycling units in the State.
- Marking is being carried out on the carry bags.
- Violation has been observed in the state and Closure Direction and disconnection of power supply were issued to 6 plastic recycling units who were in operation without obtaining consent from the Board and Registration as per PWM Rules, 2016

3.32 Tripura

- The estimated plastic waste generation is approximately 61.65 TPA during 2020-21.
- Government of Tripura has issued notice to completely ban all kind of plastic bags in Tripura. Further revised notification has been issued enhancing monetary penalty for use, sell, store and import of banned plastic carry bags.
- There are 20 no. of plastic items manufacturing units and 12 nos. of recycling units established in Tripura. Among them no plastic carry bag manufacturing unit is there. Further, there are 2 Multilayer plastic units and no unregistered plastic unit is in the state.
- 20 ULBs collect and dispose plastic waste as per PWM Rules.
- Violations have been observed in the state. Authorized officer conducted raids against Plastic Carry bags in various markets. TSPCB has received of amount Rs. 1,12,760/- as a monetary penalty.
- 20 ULBs have submitted the Annual Report.

3.33 U.P.

- The estimated plastic waste generation in the state is approximately 375950 TPA during 2020-21.
- Government of Uttar Pradesh has imposed prohibition on the use, manufacture, sale, distribution, storage, transport, Import and Export of cups, glasses, plates, spoons, tumblers etc. made up of plastic or thermocol disposable after one time
- in the State w.e.f: 15.08.2018, vide Notification no. 1056/9-7-18-29(Lucknow)/18, Dated Lucknow: 15 July, 2018.
- There are 130 plastic manufacturing, 13 recycling units, 59 MLP manufacturing units, 4 compostable plastic units & no unregistered plastic manufacturing/recycling units in the State.

- Violation of Rules has been observed and show-cause notices issued to 353 Brand owners, Producers, defaulter Plastic units. Prohibited item confiscated is 936.72MT and fine imposed is Rs. 12.42 cr.
- 651 ULBs have submitted the Annual Report to UPPCB.

3.34 Uttarakhand

- The estimated plastic waste generation is approximately 18647.7 TPA during 2020-21.
- Government of Uttarakhand has imposed complete ban on sale, use & storage of Plastic carry bags, plates, glasses, cups & packaging items, vide Notification No. 88/x-3-17-13(11)/2001, Dated: 25.01.2017.
- Plastic waste Management in the state is
 - Recycled 5454.994 MT
 - Co-Processed 3115.767 MT
 - RDF Production since April 2020 to Nov 2021 is 90579.58 MT
- There are 6 plastic manufacturing/recycling units, 2 compostable plastic units, 28 MLP manufacturing units and 15 unregistered plastic manufacturing/recycling units in state.
- Violations have been observed and Board has issued directions to all District Magistrates for compliance of PWM Rules, 2016.
- Out of 91 ULBs report of 87 ULBs received and out of 7791 Gram Panchayats none have submitted the Annual Report to Uttarakhand Environmental Protection & Pollution Control Board.

3.35 West Bengal

- The estimated plastic waste generation is approximately 417925 TPA during 2020-21.
- Government of West Bengal has imposed partial ban, several Orders for restricting use & sale of plastic carry bags in ecologically fragile areas, heritage & tourist spots had been issued by WBPCB

- 2 municipalities named Uttarpara, Kotrungang, Konnagor Municipality dispose part of plastic waste through NEPRA Environmental Solutions Pvt. Ltd Ahmedabad.
- KMC has set up a Plastic Waste Management Plant of capacity 2TPD at Dhapa.
- There are 128 plastic manufacturing/recycling units, 2 compostable, 11 MLP manufacturing units
- Status of marking and labeling is observed under guidelines issued to Stake holders regarding this issue.
- Violations have been observed and Board has imposed fine on 52.

4. Best Practices in Plastic Waste Management

The best practices as reported by the SPCBs/PCCs in their Annual Report is summarized in Table 3.

Table 3. Best Practices by adopted by States/UTs

S.No	Name of the SPCB/PCC	Best Practices
1.	A&N	• Under Andaman & Nicobar Islands scheme for exemption of Freight Charges for transportation of Plastic, Glass & E-waste, 100% freight exemption is provided to transport waste plastic, glass and e-waste for recycling in Mainland. • Plastic waste utilized in road construction
2.	Andhra Pradesh	• The ULBs are collecting and segregating the plastic waste and sending it to recyclers. Most of the Plastic waste is channelized through Kabadiwalas to recyclers. • The non-recyclable plastic waste generated from the municipalities and from bio mining operations is being sent to Cement plants and partly for road formations.

3.	Arunachal Pradesh	- In Palin district, Waste are categorized into biodegradable waste and non-biodegradable waste. The biodegradable waste from household is reused as manure in kitchen garden - Plastic being used in Road construction in several districts
4.	Assam	Plastic waste used for co-processing
5.	Bihar	Plastic waste channelized for recycling and reuse
6.	Chandigarh	- Plastic waste is informally going to recyclers. - Environmental compensation has been imposed for violation PWM rules.
7.	Chhattisgarh	- Material Recovery Centers have been established. - Plastic waste is being used in road construction and cement plants.
8.	Delhi	- Environmental Compensation of Rs. 88,00,000/- levied for violation of PWM Rules. - NDMC deployed metro waste handling pvt ltd for waste collection and transportation.
9.	Goa	Non- biodegradable waste sent to co-processing plants for which bailing plants have been set up by Goa Waste Management Agency, Local bodies as well as Village Panchayats.
10.	Gujarat	65420 T of plastic waste sent for co-processing during 2020-21.

11.	Haryana	- All Municipal corporations have been directed to set up material recovery facilities(MRF) . 54 out of 87 MCs have set up the MRF - Plastic waste is being used for road construction and 45 Ton plastic used for interlocking paver tiles. - Swap Plastic to grain project to remove the littered plastic on road side. - Developed learning center for waste management under the name “Samadhan HUB”. - Four numbers of Plastic bottle collection machines installed at high foot fall area for collection and recycling
12.	Himachal Pradesh	Plastic waste used in waste to energy plants; co-processing and road construction.
13.	Jharkhand	Reverse Vending Machine has been installed at Ranchi, Dhanbad& Jamshedpur cities for recycling of plastic bottles as pilot project. ULB-wise Action Plan prepared for management of plastic waste Plastic waste being co-processed/ used in road construction.
14.	Kerala	Plastic being used for tarring of roads
15.	Madhya Pradesh	55183 MT of plastic waste co-processed in Cement kilns; 63400.651 MT processed by recyclers; 405 MT used in road construction.

16.	Maharashtra	- Collection efficiency 81%; Recycling & coprocessing – 55%.4 , - Pyrolysis & Road construction > 5000 TPA each
17.	Manipur	Source segregation carried out by the ULBs in their respective jurisdiction. Segregated wastes are channelized to recycling units.
18.	Meghalaya	Co-processing to be initiated; Plastic usage in road construction started
19.	Mizoram	5.990 MT of Plastic Waste used for co-processing
20.	Nagaland	Polymer Bitumen road is also practiced in the state.
21.	Odisha	- Plastic waste has been included in Schedule of rate department for use of the same in construction of road. 283.132 TPA of plastic waste used for co-processing and 1452 TPA use for granules making
22.	Pondicherry	- Usage of plastic in road construction and co-processing initiated 3710 T plastic waste utilized in recycling & 943 MT used in co-processing.

23.	Punjab	235 Mater Recovery Facilities (MRF) have been setup in the State
24.	Rajasthan	265.845 T of plastic waste utilized for co-processing.
25.	Sikkim	Plastic waste used in road construction.
26.	Tamil Nadu	- Collection efficiency of plastic waste 96.4 %; 468 MRFs established; Approximately 3,64 ,225 MT of plastic waste sold and 109.67 crore rupees generated as revenue which was distributed to sanitary workers during the period August 2017 to March 2021. 295482 T channelized for recycling, 71200 TPA of plastic waste used for co-processing in Cement plants and for road laying and remaining inerts are disposed in landfills. - Recyclable plastic waste 1010 MRF Facilities have been established by Chennai Corporation and the respective other corporation and Municipalities, 328 MRFs have been established.
27.	Telangana	206 Dry Resource centers established in 139 ULBs.
28.	Tripura	100% collection of plastic waste. - Plastic waste used in road construction.

29.	Uttar Pradesh	• 2 Waste to Oil units with capacity 2700 TPA set up • Plastic usage in road construction initiated • Paper mills have tied up with cement mills for co processing of their waste • Total 17122 T of plastic waste has been disposed off from 2019 to July 2021.
30.	Uttarakhand	• Plastic waste used in co-processing is 6653.54 Ton in April 2019 to March 2021 • Total Plastic recycled is 16437.9 in year 2019 to 2021.

5.0 Environmental Performance (PWM) based rating of States/ UTs

The performance of States/ UTs in different components of Plastic Waste Management has been assessed and the States/ UTs have been ranked based on their overall performance in Plastic Waste Management. Different components included in the performance include

- Per capita PW Generation
- Unregistered plastic units in the state.
- Provision for marking and labelling implementation
- Action Plant for plastic waste Management
- Compostable plastic units in the state.

The template of the performance assessment is placed at **Annexure IV** and Environment Performance based rating is placed at **Annexure V. Following are the findings of assessment.**

(a) Ranking of States:

The score awarded to individual States/ UTs is given in Table 4 and the comparative assessment is illustrated in Figure 5. As can be seen from the information presented – Maharashtra has obtained the highest score (76) followed by Odisha (69), Pondicherry (67) A& N islands (63) in that order. States/UTs which have obtained the lowest score in performance in Plastic Waste management are Meghalaya, Arunachal Pradesh, Lakshadweep.

TABLE 4 : Environmental Performance (PWM) based ranking of States/UTs

S.No	States/UTs	Score Obtained
1	A&N Islands	63
2	Andhra Pradesh	48
3	Arunachal Pradesh	39
4	Assam	51
5	Bihar	28
6	Chandigarh	50
7	Chhattisgarh	38
8	Daman	27
9	Delhi	33
10	Goa	30
11	Gujarat	36
12	Haryana	40
13	Himachal Pradesh	38
14	Jammu & Kashmir	30
15	Jharkhand	36
16	Karnataka	35
17	Kerala	62
18	Lakshadweep	18
19	Madhya Pradesh	56
20	Maharashtra	77
21	Manipur	50
22	Meghalaya	27
23	Mizoram	41
24	Nagaland	49
25	Odisha	69
26	Puducherry	67
27	Punjab	31
28	Rajasthan	41
29	Sikkim	37
30	Tamil Nadu	55
31	Telangana	30
32	Tripura	48
33	Uttar Pradesh	48
34	Uttarakhand	45
35	West Bengal	63

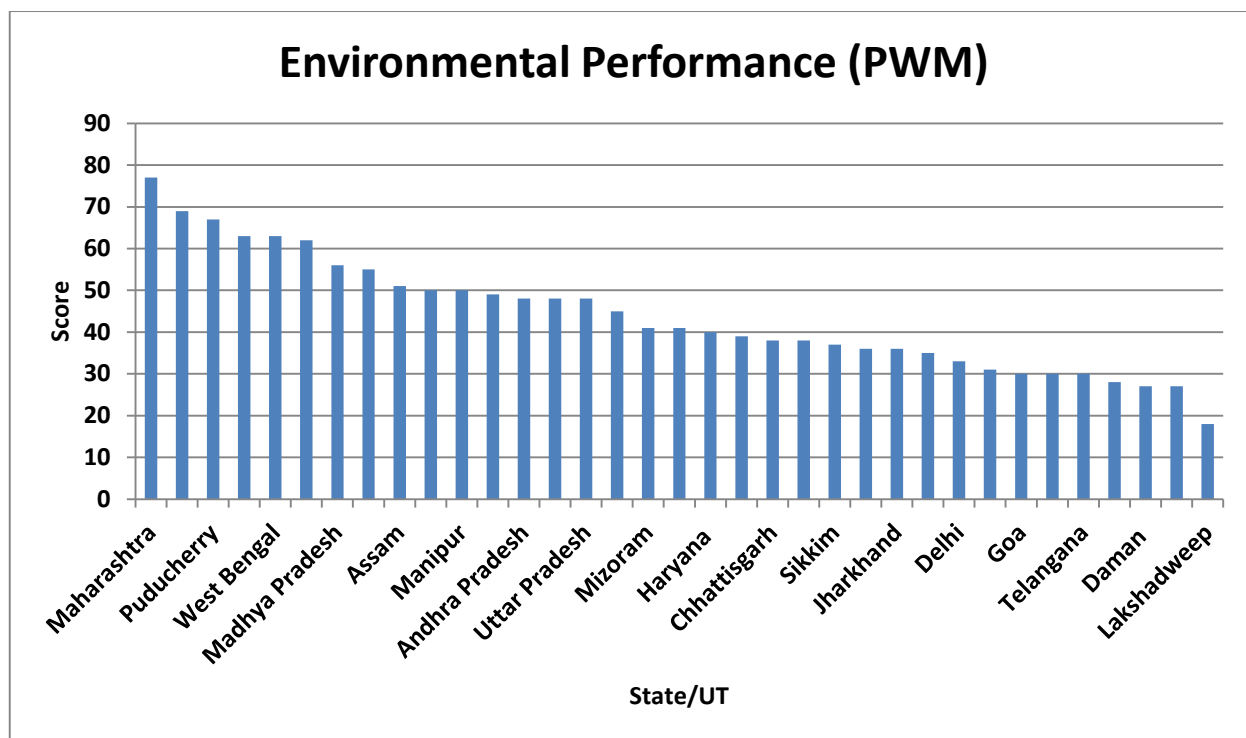


Figure 5: Environmental Performance (PWM) based ranking of States/ UTs

(a) Percentage of waste Processed:

Seven states (Kerala, Madhya Pradesh, Maharashtra, Odisha, Tamil Nadu, Tripura, Uttarakhand) are processing more than 50% of plastic waste generated in their jurisdiction. Three states/UTs (Jharkhand, Puducherry & West Bengal) are processing 50% to 30% of plastic waste generated whereas remaining 25 states/UTs are processing less than 20% of plastic waste generated in their jurisdiction. 10 states/UTs (Andhra Pradesh, Chhattisgarh, DD&DNH, Goa, J&K, Lakshadweep, Meghalaya, Punjab, Sikkim, Telangana) processing 0% of plastic waste in their jurisdiction.

(b) Action Plan

15 States/UTs have submitted Action plan for Plastic Waste Management.

Further as details in Form IV and Action plan **15 States/UTs** (Arunachal Pradesh, Bihar, Delhi, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Mizoram, Odisha, Puducherry, Tamil Nadu, Tripura,) has reported recycling of plastic waste.

9 states/UTs (A&N, Arunachal Pradesh, Haryana, Kerala, Madhya Pradesh, Maharashtra, Nagaland, Tamil Nadu, Tripura) have reported road making from plastic waste. 13 states/UTs (Assam, Gujarat, Karnataka, Kerala, M. P., Maharashtra, Mizoram, Odisha, Pondicherry, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand) have reported co-processing in their jurisdiction. 3 states/UTs (Chandigarh, Maharashtra & Uttarakhand) have reported utilization of plastic waste for RDF making.

(c) Compostable plastics:

Out of 35 states/UTs only 16 states/UTs are having 70 number of compostable plastic manufactures/sellers in their jurisdiction.

However as per CPCB, out of 35 states/UTs 23 states/UTs having 194 certified manufactures/sellers. Three states/UTs (DD&DNH, Puducherry & Himanchal Pradesh) are having more than 15% of compostable plastic manufacturing capacity with respect to the plastic waste generation in their jurisdiction.

(d) Best Practices:

The States/ UTs were ranked on a score of 10 as per the best practices for plastic waste management followed in their jurisdiction. Tamil Nadu and Maharashtra have obtained the highest score of “9” in this section. 20 States/ UTs have obtained a score of “8” in this section.

6.0 Recommendations

- a. Annual Report complete in all respects to be submitted by all concerned local authorities to SPCBs/PCCs.
- b. SPCBs/PCCs to validate the information submitted by local bodies through random sampling/ field inspection. A methodology for assessment and quantification of plastic waste detailed in the Report on *“Assessment & Characterisation of Plastic Waste Generation in 60 Major Cities”* prepared by CPCB is to be followed for validation of the information.
- c. SPCBs/PCCs to coordinate with local bodies to ensure that banned plastic items neither manufactured nor sold in their jurisdiction.

- d. States/UTs are required to setup PWM system as per Rule 6 &7 of PWM Rules, 2018 in each and every ULB and GP. Emphasis has to be laid on provision of facilities for secondary segregation of waste with more emphasis in Village Panchayats.
- e. SPCBs/PCCs to coordinate with local bodies to maximize processing of plastic waste through recyclers/ co-processing / waste to energy and road making
- f. All unregistered units to be brought under the purview of legal framework as per provision of PWM Rules
- g. SPCBs/PCCs along with the State Authorities to ensured setting-up of institutional mechanism for implementation of PWM Rules

447

	1	2	3	4	5	6			7	8	9	10	11	12
	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 50 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or exectuive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturi ng /recycling units (in residential/u napproved areas)	Status of Marking Labeling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submiss ion of Annual Report by ULBs to SPCB/P CC	Submiss ion of Annual Report to CPCB
1	Andman & Nicobar	492.342	GAP	Under Andaman & Nicobar Islands scheme for exemption of Freight Charges for transportation of Plastic, Glass & E-waste, 100% freight exemption is provided to transport waste plastic, glass and e-waste for recycling in Mainland. Approximately 1530 Tonnes of plastic waste was sent to mainland till date. Plastic utilised in road is 80.08 MT	The A&N Administration has completely banned on use, storage, import, manufacture, transportation, distribution or sale and disposal of plastic carry bags of all types vide A&N Gazette Notification No. 225, dt. 24.09.2019	Nil	Nil	Nil	Nil	Does not arise, since manufacturing of plastic carry bags do not take place	Enforcement drives are conducted regularly to implement the notifications and penalty amounting Rs. 306,000.00 was recovered from 1160 inspections.	NA	Total no. of Municipal Authority 01 and Total no. of GPs 70 under jurisdiction.	Yes
2	Andhra Pradesh	39626.45	Complied	The ULBs are collecting and segregating the plastic waste and sent to recyclers. Most of the Plastic waste is channelized through Kabadiwalas to reyclers. The non-recyclable plastic waste generated from the municipalities and from bio mining operatings is being sent to Cement plants and partly for road formations.	Certain Urban Local bodies like Tadipatri, Vijayawada, Tirupati & Bobili have put ban on plastic carry bags irrespective of their thickness. All local bodies have taken stand on ban on their own. No executive orders are available with this office.	135	1	Nil	Nil	The Board is issuing Registrations to producers for labeling the same in carry bags.	State Urban Development Dept., constituted 721 Taskforace teams 240 tons of plastic carry bags were seized and Rs. 169 lakhs of fines was collected from defaulters.	Rule 15 was omitted as per Notification GSR 285(E) dated 27.03.2018	Furnishe d by all ULBs.	Complied .
3	Arunachal Pradesh	3755.9	Complete ban on usage of plastic carry bags of thickness <50 microns	91.00 tons per year of plastic waste is channelized for recycling and One of the Towns namely Jairampur Town transports 60.00 MT per year of Plastic waste to Bordumsa for road construction activities.	Complete ban on usage of plastic carry bags of thickness <50 microns	Nil	Nil	Nil	Nil	There are no manufacturer of plastic carry bags and multilayered packing units in the state.	Nil	NA	GAP	Yes

448

	1	2	3	4	5	6			7	8	9	10	11	12
	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 50 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or exectuive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unapproved areas)	Status of Marking Labeling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
4	Assam	58765	Implemented (carry bag below thickness of 75 microns is prohibited)	sent for co-processing (26 TPD by ULBs and around 120 TPD of legacy waste)	not banned (only carry bags prohibited by rules are banned)	Plastic 12, Recycle rs -5	0	5	identification under process	implemented	In case of open burning and littering of plastic challans has been issued Challans issued to street vendors and retailers to provide commodities to consumer in carry bags or plastic sheet or multi-layered packaging, which are not manufactured and labelled or marked, as per prescribed rules	not implemented	45 ULBs out of 90 submitted	Submitted

449

	1	2	3	4	5	6			7	8	9	10	11	12
	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 50 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or exectuive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturi ng /recycling units (in residential/u napproved areas)	Status of Marking Labeling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submiss ion of Annual Report by ULBs to SPCB/P CC	Submiss ion of Annual Report to CPCB
5	Bihar	74263.689	GAP	7673.6 Tons of Plastic waste channelized for recycling, 74.09 is channelized for reuse and 42461.15 is being sent to landfill.	• Plastic carry bags (irrespective of thickness and size) banned complete in the State of Bihar vide Gazette Notification No. 943 dt. 24.10.2018 (Urban Area) and 1043 dated. 1.12.2018 (Rural Area). Single Use Plastics are also banned in the state of Bihar vide Gazette Notification No. 525 DT. 24.06.2021. It will come in force form 15.12.2021	16	Nil	Nil	396	Production of carry bags is completely banned in the State and hence not applicable Rule 11(a). However, the Board is in process of taking producers and Brand Onwers under the ambit of Rule 13 and 9. Accordingly, they shall be iposed conditions for complinace of Rule 11(b)	Proposed direction issue dto violators - Recyclers - 36 Procucers - 225 Brand Owners - 203	This rule is omitted vide notification no. G.S.R. 285(E dt. 27.03.2019	Annual Report submitte d by all 142 Urban Municipal Authoritie s (16 Municipal Corporati on, 73 Municipal Councils, and 53 Nagar Panchay ats)	Yes
6	Chandigarh	13107.15	No plastic carry bag manufacturing unit.	Plastic waste in the city informally is going to recyclers. However, as two mechanical MRFs have been made functional, engagement of waste recyclers will be done soon for these facilities. 1544.15 MT RDF has been produced during the period (Jan to Dec 2021).	Complete ban	07 plastic recyclin g unit has been register ed	Nil	Nil	Nil	No plastic carry bag manufacturing unit.	The Municipal Corporation Chandigarh has issued 961 nos. of challans issued to Defaulters/Violato rs (In Calender year 2021) and EC has been imposed	NA	During the year 2020 no meting of SLAB was held due to Covid-19 . Annual Return report submitte d.	Yes

[illegible]

451

	1	2	3	4	5	6			7	8	9	10	11	12
	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 50 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or exectuive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unapproved areas)	Status of Marking Labeling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
9	Delhi	345000	GAP	Door to Door waste collection from households. The collected waste sent to waste to energy plant. NDMC deployed metro waste handling pvt ltd for waste collection and transportation.	No additional executive orders have been issued	251	315	GAP	DPCC does not issue registration to the units operating in Residential/ Non-conforming areas with regard to closure of the illegal units from the Residential/ Non-conforming areas, Hon'ble Supreme Court has passed an order on 07.05.2004 in I.A. No. 22 in WP(C) No. 4677 of 1985 titled as M.C. Mehta vs. Union of India	251 Nos. of units.	EC of Rs. 16,97,500/- was imposed on total 14 units found non-complying the norms under PWM Rules, 2018 during the year 2020-21. Out of which, 10 units have deposited EC of Rs. 13,17,500/-	Information is not available.	5	Submitted
10	Goa	29441	Implemented	1. The non-biodegradable waste collected by local bodie/ULBs is sent for co-incienration in Cement Plants through Goa Waste Management Corporation (GWMC). 2. The GWMC has setup 3 bailing stations ie. Bicholim, Verna, Cacora. In addition to above bailing stations, 11 ULBs and 4 VPs have bailing facilities and solid waste management facilities at Saligao.	Amendemnet in the Goa Non-bioegradable Garbage Control Act banned single use plastic. Registration No. G-2/RNP/GOA/32/2018-2020.	64	1	0	Nil	NA	As per the data submitted by local bodies, 631 cases have been booked and amount of Rs. 4,40,200 has been collected.	GAP	Complied	Yes

452

	1	2	3	4	5	6			7	8	9	10	11	12
	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 50 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or exectuive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unapproved areas)	Status of Marking Labeling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
11	Gujarat	337693.96	GAP	65420 MT has been co-processed during the year 2020-21	Complete ban in Gandhinagar City vide Notification No. VN(14)/Env-10-12008-2100-E dated 28th June, 2011	287	3	0	GAP	Complying at large however in case of violation Board takes necessary action	Action taken under Plastic Waste Management Rules 2016 (Period from 1/04/2020 to 31/032021) SCN issued: 44 Notice of direction issued: 19 Direction (closure) issued: 19	Provision removed as amended 2018	GAP	GAP
12	Haryana	185168	Complete Ban on plastic carry bags vide Haryana State Govt. Notification dated 20-08-2013.	- Door to door waste collection & segregation is being done through private bodies in almost all MCs. - Out of 88 MCs, 54 MCs have setup the Material Recovery Facility Centre for sorting and storage & Processing of Plastic Waste. Further, all the MCs have been directed to setup the MRF centres as per requirement and to manage their Plastic waste as per SWM Rules-2016 & Plastic Waste Management Rules-2016. For plastic waste (including other dry waste) segregation 416 Material Recovery Facilities in 54 ULBs have been set up in the whole State. Apart from Material recovery Facilities, ULBs have also identified 4274 rag pickers and Kabariwalas's and registered 3232 for collection and segregation of plastic waste Directions have also been issued to all the ULBs vide letter memo no. XEN/DGULB/2020/2684 dated	Complete Ban on plastic carry bags vide Haryana State Govt. Notification dated 20-08-2013.	Plastic Units - 63 (inlcudi g 51 recycler s)	1	28	Nil	Complying	3097 Challans done for amount of Rs. 3659430 from January-December 2022.	GAP	Submitted by ULBs	GAP

453

	1	2	3	4	5	6			7	8	9	10	11	12
	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 50 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or exectuive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unapproved areas)	Status of Marking Labeling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
13	Himachal Pradesh	6206.782	GAP	Plastic waste used in waste to energy plants; coprocessing and road construction	Complete ban on usage of carry bags in the state.	Nil	2	86	Nil	Complete ban on usage of carry bags in the state.	State of HP has its own HP non-biodegradable act, 1995 under which in year 2020, 49 challans were done and fine of Rs. 1,16,500 rs. were collected w.r.t. use of plastic carry bags and littering non biodegradable items.	Complete ban on usage of carry bags in the state.	GAP	Yes
14	J&K	51710.6	Below 50 microns carry bags is banned in J&K as per SRO-45 dated 03.02.2017.	Rule(5) is being followed. Rule (6) is being partially followed.	Complete ban of polythene carry bags below 50 microns in J&K as per SRO-45 dated 03.02.2017	254	Nil	28	Nil	Implementation of Rule 11 is being done.	20.17 MT of illegal polythene and 01.35 MT of SUP seized during 2020-21. Compounding Fee of Rs. 4,83,300 Rs. Recovered from defaulters during 2020-21.	GAP	Yes, Annual Report submitted by all ULBs	Yes
15	Jharkhand	20263.447	Total ban on plastic carry bags.	9185.2 T of waste has been recycled and 1374 T of waste is reused in year 2020-21. Reverse Vending Machine has been installed at Ranchi, Dhanbad & Jamshedpur cities for recycling of plastic bottles as pilot project. ULB-wise Action Plan prepared for management of plastic waste Plastic waste being co-processed/ used in road construction.	Complete ban by notification letter dated 15.09.2017	59	GAP	GAP	Nil	NA	Data has not been provided by ULBs	NA	All 42 ULBs submitted their annual report.	Submitted

454

	1	2	3	4	5	6			7	8	9	10	11	12
	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 50 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or exectuive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unapproved areas)	Status of Marking Labeling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
16	Karnataka	3,68,080	GAP	(a) Bruhat Bengaluru Mahanagara Palike (BBMP) 141 Decentralized Dry Waste Collection Centre (DWCC) is established at ward level to collect, segregate and recycle the dry waste collected from households and commercial establishments. Informal waste pickers are involved in the dry waste collection system through their engagement in the door to door collection of dry waste and management of the DWCCs. The informal sector engaged in dry waste collection have also been provided with auto tippers designated for only dry waste collection. - The BBMP has collected plastic waste approximately 1,44,000 Tonnes during the year 2020-21. - BBMP has established 2 facilities for processing and disposal of plastic waste of capacity 10 TPD each. In addition there are 66 registered plastic recycling units in Bengaluru.	Completely banned. Govt. of Karnataka has banned manufacture, use and sale of carr bags vide Notification No. FEE 17EPC 2012, Bengaluru dated 11.03.2016	239	Nil	Nil	128	Not applicable, since manufacture, use of carry bags is banned in Karnataka as per the Govt of Karnataka Notification dated 11.03.2016	Director of Municipal Administration has conducted 2537 raids and Rs. 19.60 Lkhs fine was collected and about 2563 Tons of banned plastics seized during raids.	Not applicable, since manufacture of carry bags is banned in the State vide notificated dated 11.03.2016.	DMA has submitted consolidated Annual Report of local bodies to the State (283 other than BBMP. The BBMP has submitted separate Annual Report)	GAP

455

	1	2	3	4	5	6			7	8	9	10	11	12
	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 50 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or exectuive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unapproved areas)	Status of Marking Labeling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
17	Kerala	120063.87	Ban of single use plastic items including plastic carrybags irrespective of thickness in the State w.e.f 01/01/2020 vide G.O. (Ms) No. 6/2019 Env dated 27-01-2020; vide GO no. G.O. (Ms) No. 6/2019env dated 27-11-2019, G.O. No. (Ms) No. 2/2020/envt dated 27-01-2020; vide G.O. no. G.O. (Ms) 4/2020/envt dated 28-02-2021.	Material Collection Facility - 997 Reource Recovery Facility - 178, Recyclable palstic (had and soft) are taken by waste collectors for recycling in the State and outside the State, Clean Kerala Company produced 975 MT of shredded plastic in the year 2021. 379 MT of plastic used for tarring of PWD routes and 529 MT for LSGI Roads and 6 MT for NHAI. during year 2020-21. Almost, all the brand owners who have obtained registration from CPCB have not furnished reports to SPCBs and hence it is not possible to quantify or verify the quantity of plasic waste if taken back by them. From these annual reports received, the Board is not able to verify genuinity of reports.	Ban of single use plastic items including plastic carrybags irrespective of thickness in the State w.e.f 01/01/2020 vide G.O. (Ms) No. 6/2019 Env dated 27-01-2020; vide GO no. G.O. (Ms) No. 6/2019env dated 27-11-2019, G.O. No. (Ms) No. 2/2020/envt dated 27-01-2020; vide G.O. no. G.O. (Ms) 4/2020/envt dated 28-02-2021. Plastic carry bags irrespective of thickness are included in single use plastic bags.	Manufa cturers / Produc ers - 1348 Recycle rs - 187	5	Nil	41	Usage of plastic carry bags irrepsective of thicknes is banned n the State w.e.f 01/01/2020 vide G.O. (Ms) No. 6/2019 Env dated 27-01-2020; vide GO no. G.O. (Ms) No. 6/2019env dated 27-11-2019, G.O. No. (Ms) No. 2/2020/envt dated 27-01-2020; vide G.O. no. G.O. (Ms) 4/2020/envt dated 28-02-2021. Plastic carry bags irrespective of thickness are included in single use plastic bags.	1. Directions issued for EPR implemenation dated 17-03-2020 to supermarket owners. 2. Directions issued to all local bodies to implement Haritha Tribunal Rule OA. No. 606/2018 dated 21-07-2020 3. Directions issued to all local bodies monitoring use of banned plastic carry bags dated 07-01-2021. 4. Directions issued to all local bodies - ban on one time use plastics dated 27-01-2021 5. Directions issued to plastic	Usage of plastic carry bags irrepsective of thicknes is banned n the State w.e.f 01/01/2020 vide G.O. (Ms) No. 6/2019 Env dated 27-01-2020; vide GO no. G.O. (Ms) No. 6/2019env dated 27-11-2019, G.O. No. (Ms) No. 2/2020/envt dated 27-01-2020; vide G.O. no. G.O. (Ms) 4/2020/envt dated 28-02-2021.	372 local bodies (66 urban)	44408
18	Lakshadwee p	523.54	GAP	GAP	The administration has banned the single use plastic items 23 nos as per Notification F.No. 66/33/2019 E&F dated 28.04.2021	0	0	0	0	NA	Nil	NA	GAP	1

456

	1	2	3	4	5	6			7	8	9	10	11	12
	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 50 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or exectuive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unapproved areas)	Status of Marking Labeling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
19	Madhya Pradesh	138483.58		Recycled - 63400.651 MT Co-processed - 55183 MT Road - 405 MT Total : 118988.62 MT	Complete ban has been imposed on plastic carry bags in the State vide Notification No. F-5-2015-18-5, dated: 24.05.2017.	Manufa cturer - 78, Recycle rs - 116 Total - 194	1	26	0	Not Applicable	Awareness Programs - 2499, Raids conducted - 19222 Violators - 15261 Plastic seized - 24 MT, Penalty imposed by ULBs - Rs 42 Lakh.	Not Applicable	381 ULBs and Cantt Boards submitted out of 383. Total village panchayats are 22814 and not required to submit annual report under PWM Rules.	GAP

457

	1	2	3	4	5	6			7	8	9	10	11	12
	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 50 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or exectuive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unnapproved areas)	Status of Marking Labeling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
20	Maharastra	311254	Complied. As per Maharashtra Plastic & Thermocol Notification 2018, all types of carry bags are banned irrespective of thickness.	Collection: 251,556 Segregation: 251,556 Disposal: 199,703 Quantity recycled (Tons)- Plastic Granules - 29,485 Quantity recycled (Tons)- Pyrolysis - 4918 Quantity recycled (Tons)- Road Construction - 13,513 Quantity recycled (Tons)- RDF (Refuse Derived Fuel) - 124,725 Quantity of Plastic Waste sent to Landfilling facility (Tons) - 23,237	The state of Maharashtra has imposed complete ban on certain plastic products like i) plastic bags with or without handle irrespective of size and thickness, ii) single use disposable items like cups, plates, straws, spoons etc and iii) Non-woven Polypropylene bags through Maharashtra Plastic and Thermocol Products (Manufacture, Usage, Sale, Transport, Handling and Storage) Notification, 2018 dated 23.3.2018 and amendment dated 11.4.2018, 30.6.2018 & 14.06.2019.	6 (capacity: 2601 TPA)	7 (10405 TPA)	Out of 6 plastic producing units, 3 manufacture plastic packaging including Multi-layer plastic.	Nil	Not Applicable as the Government of Maharashtra has imposed complete ban on plastic carry bags irrespective of size and thickness in the State of Maharashtra.	In compliance of Maharashtra Plastic Notification 2018, plastic carry bags of all types are banned in the state. MPCB is issuing registrations for manufacturing of MLP and plastic recyclers (as mentioned above). MPCB has taken following action: 1. Issued closure directions to 405 plastic and thermocol manufacturing industries since October 2018 till 31st March 2021. 2. Collected fine	Not Applicable as the Government of Maharashtra has imposed complete ban on plastic carry bags irrespective of size and thickness in the State of Maharashtra	394 out of 403 Municipal Authorities have submitted Annual Report	GAP
21	Manipur	10303	Implemented in the State as per Rules	Source segregation carried out by the ULBs in their respective jurisdiction. Action Plan submitted by Municipal Administration, Housing & Urban Development (MAHUD), Govt. of Manipur for implementation by the ULBs. Segregated waste are channelized to recycling units.	Notification issued by State Govt. vide no. 23/3/2016-For&Envnt (MPCB), dated 16th February 2021, regarding the ban on (i) usage of plastic carry bags, plastic sheets, wrapping sheets under PWM (Amendment) Rules, 2018 and (ii) manufacture, sale or usage of "use and throwaway plastics" in the State.	Plastic-1, Recycler-3	0	NA	Nil	Complied	15 incidence for selling sub-standard and non-labelling plastic carry bags., 8 incidence for selling carry bags of thickness less than 50 micron. Item seized and utilized in Road construction.	NA	Annual Report received from all 27 ULBs.	Yes

458

	1	2	3	4	5	6			7	8	9	10	11	12
	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 50 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or exectuive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unapproved areas)	Status of Marking Labeling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
22	Meghalaya	Shillong Municipal Board - did not submit Shillong Cantonment Board - did not submit Baghmara Municipal Board - plastic waste is not segregated Tura Municipal Board - did not submit Resubelpara Municipal Board - 0.516 TPD Jowai Municipal Board - did not submit Williamnagar Municipal Board - 3		The waste is collected as municipal waste into dry waste and wet waste. The plastic waste is segregated from the dry waste at the dumpsite and collected for compaction and bailing. Dalmia Bharat Cement, Luimshnong, East Jaintia Hills District, has inform regional Director, Northeastren zone, CPCB that their plant is ready for co-incineration of plastic and solid waste. Under process to make waste available. A 1 km road was constructed in Nongkynjeng village in west Khasi Hills, Meghalaya using plastic wastes.	Use and sale of plastic bags less than 50 microns has been prohibited and public notice has been issued vide No. MPCB/TB-144(B)/2016-2017/79 dated 16th Feb, 2017 regarding compliance to PWM Rules 2016.	8	Nil	Nil	Nil	M/s. Karkarnia Industries manufacturers carry bags that are labeled with the name of manufacturer and registration number	Nil	To be omitted as per Notificaiton G.S.R. 285(E) dated 27th March 2018	7 ULBs submitted annual report	GAP

459

	1	2	3	4	5	6			7	8	9	10	11	12
	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 50 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or exectuive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unapproved areas)	Status of Marking Labeling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
23	Mizoram	1514.51	Awareness Campaign on SUPs 1) Distribution of environmental-friendly paper bags to street and vegetable vendors 2) Distribution of Single-use plastic related pamphlets and bookmarks 3) Distribution of cloth bags to discourage the use of polythene bags Mass media awareness campaign on SUPs 4) anti-plastic awareness campaigns	0.768 MT of recyclable plastic wastes are collected by various Brand Owners through PROs. 5.990 MTA PW used for co-processing	Complete ban on usage of carry bags less than 50 micron within Municipal Corporation Area already enforced. Govt already banned packaged drinking water in plastic bottles in every government programmes/func tions.	Nil	Nil	Nil	Nil	N.A. as there is no manufacturer.	136 shops were Using polythene less than 50 microns for packing and items Confiscated and fine imposed. One open burning case oberseved for the fine imposed. 4 invalid registraion, direction issued to the units	Not Applicable as Rule 15 has been omitted in the PWM Amendment Rules, 2018. Prior to the amendments above, the Aizawl MC	GAP	GAP

460

	1	2	3	4	5	6			7	8	9	10	11	12
	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 50 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or exectuive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unapproved areas)	Status of Marking Labeling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
24	Nagaland	4785.94	The Govt. of Nagaland had vide notification no. UDD/7-GEN-07-PWM/2018 dated 17th June, 2019 banned all the Single use plastics in Nagaland, namely: 1. All Plastic carry bags, with or without handles, irrespective of thickness and size; 2. Plastic cutlery including plates, plastic cups, straws, stirrers etc. 3. Cutlery and other decorative made of Styrofoam (Thermocol) 4. Polythene	1. Collected by a ragpicker and sold to scrap dealers/material recovery centre who in term sell to recyclers. 2. Polymer Bitumen road is also practiced in limited way using plastic wastes.	The Govt. of Nagaland vide notification No. UDD/7-GEN/07-PWM/2018 dated Kohima, 29th Nov, 2018 notified restricting the use of single use plsticx less than 50 microns, specially plastic bags and plastic cutleries including Styrofoam and thermocol disposal plates which will be banned with effect from 1st Dec, 2018 (enclosed)	4	Nil	Nil	Nil	Yes, labelling is done	Nil	N.A.	GAP	June 20th, 2021.

461

	1	2	3	4	5	6			7	8	9	10	11	12
	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 50 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or exectuive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unapproved areas)	Status of Marking Labeling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
25	Odisha	51269.9	Not applicable as the Govt. of Odisha has imposed complete ban on plastic carry bags irrespective of size thickness in all ULBs of the State of Odisha.	1. Plastic waste collected - 51267.9 TPA 2. Plastic waste sent for co-processing - 283.132 TPA 3. Plastic waste use for granules making - 1452 TPA 4. In compliance of order dated 04.12.2019 passed by Honble NGT in the matter of OA no. 247/2017 CPCB vs Andaman Nicobar and other States. The Action Plan based on the data gap analysis in the aforesaid order is prepared by H&UD Dept, Govt of Odisha and the quarterly report submitted to CPCB on regular basis.	The State of Odisha has imposed complete ban within all ULBs on certain plastic products. i. Plastic bags with or without handle irrespective of size and thickness.. ii. SINGLE USE DISPOSABLE ITEMS LIKE CUP, PLATES, STRAWS, Spoon etc. iii. Non woven polythene bags and thermo products (manufacture, usage, sale, transport, handling and storage).	20	Nil	6	NIL	NA	Fine is being imposed by ULBs under the guidance of SUDA and Direction from WBPCB.	Nil	Total No. of ULBs : 114 Annual reports submitted by 114 ULBs.	GAP

462

	1	2	3	4	5	6			7	8	9	10	11	12
	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 50 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or exectuive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unapproved areas)	Status of Marking Labeling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
26	Puducherry	12754	22 units with production capacity 100 TPD were closed	- All local bodies have identified and established Material Recovery Facility (MRF) within their jurisdiction and collected, segregated and sending Plastic Waste for recycling/reprocessing. - Some of the ULBs disposing the plastic waste through co-processing in cement Kilns, like Dalmia Cements. - The Producer Responsibility organisations are collecting the plastic waste from their units and sending it for authorized recycling units and for co-processing. - So far, 943 MT of plastic waste is collected and disposed by PROs and Local Bodies.	Govt of Puducherry has imposed total ban on Single Use Plastics with effect from 02.08.2019	49	2	4	Nil	All types of carry bags irrespective of thickness is banned in the UT of Puducherry with effect from 02.08.2019	1. 7 units which were manufacturing SUP were closed by issuing directions. 2. 1 stockiest, who involved in stocking and storing of banned SUP items were sealed, 2 tons of banned plastic items were seized. 3. As per the provision of PWM Rules, 2016, Bye-laws have been framed by the ULBs. As per the report received from the ULBs, Rs. 50,000/- have been received from the violators.	All types of carry bags irrespective of thickness is banned in the UT of Puducherry with effect from 02.08.2019	5 Municipalities and 10 Commune Panchayats	GAP
27	Punjab	108332.06	GAP	All the ULBs of the State have started Door to Door collection and source segregation of solid waste and the segregated recyclable plastic waste is channelized to authorized recyclers waste management agencies/kabaris from 235 Mater Recovery Facilities (MRF), which have been setup in the State till 31.12.2020	Department of Local Govt. Punjab vide notificatoin no. 5/18/2016-4lg4/692717/1 dated 18/02/2016 and Department of Rural Development & Panchayat, Punjab vide notification no. S.O. 438/P.A./9/1994/S30/2016 dated 29/03/2016 has prohibited the manufacturing, stocking, distribution, recycling, selling or use of plastic carry bags in the State.	243	5	2	35	Plastic carry bags manufacturing is prohibited in the State. Further, there are 2 MLP manufacturing unit which are doing marking and labelling as per Rules 8 of the PWM Rule	51 no. of plastic units were issued show-cause notices for not obtaining registration under the Plastic Waste Management Rules, 2016.	GAP	153 ULBs have submitted Annual Return under PWM Rules, 2016.	Annual Reports upto 2019-20 have already been submitted to CPCB

463

	1	2	3	4	5	6			7	8	9	10	11	12
	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 50 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or exectuive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unapproved areas)	Status of Marking Labeling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
28	Rajasthan	66324.57	State Gov.t has imposed complete ban on manufacture, storage, import, sell or transport of plastic carry bags vide notification dt. 21/07/2010 irrespective of thickness.	As per information received from Municipalities/ULBs details are as under: (a) Collection - 16437.005 TPA (B) Co-processing - 265.845 TPA	State Govt. has imposed complete ban on manufacture, storage, import, sell or transport of plastic carry bags vide notification dated 21/07/2010.	101	Nil	12	Nil	Not applicable as State Government has imposed complete ban on manufacture, sotrage, import, sell or transport of plastic carry bags vide notification dt. 21/07/2010	Total violations - 48 Letter/Notices issued - 48	Not applicable as State Government has imposed complete ban on manufacture, sotrage, import, sell or transport of plastic carry bags vide notification dt. 21/07/2010	Total 196 Municipal Authorities are under jurisdiction and all have submitted the annual reports.	Submitted

464

	1	2	3	4	5	6			7	8	9	10	11	12
	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 50 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or exectuive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unnapproved areas)	Status of Marking Labeling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
29	Sikkim	82.75	Although Plastic carry bags are already prohibited under Sikkim Trade Licence and Miscellaneous Provision Rules, 1985 vide notification No. GOS/UD&HD/97-98/6(85) dated 4th June 1998, however, as per the information received from CPCB, Delhi all ULBs and Rural Lbs in the state have been communicated the implementation of 75micron thickness	Out of 07 ULBs, it was informed that 1. Gangtok Municipal Corporation and 2. Singtam Nagar Panchayat has disposed plastic waste to NHIDCL for road construction	Plastic carry bags have been banned in Sikkim vide Urban Development Notification no. GOS/UD&HD 97-98/6(85) dated 4th June 1998	Nil	Nil	Nil	Nil	Not Applicable	Nil	Notice has been issued to al PIBOs through IPR department vide F.NO. 1073/SPCB/527 dated 07/07/2021 for information to general public	State of Sikkim has 07 numbers of notified Urban and Local Bodies and they have sbmitted annual report in Form-V of PWM Rules, 2016. The waste generate d is as per follows: i) Gangtok Municipal Corporati on - 36.5	GAP

465

	1	2	3	4	5	6			7	8	9	10	11	12
	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 50 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or exectuive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unapproved areas)	Status of Marking Labeling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
30	Tamil Nadu	430107	Tamil Nadu Govt. in G.O. (Ms) No. 84 dated 25-06-2018 notified ban on manufacture, storage, supply, transports, sales, distribution of use and throw away plastics irrespective of thickenss including plastic carry bags of any size and thickness and came into effect from 01-01-2019.	Plastic waste collected is segregated and low value plastics & multi layer plastics used for road laying, recyclable plastic waste sold to recyclers and non-recyclable plastic waste disposed to cement industries for co-processing. Recyclable plastic waste 295482 TPA is channelized for recycling, 71200 TPA of plastic waste is used for co-processing in Cement plants and for road laying and remaining inerts are disposed in landfills. 1010 MRF Facilities have been established by Chennai Corporation and the respective other corporation and Municipalities, 328 MRFs have been established. The shredded plastic waste is mixed with aggregates in bituminous road laying. In Tamil Nadu, 6350 MT of non-saleable and non-recyclable plastic waste was used for 4530 kms of plastic	The Government of Tamil Nadu vide G.O. (Ms) No.84 dated 25.06.2018 notified ban on manufacture, store, supply, transport, sale or distribute of use and throwaway plastics which came into effect from 01.01.2019.	Recycling Units: 230 Nos. Plastic Manufacturing Units: 15 Nos.	29	7	TNPCB is issuing consent under Water and Air Act to Plastic Manufacturing (Prodcuers)/ Recycling units located in industrial and commerical zones and consent is not issued to units located in residential areas.	Tamilnadu Government in G.O. (Ms).No.84 dated 25.06.2018, notified ban on manufacture, store, supply, transport, sale or distribute of use and throwaway plastics irrespective of thickness including plastic carry bags of any size and thickness and hence marking and labeling is not applicable.	Closure Direction and disconnection of power supply were issued to 6 plastic recycling units who were in operation without obtaining consent from the Board and Registration as per PWM Rules, 2016	As per PWM Amendment Rules, 2018, Rule 15 is ommitted. Hence, does not arise.	Corporations - 15 Municipalities - 121 Town Panchayats - 528 All ULBs have submitted their Annual Report as per prescribed format.	Yes

466

	1	2	3	4	5	6			7	8	9	10	11	12		
	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 50 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or exectuive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturi ng /recycling units (in residential/u napproved areas)	Status of Marking Labeling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submiss ion of Annual Report by ULBs to SPCB/P CC	Submiss ion of Annual Report to CPCB		
31	Telangana	472675	GAP	206 Dry Resource centers established in 139 ULBs. Plastic waste utilized for recycling.	Complete ban on <50 micron thickness plastic carry bags is under implementation.	316	5	2	Nil	Marking is being carried out on plastic carry bags and compostable carry bags.	Collected fine of Rs. 13 Lakhs and cumulative fines collected from violators as on date is Rs. 62.31 lakhs.	The Govt. issued G.O. Ms. No. 79, dated 31.12.2016 banning manufacture, stock, sale and use of carry bags <50 microns thickness prescribing explicit pricing of carry bags@ Rs. 48,000 per annum for the shop keepers and street vendors willing to provide plastic carry bags.	GAP	GAP		
32	Tripura	61.65	All types of plastic carry bags are banned in the State of Tripura	100% collection of plastic waste. Plastic waste used in road construction.	The State Government has issued complete ban order on all kinds of plastic carry bags in Tripura. A revised notiication have been issued enhancing monetary penalty for use, sell, store and import of banned plastic carry bags.	20	plstic items	manufa cturing units and 12 nos. of recycl	Nil	2	Nil	Not yet started	Nil	Not applicable	GAP	Submitte d

467

	1	2	3	4	5	6			7	8	9	10	11	12
	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 50 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or exectuive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unapproved areas)	Status of Marking Labeling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
33	Uttar Pradesh	375950	GAP	• 2 Waste to Oil units with capacity 2700 TPA set up • Plastic usage in road construction initiated • Paper mills have tied up with cement mills for co processing of their waste • Total 10252M T of plastic waste has been disposed off during 2020-21	Nagar Vikas Anubhag-7, U.P. Shashsan, vide its Notification No. 10569-7-18-29(Lucknow)18, Dated lucknow 15 July, 2018 has imposed prohibition on the use, manufacture, sale, distribution, storage, transport, Import and Export of cups,glasses, plates, spoons, tumblers etc. made up of plastic or thermocol disposable after one time. Notification dated 15.07.2018 is attached.	Plastic Units - 130	4	59	0	Carry bags made of plastic are banned by Governmennt of U.P. CPCB has authorized 5 compostable carry bags manufactured in Uttar pradesh and they are following the provisions of Rules.	936.72 MT of plastic waste has been confiscated and Rs. 12.42 Cr of fine has been imposed.	Carry bags made of plastic banned by Government of Uttar pradesh.	651 Urban Local Bodies are in U.P. and they have submitted annual report to UPPCB. Based on data the annual report for the state has been compiled by UPPCB>	GAP

468

	1	2	3	4	5	6			7	8	9	10	11	12
	Name of the SPCB/PCC	Estimated Plastic Waste Generation in Tons per Annum (TPA)	Implementation of thickness of less than 50 microns carry bags (virgin/recycled), Rule 4c	Details of PWM e.g. Collection, Segregation, Disposal (Co-processing, road construction etc.) (Rules 6) (Attach Separate sheet)	Partial or complete ban on usages of Plastic Carry Bags (through Executive Order) Attach copy of the notification or exectuive order)	No. of registered Plastic Manufacturing or Recycling (including multilayer, compostable) units (Rule 9)			No. of unregistered plastic manufacturing /recycling units (in residential/unnapproved areas)	Status of Marking Labeling on carry bags (Rule 8) (Specify the number of units or not compiled)	No. of violations and action taken on non-compliance of provisions of these Rules	Explicit Pricing of carry bags (Rule 10)	Status of submission of Annual Report by ULBs to SPCB/PCC	Submission of Annual Report to CPCB
34	Uttarakhand	18647.75	The Sale, Trade, Manufacture, Import, Store, Carry Transport, use supply or distribute of Polythene carry bags of any shape (with or Without handle), thickness, size & Colour, and non-woven poly propylene bags is ban since 16 February 2021 (In notification of government of Uttarakhand Environment Conservation & Climate Change Section)	Total Plastic waste co-processed is 6653.54 Ton in April 2019 to March 2021 Total Plastic recycled is 16437.9 in year 2019 to 2021	Yes, single use plastic for plastic carry bag and food cutleries and their use, handling, stroage, transporataion and manufacturing is banned by Uttarakhand Govt. notification no. 84/XXXVIII-120-13(II)/2021 dated 16.02.2021	53	1	28	15	GAP	1. UKPCB has issued directions to all District Magistrate for compliance of PWM Rules, 2016 and ban on plastic on dated 25.06.2019 and 20.07.2021. 2. Director, Urban Development Directorate, All District Magistrate vide letter dated 28.12.2019 3.15214 Challans issued for using banned plastic and fine imposed.	GAP	Out of 91 ULBs, report of 67 ULBs received and no Gram Panchay at report is received in UKPCB.	GAP

Annexure-II**Notification for banning manufacture, use, sale import and handling of Plastic carry bags/items****(Based on the data available in Annual reports submitted by SPCBs/PCCs)**

S. No	Name of State/UT	Complete or Partial Ban	Executive order Date and No.	Remarks
1	Andaman & Nicobar Islands	Complete ban	Date: 02.08.2010 Notification No.: 202	Complete ban on manufacture, store, import, distribution, transportation, recycle, sell & use of plastic carrybags.
2	Andhra Pradesh		Not available	Certain Urban Local Bodies like Tadipatri, Vijayawada, Tirupati&Bobbili have put Ban on Plastic carry bags irrespective of their thickness. All local bodies have taken stand on ban on their own.
3	Arunachal Pradesh	Partial ban	Date: 16.07.2019 Notification No.: FOR.129/E(A)/2019/1271 3-60	Complete ban on manufacture, store, stock, sale of plastic <50 microns.
4	Assam		Notification not available	
5	Bihar	Complete ban	Date: 24.10.2018 Notifications No. 943 (urban)Dated 11.12.2018 Notification 1043	Complete ban on manufacture, store, import, distribution, transportation, recycle, sell & use of plastic carrybags (irrespective of thickness)
6	Chandigarh	Complete ban	Notification No. ED/2019/1648 Dated 27.09.2019	Complete ban on manufacture, storage, import, sale, use transportation & disposal of plastic items
7	Chhattisgarh	Complete ban	Notification F 5-7/18/2011	Complete ban on manufacture, store,

470

S. No	Name of State/UT	Complete or Partial Ban	Executive order Date and No.	Remarks
			dated 24.12.2014 (Gazette) Date: 27-09-2017 Notification No.: क्रमांक एफ 05-88/2014/32	import, transportation, recycle, sell & use of polythene/plastic carrybags. Further for banned short life PVC and chlorinated plastic
8	Daman Diu & Dadra Nagar Haveli	Complete ban	Notification No. PCC/DMN/PLASTIC Bags/12-13/473 Dated 24.01.2014	Forbidding the use, sale/ storage of all kinds of plastic bags
9	Delhi		Information not available	No executive order additional to PWM Rules have been issued
10	Goa	Complete ban	Amendment bill The Goa nob-biodegradable garbage Dated :08.08.2019	Government imposed ban on Manufacture, stock, import, transportation, recycle, sale & use of plastic (carrybags, cups, forks, paper plates, spoons) And other non-biodegradable items.
11	Gujarat		Notification No: VI,I(14/Env-10-2008-2100-E Dated 25th June, 2011	Complete ban on plastic products in Gandhi Nagar
12	Haryana	Complete ban	Date: 20 Aug, 2013	Complete ban on manufacture, stock, import, transportation, recycle, sell & use of plastic carrybags,
13	Himachal Pradesh	Complete Ban		Complete ban on use of Carrybags (irrespective of size), polythene, non-biodegradable material, disposable plastic cups, plates, and glasses
14	Jammu & Kashmir	Partial ban	Notification: SRO-45 of 2017 dated :03.02.2017	Partial ban on Polyethylene carry bags of thickness below 50 microns

471

S. No	Name of State/UT	Complete or Partial Ban	Executive order Date and No.	Remarks
15	Jharkhand	Complete Ban	Notification no 3/Praya Pradu- 52/2007- 3900 Dated 15.09.2017	Complete ban on manufacture, import, storage, transport, sell and usage of plastic carrybags in the whole State
16	Karnataka	Complete ban	Date: 11-03-2016 Notification No.: FEE 17EPC 2012, Bengalru	State government banned the plastic banners, buntings, carrybags (plastic & compostable), cups, cling films, flex, flags, plates, spoons & sheets made of plastic or Thermocol and microbeads usage in the entire state
17	Kerala	Complete ban	Notification No.: G.O.(Ms)No.6/2019Env dated 27-11-2019 G.O.(M/s) No. 2/2020/ENV dated 27-01-2020 GOno. GO(Ms) No. 4/2020 Envnt dated 16-02-2020	Complete ban on Single use plastic And plastic carrybags (plastic and compostable)
18	Lakshadweep	Complete ban	Date: 25.01.2019 Notification No.: F.No.66/33/2019	Complete ban on Single use plastic includes : Plastic carrybags of all thickness, plastic coated carry bags, plastic flags, plastic sheets/films used for wrapping, plastic sheets used as dining table covers, thermocol cups and plates, plastic coated paper cups and plates, plastic teacups, plastic tumblers, plastic teacups, water pouches/packets/PET plastic water bottles, straws,
19	Madhya Pradesh	Complete ban	Notification : F5-2-2015-18-5 Dated :24.05.2017	Production, Storage, Transportation, sale & use of plastic

S. No	Name of State/UT	Complete or Partial Ban	Executive order Date and No.	Remarks
				carrybags.
20	Maharashtra	Complete Ban	No Plastic-2018/C.R.24/TC-4 Notification, dated 23.3.2018 and amendment dated 11.4.2018, 30.6.2018 & 14.06.2019	complete ban on certain plastic products like i) plastic bags with or without handle irrespective of size and thickness, single use disposable items like cups, plates, straws, spoons etc, Nonwoven Polypropylene bags through Maharashtra Plastic and Thermocol Products (Manufacture, Usage, Sale, Transport, Handling and Storage)
21	Manipur	Complete ban	Date: 12-09-2017 Notification No.: 56/38/99-for&Envt	Complete ban on use, store & sale of plastic carrybags
22	Meghalaya	Partial ban	Date: 16-02-2017 Notification No. MPCB/TB-144(B)/2016-2017/79	Use and sale of plastic bags less than 50 microns has been prohibited and public notice has been issued
23	Mizoram	Partial ban	With effect from :01.08.2019 by Aizal municipal corporation	Complete ban on plastic carry bags below 50 microns
24	Nagaland	Partial ban	Date: 29 th Nov, 2018 Notification No.: UDD/7-GEN/07-PWM/2018	Complete ban on single use plastic less than 50 microns,
25	Odisha	Complete ban	Notification Order No. 18441, Dt. 30.09.2019	Polythene carry bags thickness of any shape and size has been banned in all Municipal limits in the State. Govt. of Odisha. Further in the said order State has been prohibited (use

473

S. No	Name of State/UT	Complete or Partial Ban	Executive order Date and No.	Remarks
				polythene sheets of less than 50 micron thickness for storing, transporting, dispensing or packaging of any articles, commodity or food items)
26	Puducherry	Complete ban	Not Available	total ban on single use plastics with effect from 02.08.2019.
27	Punjab	Complete ban	Notification no 5/18/2016-4lg4/692717/1 dated 18.02.2016 S.O.438/P.A. 9/1994/S30/2016 dated 29.03.2016	Complete ban on Manufacture, stock, distribute, recycle, sale & use of plastic carrybags.
28	Rajasthan	Complete ban	Notification dated : 21.07.2010	Complete ban on use, store & sale of plastic carrybags
29	Sikkim	Complete ban	Notification No.: GOS/UD&HD97-98/6(85) Date: 04-06-1998	Complete ban on sale & use, storage of plastic carry bags
30	Tamil Nadu	Complete Ban	Date: 25.06.2018 Notification No.: G.O. (Ms). No.84 dated 25.06.2018	Complete ban on manufacture, sell, use, storage, Transportation and distribution of "Single-use plastics" i.e. plastic carrybags, flags, sheets using for food wrapping, straws, tea cups, tumblers, water packets & pouches
31	Telangana	Not Banned		Not Banned
32	Tripura	Complete ban	Notification no:F.B(30)/DSTE/ENV/Pt-II//1679-97 dated 10.03.2015	Complete ban on Sell, use, storage, Transportation & import of plastic carrybags (including polypropylene, non-woven fabric type) plastic tube to pack or

474

S. No	Name of State/UT	Complete or Partial Ban	Executive order Date and No.	Remarks
				cover any book including magazine & invitation/greeting cards.
33	Uttar Pradesh	Complete ban	Date: 15-07-2018 Notification No. 1056/9-7-18-29(Lucknow)/18	Manufacture, Sell, use, Storage, Transportation & import of plastic carrybags of thickness 50 microns and and cups, bowl, container, tumblers, glasses & plates etc made of plastic or thermocol
34	Uttarakhand	Complete Ban	Date: 25.01.2017 Notification No. 88/x-3-17-13(11)/2001	Manufacture, Sell, use, Storage, Transportation & import of plastic carrybags, cups, bowl, container, tumblers, glasses & plates etc made of plastic or thermocol
35	West Bengal		Not available	Restricted use & sale of plastic carry bags in ecologically fragile areas and in certain heritage & tourist spots

Details of Plastic waste management details				
S.No	State/UT	PW Generated (TPD)	PW Collected (TPD)	PW Proccessed (TPD)
1	Assam	161	26	26
2	Chandigarh	35.91	GAP	GAP
3	Maharashtra	853	689	547
4	Mizoram	4.15	3.92	3.92
5	Nagaland	35.06	35.06	GAP
6	Odisha	136	136	136
7	Puducherry	35.8	11	11
8	Sikkim	0.2267	0.2267	0.1942
9	Tripura	61.65	61.65	61.65
10	Uttarakhand	51.08	(1) By recyclers according to form IV 186.66 T/Day (2) By WMA 8550.761 MT in year 2021-2022	(1) By recyclers according to form IV 171.38 M T/Day (2)(a) By WMA recycled 5454.994 MT in year 2021 - 2022 (b) By WMA Co-Processed 3115.767 MT in year
11	West Bengal	1145	239	403

STATUS OF IMPLEMENTATION OF BAN ON CARRYBAGS WITH THICKNESS < 75 Micron

S.No.	State/UT	Implementation of thickness of less than 75 microns carry bags (virgin/ recycled) (with effect from the 30th September, 2021). (Rule 4c- August 12, 2021)
1	Assam	Implemented (notice issued to all carrybags manufacturers)
2	Chandigarh	Chandigarh Administration vide Notification No.ED/2019/1648, dated 27.09.2019 has imposed complete ban on manufacture, store, import, sell, transport, supply or use of the Polythene /plastic carry bags with or without handle irrespective of size, shape & colour.
3	Maharashtra	Complied. As per Maharashtra Plastic & Thermocol Notification 2018, all types of carry bags are banned irrespective of thickness.
4	Mizoram	Awareness Campaign on SUPs 1) Distribution of environmental-friendly paper bags to street and vegetable vendors 2) Distribution of Single-use plastic related pamphlets and bookmarks 3) Distribution of cloth bags to discourage the use of polythene bags Mass media awareness campaign on SUPs 4) anti-plastic awareness campaigns
5	Nagaland	The Govt. of Nagaland had vide notification no. UDD/7-GEN-07-PWM/2018 dated 17th June, 2019 banned all the Single use plastics in Nagaland, namely: 1. All Plastic carry bags, with or without handles, irrespective of thickness and size; 2. Plastic cutlery including plates, plastic cups, straws, stirrers etc. 3. Cutlery and other decorative made of Styrofoam (Thermocol) 4. Polythene 5. Nylon 6. Poly-Vinyl-Carbohydrates (PVC) 7. Poly-Propylene 8. Poly-Styrene
6	Odisha	Not Provided
7	Puducherry	22 units with production capacity 100 TPD were closed
8	Sikkim	Although Plastic carry bags are already prohibited under Sikkim Trade Licence and Miscellaneous Provision Rules, 1985 vide notification No. GOS/UD&HD/97-98/6(85) dated 4th June 1998, however, as per the information received from CPCB, Delhi all ULBs and Rural Lbs in the state have been communicated the implementation of 75micron thickness
9	Tripura	All types of plastic carry bags are banned in the State of Tripura

STATUS OF IMPLEMENTATION OF BAN ON CARRYBAGS WITH THICKNESS < 75 Micron

S.No.	State/UT	Implementation of thickness of less than 75 microns carry bags (virgin/ recycled) (with effect from the 30th September, 2021). (Rule 4c- August 12, 2021)
10	Uttarakhand	The Sale, Trade, Manufacture, Import, Store, Carry Transport, use supply or distribute of Polythene carry bags of any shape (with or Without handle), thickness, size & Colour, and non- woven poly propylene bags is ban since 16 February 2021 (In notification of government of Uttarakhand Environment Conservation & Climate Change Section)
11	West Bengal	Directed to all concerned for effective implementation of PWM (Amendment) Rules, 2021.

ACTION PLAN FOR PLASTIC WASTE MANAGEMENT		Andaman & Nicobar			
Serial No.	Items	Current Status	Desirable Levels	Gap between C & D	Timeline
1	what is the quantity of plastic waste generated (Annual Report form VI pt. 2,6) (TPD)	1.37	NA	NA	NA
2(a)	Number of registered plastic manufacturing units	1	GAP	GAP	GAP
2(b)	Capacity of registered plastic manufacturing units (TPD)	0.39	GAP	GAP	GAP
3(a)	Total No of ULBs	1			
3(b)	Percentage of ULBs which have set-up of plastic waste management system as per Rule 6(2)? (including collection, segregation, channelization & processing of plastic waste)	100	100	0	GAP
3©	Percentage of ULBs having facilities for collection of segregated waste	100	GAP	GAP	GAP
3(d)	Percentage of ULBs Material Recovery Facility	0	GAP	GAP	GAP
4(a)	Total no. of Gram Panchayat	70	NA	NA	NA
4(b)	Percentage of Gram Panchayat which have setup of plastic waste management system as per Rule 7	26 clusters are formulated and notified for 70 GPs. 23 clusters constructed, 02 clusters are under construction and 01 clusters is under tender process	GAP	GAP	GAP
4©	Percentage of GPs having facilities for Collection of segregated waste	26 clusters are formulated and notified for 70 GPs. 23 clusters constructed, 02 clusters are under construction and 01 clusters is under tender process	GAP	GAP	GAP

ACTION PLAN FOR PLASTIC WASTE MANAGEMENT		Andaman & Nicobar			
Serial No.	Items	Current Status	Desirable Levels	Gap between C & D	Timeline
4(d)	Percentage of GPs having Material Recovery Facility	NIL	GAP	GAP	GAP
5(a)	No. of registered Producers/brand owners/importers as per Rules 9 & 13 of PWM Rules?	0	GAP	GAP	GAP
5(b)	Percentage of Producers/Brandowners/Importers which have engaged with ULBs for PWM	0	GAP	GAP	GAP
5©	Percentage of ULBs which have set up system for plastic waste management with assistance of producers been set -up? Rule (6(3))?	0	GAP	GAP	GAP
6(a)	Number of registered plastic waste recyclers	NIL	GAP	GAP	GAP
6(b)	Capacity of recycler (TPD)	NA	GAP	GAP	GAP
7	Status-of Utilization of plastic waste (Annual Report form VI pt.4)				
7(a)	Quantity of Plastic waste utilized in recycling (TPD)	Approximately 1530 Tonnes of plastic waste was sent to mainland till date.	GAP	GAP	GAP
7(b)	Quantity of plastic waste utilized in recycling Road Construction	80	NA	NA	NA
7©	Quantity of waste Co-processed in Plastic Waste in Cement kilns	NA	GAP	GAP	GAP
7(d)	Quantity of waste utilized in production of RDF	NA	GAP	GAP	GAP
7 (e)	Quantity of plastic waste used in production of Waste to oil	NA	GAP	GAP	GAP
7(f)	Quantity of plastic waste used in other purpose (please specify)	3.65 MT	GAP	GAP	GAP
8(a)	No. of Units registered manufacturing compostable plastic	1	GAP	GAP	GAP

ACTION PLAN FOR PLASTIC WASTE MANAGEMENT		Andaman & Nicobar			
Serial No.	Items	Current Status	Desirable Levels	Gap between C & D	Timeline
8(b)	Total Capacity of Units manufacturing compostable plastic	144	GAP	GAP	GAP
9(a)	No. of unregistered plastic manufacturing or recycling units. (Annual Report format pt.7)	NIL	NA	NA	NA
10	Whether local bodies have framed bye-laws [Rule6 (4)?	YES	GAP	GAP	GAP
11	Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)? Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)?	YES	GAP	GAP	GAP
12	Has complete ban on plastic carry bags been imposed? (Annual Report format pt. 3)	YES	NA	NA	NA
13	Status of action taken on non-compliance of PWM Rules (Annual Report format pt.9)	1. Rs.306,000 recovered from 1,160 inspections 2. 03 CR cases were filed before the Hon'ble Judicial Magistrate First Class I Court at Port Blair against establishments for non-compliance on ban of SUP items in 2019, 02 cases are disposed with penalty of Rs. 50,000 each. 01 case is pending with court.	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE MANAGEMENT		Andaman & Nicobar			
Serial No.	Items	Current Status	Desirable Levels	Gap between C & D	Timeline
14	Status of marking & labelling on plastic carry bags & multi layered packaging.(Rule11)	YES, M/s Green Tech for manufacturing of Compostable carry bag has been directed to mark and label the plastic carry bags.	NA	NA	NA
15	Whether State Level Advisory Committee is constituted or not? [Rule 16] If yes, details of number of meetings conducted in a year and implementation of suggestions of committee in the last 2 years	11 Nos.	NA	NA	NA
16	Status of phasing out of manufacture and use of multi-layered plastic which is non-recyclable or non-energy recoverable or with no alternate use of plastic in two years' time [Rule9-3]	No plastic manufacturing units exists in ANI.	NA	NA	NA
17			NA	NA	NA
a	Details of Action taken to ensure that plastic waste is not burnt (Rule-6(g))	No burning of plastic waste is being carried out in ANI.	NA	NA	NA
b	Details of Action taken w.r.t engagement of civil societies/groups with waste pickers (Rule-6(f))	There exists a scheme in Andaman & Nicobar Islands for exemption of freight charges for transportation of Plastic, Glass,& E-waste notified vide notification No. 109 dated 28.06.2016 in which 100% freight exemption is provided to transport waste plastic, glass and e-waste for recycling in mainland.	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE MANAGEMENT		Andaman & Nicobar			
Serial No.	Items	Current Status	Desirable Levels	Gap between C & D	Timeline
c	Details of Action taken w.r.t. creating awareness among stakeholders (Rule-6(e))	1.The Andaman & Nicobar Administration has conducted 02 exhibitions displaying Alternatives to single use plastic in the month of May 2019 and August 2019 for promoting smooth transition to non-plastic alternatives. 2. The Andaman & Nicobar Administration conducted massive campaign under Swatchh Bharat Mission at North & Middle Andaman from Jan 4 to Jan 9' 2021 to sensitize people for proper segregation of waste and its scientific management. 3. Bamboo straws made by SHG launched by Port Blair Municipal Council (PBMC) as an alternative to Plastic straws (SUP). 4. Skill development trainings on Bamboo straw making are conducted regularly for women by ICAR-CIARI. 5. Awareness brochures regarding harmful effects of plastic and alternative to single use plastic released.	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		Arunchal Pradesh			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline
1	what is the quantity of plastic waste generated (Annual Report form VI pt. 2,6) (TPD)	10.29	NA	NA	NA
2(a)	Number of registered plastic manufacturing units	0	GAP	GAP	GAP
2(b)	Capacity of registered plastic manufacturing units (TPD)	NA	NA	NA	NA
3(a)	Total No of ULBs	33			
3(b)	Percentage of ULBs which have set-up of plastic waste management system as per Rule 6(2)? (including collection, segregation, channelization & processing of plastic waste)	70	100	30	GAP
3©	Percentage of ULBs having facilities for collection of segregated waste	GAP	GAP	GAP	GAP
3(d)	Percentage of ULBs Material Recovery Facility	3.33	GAP	GAP	GAP
4(a)	Total no. of Gram Panchayat	GAP	GAP	GAP	GAP
4(b)	Percentage of Gram Panchayat which have setup of plastic waste management system as per Rule 7	GAP	GAP	GAP	GAP
4©	Percentage of GPs having facilities for Collection of segregated waste	GAP	GAP	GAP	GAP
4(d)	Percentage of GPs having Material Recovery Facility	GAP	GAP	GAP	GAP

ACTION PLAN FOR PLASTIC WASTE		Arunchal Pradesh			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline
5(a)	No. of registered Producers/brand owners/importers as per Rules 9 & 13 of PWM Rules?	10	GAP	GAP	GAP
5(b)	Percentage of Producers/Brandowners/Importers which have engaged with ULBs for PWM	GAP	GAP	GAP	GAP
5©	Percentage of ULBs which have set up system for plastic waste management with assistance of producers been set -up? Rule (6(3))?	Nil	GAP	GAP	GAP
6(a)	Number of registered plastic waste recyclers	Nil	GAP	GAP	GAP
6(b)	Capacity of recycler (TPD)	NA	NA	NA	NA
7	Status-of Utilization of plastic waste (Annual Report form VI pt.4)				
7(a)	Quantity of Plastic waste utilized in recycling (TPD)	91.00 tons per year of plastic waste is channelized for recycling.	GAP	GAP	GAP
7(b)	Quantity of plastic waste utilized in recycling Road Construction	60.00 MT per year.	GAP	GAP	GAP
7©	Quantity of waste Co-processed in Plastic Waste in Cement kilns	Nil	GAP	GAP	GAP
7(d)	Quantity of waste utilized in production of RDF	Nil	GAP	GAP	GAP
7 (e)	Quantity of plastic waste used in production of Waste to oil	Nil	GAP	GAP	GAP
7(f)	Quantity of plastic waste used in other purpose (please specify)	Nil	GAP	GAP	GAP

ACTION PLAN FOR PLASTIC WASTE		Arunchal Pradesh			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline
8(a)	No. of Units registered manufacturing compostable plastic	Nil	GAP	GAP	GAP
8(b)	Total Capacity of Units manufacturing compostable plastic	NA	NA	NA	NA
9(a)	No. of unregistered plastic manufacturing or recycling units. (Annual Report format pt.7)	Nil	NA	NA	NA
10	Whether local bodies have framed bye-laws [Rule6 (4)?	Yes	NA	NA	NA
11	Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)? Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)?	Yes. Banned.	NA	NA	NA
12	Has complete ban on plastic carry bags been imposed? (Annual Report format pt. 3)	Yes. State ban on use of plastic carry bags of thickness < 50 microns.	NA	NA	NA
13	Status of action taken on non-compliance of PWM Rules (Annual Report format pt.9)	Nil	NA	NA	NA
14	Status of marking & labelling on plastic carry bags & multi layered packaging.(Rule11)		NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		Arunchal Pradesh			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline
15	Whether State Level Advisory Committee is constituted or not? [Rule 16] If yes, details of number of meetings conducted in a year and implementation of suggestions of committee in the last 2 years	Constituted.	NA	NA	NA
16	Status of phasing out of manufacture and use of multi-layered plastic which is non-recyclable or non-energy recoverable or with no alternate use of plastic in two years' time [Rule9-3]	Special Task Force constituted vide Notification No. DTP/MUN-88/2018-19/586-96 dated 6th September, 2021.	NA	NA	NA
17			NA	NA	NA
a	Details of Action taken to ensure that plastic waste is not burnt (Rule-6(g))	Longding Town has held awareness on impacts of burning plastic waste to the natural environment and health of an individual.	NA	NA	NA
b	Details of Action taken w.r.t engagement of civil societies/groups with waste pickers (Rule-6(f))	Pasighat Municipal Council has conducted social service, cleanliness drives by involving civil societies/groups/NGOs/SHGs. Longding Town is on process to integrate informal waste pickers to collect door to door waste collection of recyclable items from dry waste.	NA	NA	NA
c	Details of Action taken w.r.t. creating awareness among stakeholders (Rule-6(e))	Mass awareness held on how to segregate waste at source in Longding Town.	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE MANAGEMENT		Assam			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline
1	what is the quantity of plastic waste generated (Annual Report form VI pt. 2,6) (TPD)	161	NA	NA	NA
2(a)	Number of registered plastic manufacturing units	17	NA		NA
2(b)	Capacity of registered plastic manufacturing units (TPD)	328	GAP	GAP	GAP
3(a)	Total No of ULBs	96	NA	NA	NA
3(b)	Percentage of ULBs which have set-up of plastic waste management system as per Rule 6(2)? (including collection, segregation, channelization & processing of plastic waste)	67	GAP	GAP	GAP
3(c)	Percentage of ULBs having facilities for collection of segregated waste	89	GAP	GAP	GAP
3(d)	Percentage of ULBs Material Recovery Facility	82	GAP	GAP	GAP
4(a)	Total no. of Gram Panchayat	2201	NA	NA	NA
4(b)	Percentage of Gram Panchayat which have setup of plastic waste management system as per Rule 7	GAP	GAP	GAP	GAP
4(c)	Percentage of GPs having facilities for Collection of segregated waste	GAP	GAP	GAP	GAP
4(d)	Percentage of GPs having Material Recovery Facility	GAP	GAP	GAP	GAP

ACTION PLAN FOR PLASTIC WASTE MANAGEMENT		Assam			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline
5(a)	No. of registered Producers/brand owners/importers as per Rules 9 & 13 of PWM Rules?	17	GAP	GAP	GAP
5(b)	Percentage of Producers/Brandowners/Importers which have engaged with ULBs for PWM	GAP	GAP	GAP	GAP
5(c)	Percentage of ULBs which have set up system for plastic waste management with assistance of producers been set -up? Rule (6(3))?	GAP	GAP	GAP	GAP
6(a)	Number of registered plastic waste recyclers	5	GAP	GAP	GAP
6(b)	Capacity of recycler (TPD)	180	GAP	GAP	GAP
7	Status-of Utilization of plastic waste (Annual Report form VI pt.4)	GAP	GAP	GAP	GAP
7(a)	Quantity of Plastic waste utilized in recycling (TPD)	no data	GAP	GAP	GAP
7(b)	Quantity of plastic waste utilized in recycling Road Construction	nil	GAP	GAP	GAP
7(c)	Quantity of waste Co-processed in Plastic Waste in Cement kilns	26	GAP	GAP	GAP
7(d)	Quantity of waste utilized in production of RDF	nil	GAP	GAP	GAP
7 (e)	Quantity of plastic waste used in production of Waste to oil	nil	GAP	GAP	GAP
7(f)	Quantity of plastic waste used in other purpose (please specify)	GAP	GAP	GAP	GAP
8(a)	No. of Units registered manufacturing compostable plastic	nil	GAP	GAP	GAP
8(b)	Total Capacity of Units manufacturing compostable plastic	nil	GAP	GAP	GAP

ACTION PLAN FOR PLASTIC WASTE MANAGEMENT		Assam			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline
9(a)	No. of unregistered plastic manufacturing or recycling units. (Annual Report format pt.7)	GAP	GAP	GAP	GAP
10	Whether local bodies have framed bye-laws [Rule6 (4)?	yes	GAP	GAP	GAP
11	Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)? Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)?	yes	GAP	GAP	GAP
12	Has complete ban on plastic carry bags been imposed? (Annual Report format pt. 3)	GAP	GAP	GAP	GAP
13	Status of action taken on non-compliance of PWM Rules (Annual Report format pt.9)	PCBA is monitoring all plastic producers and recyclers to ensure compliance. Fines are collected by ULBs for violations in in respect of stocking, sale and usage of plastics.	NA	NA	NA
14	Status of marking & labelling on plastic carry bags & multi layered packaging.(Rule11)	implemented	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE MANAGEMENT		Assam			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline
15	Whether State Level Advisory Committee is constituted or not? [Rule 16] If yes, details of number of meetings conducted in a year and implementation of suggestions of committee in the last 2 years	yes	NA	NA	NA
16	Status of phasing out of manufacture and use of multi-layered plastic which is non-recyclable or non-energy recoverable or with no alternate use of plastic in two years' time [Rule9-3]	draft action already prepared by the govt. of Assam and PCBA	NA	NA	NA
17					
a	Details of Action taken to ensure that plastic waste is not burnt (Rule-6(g))	Directions issued to ULBs.568 challans issued (Rs305500/- was collected through challan for for littering/burning/use of single use plastic	NA	NA	NA
b	Details of Action taken w.r.t engagement of civil socities/groups with waste pickers (Rule-6(f))	engaged by ULBs	NA	NA	NA
c	Details of Action taken w.r.t. creating awarness among stakeholders (Rule-6(e))	workshops and other IEC activities conducted by PCBA	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE MANAGEMENT		Chandigarh			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline
1	what is the quantity of plastic waste generated (Annual Report form VI pt. 2,6) (TPD)	37.81	NA	NA	NA
2(a)	Number of registered plastic manufacturing units	Nil	NA	NA	NA
2(b)	Capacity of registered plastic manufacturing units (TPD)	GAP	GAP	GAP	GAP
3(a)	Total No of ULBs	1	NA	NA	NA
3(b)	Percentage of ULBs which have set-up of plastic waste management system as per Rule 6(2)? (including collection, segregation, channelization & processing of plastic waste)	100	100	0	GAP
3©	Percentage of ULBs having facilities for collection of segregated waste	100	100	Nil	NA
3(d)	Percentage of ULBs Material Recovery Facility	100	100	Nil	NA
4(a)	Total no. of Gram Panchayat	0	NA	NA	NA
4(b)	Percentage of Gram Panchayat which have setup of plastic waste management system as per Rule 7	NA	NA	NA	NA
4©	Percentage of GPs having facilities for Collection of segregated waste	NA	NA	NA	NA
4(d)	Percentage of GPs having Material Recovery Facility	NA	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE MANAGEMENT		Chandigarh			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline
5(a)	No. of registered Producers/brand owners/ importers as per Rules 9 & 13 of PWM Rules?	GAP	All facilities are to be registered.	GAP	GAP
5(b)	Percentage of Producers/Brandowners/Importers which have engaged with ULBs for PWM	GAP	GAP	GAP	GAP
5(c)	Percentage of ULBs which have set up system for plastic waste management with assistance of producers been set -up? Rule (6(3))?	100	100	Nil	NA
6(a)	Number of registered plastic waste recyclers	7	GAP	GAP	GAP
6(b)	Capacity of recycler (TPD)	4.62	GAP	GAP	GAP
7	Status-of Utilization of plastic waste (Annual Report form VI pt.4)	Plastic waste in the city informally is going to recyclers. However, as two mechanical MRFs have been made functional, engagement of waste recyclers will be done soon for these facilities.	Plastic waste should be utilized/recycled upto maximum extent	being done in unorganised sector. No data available	6 months
7(a)	Quantity of Plastic waste utilized in recycling (TPD)	GAP	GAP	GAP	GAP
7(b)	Quantity of plastic waste utilized in recycling Road Construction	Plastic waste so collected is also used for patchwork in small quantity	GAP	GAP	6 months
7(c)	Quantity of waste Co-processed in Plastic Waste in Cement kilns	GAP	GAP	GAP	6 months
7(d)	Quantity of waste utilized in production of RDF	1544.15 MT (Jan to Dec 2021)	GAP	GAP	6 months
7 (e)	Quantity of plastic waste used in production of Waste to oil	NIL	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE MANAGEMENT		Chandigarh			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline
7(f)	Quantity of plastic waste used in other purpose (please specify)	NIL	NA	NA	NA
8(a)	No. of Units registered manufacturing compostable plastic	NIL	NA	NA	NA
8(b)	Total Capacity of Units manufacturing compostable plastic	NA	NA	NA	NA
9(a)	No. of unregistered plastic manufacturing or recycling units. (Annual Report format pt.7)	NIL	NA	NA	NA
10	Whether local bodies have framed bye-laws [Rule6 (4)?	yes	NA	NA	NA
11	Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)? Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)?	Yes	NA	NA	Complied
12	Has complete ban on plastic carry bags been imposed? (Annual Report format pt. 3)	Yes	NA	NA	Complied
13	Status of action taken on non-compliance of PWM Rules (Annual Report format pt.9)	The Municipal Corporation Chandigarh has issued 961 nos. of challans to the violators and 400 Kg (approx.) polythene/plastic seized during the period Jan. 2021 to Dec 2021.	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE MANAGEMENT		Chandigarh			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline
14	Status of marking & labelling on plastic carry bags & multi layered packaging.(Rule11)	Complete ban	NA	NA	Complied
15	Whether State Level Advisory Committee is constituted or not? [Rule 16] If yes, details of number of meetings conducted in a year and implementation of suggestions of committee in the last 2 years	Yes	NA	NA	NA
16	Status of phasing out of manufacture and use of multi-layered plastic which is non-recyclable or non-energy recoverable or with no alternate use of plastic in two years' time [Rule9-3]	The concept of Extended Producer Responsibility (EPR) is being introduced and some manufactures will be held accountable for the MLPs in market. A buy back system may be proposed for the same with the approval of competent authority.	Complete collection of multi layered plastic	done in unorganised sector	3 months
17					
a	Details of Action taken to ensure that plastic waste is not burnt (Rule-6(g))	NA	NA	NA	NA
b	Details of Action taken w.r.t engagement of civil socities/groups with waste pickers (Rule-6(f))	Characterisation of plastic waste will be provided after achievement of fully functional of mechnincal MRFs. Their after compontent wise charactersation will be given.	Complete characterization of Plastic waste	NA	6 months

ACTION PLAN FOR PLASTIC WASTE MANAGEMENT		Chandigarh			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline
c	Details of Action taken w.r.t. creating awarness among stakeholders (Rule-6(e))	MCC is conducting various IEC and public awareness programmes with NGOs on curbing single use plastics. Wall paintings have been done by MCC for showcasing the message of " Say No to Plastic"	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		Kerala			
Serial No.	Items	Current Status	Desirable Levels	Gap between C & D	Timeline
1	what is the quantity of plastic waste generated (Annual Report form VI pt. 2,6) (TPD)	328.9	NA	NA	NA
2(a)	Number of registered plastic manufacturing units	1348	1348	1348	GAP
2(b)	Capacity of registered plastic manufacturing units (TPD)	GAP	GAP	GAP	GAP
3(a)	Total No of ULBs	93			
3(b)	Percentage of ULBs which have set-up of plastic waste management system as per Rule 6(2)? (including collection, segregation, channelization & processing of plastic waste)	98.92	100	1.08	6 months
3©	Percentage of ULBs having facilities for collection of segregated waste	91.3	100	8.7	6 months
3(d)	Percentage of ULBs Material Recovery Facility	70.96	100	29.04	6 months
4(a)	Total no. of Gram Panchayat	941			
4(b)	Percentage of Gram Panchayat which have setup of plastic waste management system as per Rule 7	31.74	100	68.26	6 months
4©	Percentage of GPs having facilities for Collection of segregated waste	87.25	100	12.75	6 months
4(d)	Percentage of GPs having Material Recovery Facility	66.29	100	33.71	6 months
5(a)	No. of registered Producers/brand owners/ importers as per Rules 9 & 13 of PWM Rules?	0	GAP	GAP	GAP

ACTION PLAN FOR PLASTIC WASTE		Kerala			
Serial No.	Items	Current Status	Desirable Levels	Gap between C & D	Timeline
5(b)	Percentage of Producers/Brandowners/Importers which have engaged with ULBs for PWM	0	GAP	GAP	GAP
5©	Percentage of ULBs which have set up system for plastic waste management with assistance of producers been set -up? Rule (6(3))?	1.1	100	98.9	6 months
6(a)	Number of registered plastic waste recyclers	187	GAP	GAP	GAP
6(b)	Capacity of recycler (TPD)	200	GAP	GAP	GAP
7	Status-of Utilization of plastic waste (Annual Report form VI pt.4)				
7(a)	Quantity of Plastic waste utilized in recycling (TPD)	200			
7(b)	Quantity of plastic waste utilized in recycling Road Construction	2.5	GAP	GAP	GAP
7©	Quantity of waste Co-processed in Plastic Waste in Cement kilns	3.56	GAP	GAP	GAP
7(d)	Quantity of waste utilized in production of RDF	Nil	GAP	GAP	GAP
7 (e)	Quantity of plastic waste used in production of Waste to oil	Nil	GAP	GAP	GAP
7(f)	Quantity of plastic waste used in other purpose (please specify)	Nil	GAP	GAP	GAP
8(a)	No. of Units registered manufacturing compostable plastic	5 units	GAP	GAP	GAP
8(b)	Total Capacity of Units manufacturing compostable plastic	1248	GAP	GAP	GAP
9(a)	No. of unregistered plastic manufacturing or recycling units. (Annual Report format pt.7)	Nil	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		Kerala			
Serial No.	Items	Current Status	Desirable Levels	Gap between C & D	Timeline
10	Whether local bodies have framed bye-laws [Rule6 (4)?	Yes	NA	NA	NA
11	Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)? Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)?	Banned	NA	NA	NA
12	Has complete ban on plastic carry bags been imposed? (Annual Report format pt. 3)	Yes	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		Kerala			
Serial No.	Items	Current Status	Desirable Levels	Gap between C & D	Timeline
13	Status of action taken on non-compliance of PWM Rules (Annual Report format pt.9)	The Board officers along with the officials of other departments conducted inspections for the strict implementation of single use plastic ban in the State. Out of the 465 inspections conducted as on October 2020, 153 violations were observed. An amount of Rs. 13,05,000/- was imposed as fine to the violators and collected Rs.3,35,000/- as fine. Confiscation of banned items was also done for the strict implementation of ban in the State. The Board inspected various shops and market places through out Idukki district on 04/03/2021 and 188.704 Kg of banned single use plastic items caught in this inspection another inspection was carried out in Kozhikode city and fine of Rs.10,000/- imposed on each violators.	NA	NA	NA
14	Status of marking & labelling on plastic carry bags & multi layered packaging.(Rule11)	Single use Plastic is banned in Kerala	NA	NA	NA
15	Whether State Level Advisory Committee is constituted or not? [Rule 16] If yes, details of number of meetings conducted in a year and implementation of suggestions of committee in the last 2 years	Yes	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		Kerala			
Serial No.	Items	Current Status	Desirable Levels	Gap between C & D	Timeline
16	Status of phasing out of manufacture and use of multi-layered plastic which is non-recyclable or non-energy recoverable or with no alternate use of plastic in two years' time [Rule9-3]	PVC flex has been banned in the State.	NA	NA	NA
17					
a	Details of Action taken to ensure that plastic waste is not burnt (Rule-6(g))	Instruction given to local bodies	NA	NA	NA
b	Details of Action taken w.r.t engagement of civil societies/groups with waste pickers (Rule-6(f))	Local bodies with Harithakarma Senas associated with waste pickers	NA	NA	NA
c	Details of Action taken w.r.t. creating awareness among stakeholders (Rule-6(e))	Awareness Programmes were conducted at State, District and Institutional levels.	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		Maharashtra			
Serial No.	Items	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline
1	what is the quantity of plastic waste generated (Annual Report form VI pt. 2,6) (TPD)	853	NA	NA	NA
2(a)	Number of registered plastic manufacturing units	111	GAP	GAP	GAP
2(b)	Capacity of registered plastic manufacturing units (TPD)	1001	GAP	GAP	GAP
3(a)	Total No of ULBs	403	NA	NA	NA
3(b)	Percentage of ULBs which have set-up of plastic waste management system as per Rule 6(2)? (including collection, segregation, channelization & processing of plastic waste)	95	GAP	5	GAP
3(c)	Percentage of ULBs having facilities for collection of segregated waste	100	0	NA	NA
3(d)	Percentage of ULBs Material Recovery Facility	0	GAP	GAP	GAP
4(a)	Total no. of Gram Panchayat	27,891	NA	NA	NA
4(b)	Percentage of Gram Panchayat which have setup of plastic waste management system as per Rule 7	0	GAP	GAP	GAP
4(c)	Percentage of GPs having facilities for Collection of segregated waste	0	GAP	GAP	GAP
4(d)	Percentage of GPs having Material Recovery Facility	0	GAP	GAP	GAP

ACTION PLAN FOR PLASTIC WASTE		Maharashtra			
Serial No.	Items	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline
5(a)	No. of registered Producers/brand owners/ importers as per Rules 9 & 13 of PWM Rules?	9			
5(b)	Percentage of Producers/Brandowners/Importers which have engaged with ULBs for PWM	Many of producers/brand owners have given responsibility to PROs who are working with ULBs for collection of plastic waste. There are total 216 EPR agreements of plastic producers as well as brand owners with total 12 no. of PROs for collection of 33,746 MT plastic waste per year for FY 2020-21.	GAP	GAP	GAP
5(c)	Percentage of ULBs which have set up system for plastic waste management with assistance of producers been set - up? Rule (6(3))?	22	GAP	GAP	GAP
6(a)	Number of registered plastic waste recyclers	127	GAP	GAP	GAP
6(b)	Capacity of recycler (TPD)	1167	GAP	GAP	GAP
7	Status-of Utilization of plastic waste (Annual Report form VI pt.4)	64% plastic efficiency (processing) of plastic waste generation.			
7(a)	Quantity of Plastic waste utilized in recycling (TPD)	81	GAP	GAP	GAP
7(b)	Quantity of plastic waste utilized in recycling Road Construction	37	GAP	GAP	GAP
7(c)	Quantity of waste Co-processed in Plastic Waste in Cement kilns	70	GAP	GAP	GAP
7(d)	Quantity of waste utilized in production of RDF	342	GAP	GAP	GAP
7 (e)	Quantity of plastic waste used in production of Waste to oil	13	GAP	GAP	GAP

ACTION PLAN FOR PLASTIC WASTE		Maharashtra			
Serial No.	Items	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline
7(f)	Quantity of plastic waste used in other purpose (please specify)	GAP	GAP	GAP	GAP
8(a)	No. of Units registered manufacturing compostable plastic	7	GAP	GAP	GAP
8(b)	Total Capacity of Units manufacturing compostable plastic	10,405 Tonnes per annum	GAP	GAP	GAP
9(a)	No. of unregistered plastic manufacturing or recycling units. (Annual Report format pt.7)	GAP	GAP	GAP	GAP
10	Whether local bodies have framed bye-laws [Rule6 (4)?	No	NA	NA	NA
11	Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)? Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)?	yes	NA	NA	NA
12	Has complete ban on plastic carry bags been imposed? (Annual Report format pt. 3)	yes	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		Maharashtra			
Serial No.	Items	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline
13	Status of action taken on non-compliance of PWM Rules (Annual Report format pt.9)	As per PWM Rules, 2016, the SPCB shall be the authority for enforcement of the provision of these rules relating to (1) registration - for manufacturing of carry bags, multi-layer plastic and plastic recyclers (2) manufacture of plastic products and multi layered packaging (MLP), (3) processing and disposal of plastic wastes. In compliance of Maharashtra Plastic Notification 2018, plastic carry bags of all types are banned in the State. MPCB is issuing registrations for manufacturing of MLP and plastic recyclers. MPCB has taken following action: 1. Issued closure directions to 405 plastic and thermocol manufacturing industries since October 2018 till 31st March 2021. 2. collected fine of Rs. 3.91 Cr from shops/establishments through joint survey with local bodies as well as independently in FY 2020-21, for non-compliance with the Maharashtra Plastic Notification. 3. Around 1425 tonnes of banned plastic items have been seized in FY 2020-21 for non-compliance with the Maharashtra Plastic Notification.	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		Maharashtra			
Serial No.	Items	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline
14	Status of marking & labelling on plastic carry bags & multi layered packaging.(Rule11)	Not applicable as the Govt. of Maharashtra has imposed complete ban on plastic carry bags irrespective of size and thickness in the State.	NA	NA	NA
15	Whether State Level Advisory Committee is constituted or not? [Rule 16] If yes, details of number of meetings conducted in a year and implementation of suggestions of committee in the last 2 years	Yes. Environment Department, GoM has constituted State Level Advisory Committee vide G.R. Dated 4.1.2017. Meeting of the Committee was held on 09.07.2021. Implementation of recommendations of the Committee is ongoing.	NA	NA	NA
16	Status of phasing out of manufacture and use of multi-layered plastic which is non-recyclable or non-energy recoverable or with no alternate use of plastic in two years' time [Rule9-3]	Complied.	NA	NA	NA
17					

ACTION PLAN FOR PLASTIC WASTE		Maharashtra			
Serial No.	Items	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline
a	Details of Action taken to ensure that plastic waste is not burnt (Rule-6(g))	Yes. Maharashtra PCB has issued directions to all the 27 municipal corporations to submit compliance status of domestic hazardous waste disposal and prohibition on open burning of waste (incl. plastic waste) on lands on 29.08.2019. It was also directed to submit details regarding environmental compensation recovery towards open burning of waste on lands. Accordingly, till date, reply from 10 municipal corporations is received. Total 138 cases of open waste burning have been reported and Rs. 4,17,200/- EC is collected. Furthermore, MPCB has given directions to Maharashtra Industrial Development Corporation (MIDC), in the matter of Judgement dated 22.12.2016 passed by Honble NGT in OA 199/2014 regarding prohibition on open burning of waste on lands and imposition of environmental compensation on violators. Furthermore, RO Nagpur, SRO Chandrapur and SRO Mahad offices have given similar directions to the CEOs of respective Zilha Parishads.	NA	NA	NA
b	Details of Action taken w.r.t engagement of civil societies/groups with waste pickers (Rule-6(f))	Not available	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		Maharashtra			
Serial No.	Items	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline
c	Details of Action taken w.r.t. creating awareness among stakeholders (Rule-6(e))	MPCB has uploaded awareness material on MPCB website regarding banned items as per SUP Notification 2021 and Maharashtra Plastic and Thermocol Notification 2018. MPCB has issued letters to all Municipal Corporations, Municipal Councils, and anagar Panchayats in the State of Maharashtra regarding compliance of SUP Notification 2021 on 27.10.2021. MPCB has installed standees regarding banned SUP items as per SUP Notification 2021 and Maharashtra Plastic and Thermocol Notification, 2018. MPCB has issued notice in local newspapers (Marathi and English) regarding banned SUP items as per both Notifications.	NA	NA	NA

[illegible]

[illegible]

ACTION PLAN FOR PLASTIC WASTE		Manipur				Sikkim			
Serial No.	Items	Current Status	Desirable Levels	Gap between C & D	Timeline	Current Status	Desirable Levels	Gap between C & D	Timeline
8(a)	No. of Units registered manufacturing compostable plastic	Nil	Nil	Nil	GAP	GAP	GAP	GAP	GAP
8(b)	Total Capacity of Units manufacturing compostable plastic	Nil	Nil	Nil	GAP	GAP	GAP	GAP	GAP
9(a)	No. of unregistered plastic manufacturing or recycling units. (Annual Report format pt.7)	Nil	NA	NA	NA	GAP	GAP	GAP	GAP
10	Whether local bodies have framed bye-laws [Rule6 (4)?	GAP	NA	NA	NA	GAP	GAP	GAP	GAP
11	Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)? Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)?	Yes	NA	NA	NA	GAP	GAP	GAP	GAP
12	Has complete ban on plastic carry bags been imposed? (Annual Report format pt. 3)	No	NA	NA	NA	GAP	GAP	GAP	GAP
13	Status of action taken on non-compliance of PWM Rules (Annual Report format pt.9)	NA	NA	NA	NA	GAP	GAP	GAP	GAP
14	Status of marking & labelling on plastic carry bags & multi layered packaging.(Rule11)	100% compiled	NA	NA	NA	GAP	GAP	GAP	GAP

ACTION PLAN FOR PLASTIC WASTE		Manipur				Sikkim			
Serial No.	Items	Current Status	Desirable Levels	Gap between C & D	Timeline	Current Status	Desirable Levels	Gap between C & D	Timeline
15	Whether State Level Advisory Committee is constituted or not? [Rule 16] If yes, details of number of meetings conducted in a year and implementation of suggestions of committee in the last 2 years	Yes	NA	NA	NA	GAP	GAP	GAP	GAP
16	Status of phasing out of manufacture and use of multi-layered plastic which is non-recyclable or non-energy recoverable or with no alternate use of plastic in two years' time [Rule9-3]	Yes	NA	NA	NA	GAP	GAP	GAP	GAP
17			NA	NA	NA	GAP	GAP	GAP	GAP
a	Details of Action taken to ensure that plastic waste is not burnt (Rule-6(g))	Compiled by local body in their respective jurisdiction as per action taken report submitted by local bodies in their annual report.	NA	NA	NA	GAP	GAP	GAP	GAP
b	Details of Action taken w.r.t engagement of civil societies/groups with waste pickers (Rule-6(f))	Compiled by local body in their respective jurisdiction as per action taken report submitted by local bodies in their annual report.	NA	NA	NA	GAP	GAP	GAP	GAP
c	Details of Action taken w.r.t. creating awareness among stakeholders (Rule-6(e))	Compiled by local body in their respective jurisdiction as per action taken report submitted by local bodies in their annual report.	NA	NA	NA	GAP	GAP	GAP	GAP

[illegible]

[illegible]

ACTION PLAN FOR PLASTIC WASTE		Manipur				Sikkim			
Serial No.	Items	Current Status	Desirable Levels	Gap between C & D	Timeline	Current Status	Desirable Levels	Gap between C & D	Timeline
8(a)	No. of Units registered manufacturing compostable plastic	Nil	Nil	Nil	GAP	GAP	GAP	GAP	GAP
8(b)	Total Capacity of Units manufacturing compostable plastic	Nil	Nil	Nil	GAP	GAP	GAP	GAP	GAP
9(a)	No. of unregistered plastic manufacturing or recycling units. (Annual Report format pt.7)	Nil	NA	NA	NA	GAP	GAP	GAP	GAP
10	Whether local bodies have framed bye-laws [Rule6 (4)?	GAP	NA	NA	NA	GAP	GAP	GAP	GAP
11	Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)? Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)?	Yes	NA	NA	NA	GAP	GAP	GAP	GAP
12	Has complete ban on plastic carry bags been imposed? (Annual Report format pt. 3)	No	NA	NA	NA	GAP	GAP	GAP	GAP
13	Status of action taken on non-compliance of PWM Rules (Annual Report format pt.9)	NA	NA	NA	NA	GAP	GAP	GAP	GAP
14	Status of marking & labelling on plastic carry bags & multi layered packaging.(Rule11)	100% compiled	NA	NA	NA	GAP	GAP	GAP	GAP

ACTION PLAN FOR PLASTIC WASTE		Manipur				Sikkim			
Serial No.	Items	Current Status	Desirable Levels	Gap between C & D	Timeline	Current Status	Desirable Levels	Gap between C & D	Timeline
15	Whether State Level Advisory Committee is constituted or not? [Rule 16] If yes, details of number of meetings conducted in a year and implementation of suggestions of committee in the last 2 years	Yes	NA	NA	NA	GAP	GAP	GAP	GAP
16	Status of phasing out of manufacture and use of multi-layered plastic which is non-recyclable or non-energy recoverable or with no alternate use of plastic in two years' time [Rule9-3]	Yes	NA	NA	NA	GAP	GAP	GAP	GAP
17			NA	NA	NA	GAP	GAP	GAP	GAP
a	Details of Action taken to ensure that plastic waste is not burnt (Rule-6(g))	Compiled by local body in their respective jurisdiction as per action taken report submitted by local bodies in their annual report.	NA	NA	NA	GAP	GAP	GAP	GAP
b	Details of Action taken w.r.t engagement of civil societies/groups with waste pickers (Rule-6(f))	Compiled by local body in their respective jurisdiction as per action taken report submitted by local bodies in their annual report.	NA	NA	NA	GAP	GAP	GAP	GAP
c	Details of Action taken w.r.t. creating awareness among stakeholders (Rule-6(e))	Compiled by local body in their respective jurisdiction as per action taken report submitted by local bodies in their annual report.	NA	NA	NA	GAP	GAP	GAP	GAP

ACTION PLAN FOR PLASTIC WASTE MANAGEMENT		Mizoram			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline
1	what is the quantity of plastic waste generated (Annual Report form VI pt. 2,6) (TPD)	3.92	NA	NA	NA
2(a)	Number of registered plastic manufacturing units	NIL	NA	NA	NA
2(b)	Capacity of registered plastic manufacturing units (TPD)	NA	NA	NA	GAP
3(a)	Total No of ULBs	23	NA	NA	NA
3(b)	Percentage of ULBs which have set-up of plastic waste management system as per Rule 6(2)? (including collection, segregation, channelization & processing of plastic waste)	0	GAP	GAP	GAP
3©	Percentage of ULBs having facilities for collection of segregated waste	100	GAP	GAP	GAP
3(d)	Percentage of ULBs Material Recovery Facility	100	GAP	GAP	GAP
4(a)	Total no. of Gram Panchayat	There is no Gram Panchayat system in the State but Village Councils instead of GP. There are such 155 Village Councils in 22 Urban Towns	NA	NA	NA
4(b)	Percentage of Gram Panchayat which have setup of plastic waste management system as per Rule 7	0	GAP	GAP	GAP
4©	Percentage of GPs having facilities for Collection of segregated waste	0	GAP	GAP	GAP

ACTION PLAN FOR PLASTIC WASTE MANAGEMENT		Mizoram			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline
4(d)	Percentage of GPs having Material Recovery Facility	0	GAP	GAP	GAP
5(a)	No. of registered Producers/brand owners/importers as per Rules 9 & 13 of PWM Rules?	9	GAP	GAP	GAP
5(b)	Percentage of Producers/Brandowners/Importers which have engaged with ULBs for PWM	NIL	GAP	GAP	GAP
5©	Percentage of ULBs which have set up system for plastic waste management with assistance of producers been set -up? Rule (6(3))?	NIL	GAP	GAP	GAP
6(a)	Number of registered plastic waste recyclers	NIL	GAP	GAP	GAP
6(b)	Capacity of recycler (TPD)	NA	GAP	GAP	GAP
7	Status-of Utilization of plastic waste (Annual Report form VI pt.4)				
7(a)	Quantity of Plastic waste utilized in recycling (TPD)	0.768 MT of recyclable plastic waste are collected	GAP	GAP	GAP
7(b)	Quantity of plastic waste utilized in recycling Road Construction	GAP	GAP	GAP	GAP
7©	Quantity of waste Co-processed in Plastic Waste in Cement kilns	5.990 MTA	GAP	GAP	GAP
7(d)	Quantity of waste utilized in production of RDF	NIL	GAP	GAP	GAP
7 (e)	Quantity of plastic waste used in production of Waste to oil	NIL	GAP	GAP	GAP
7(f)	Quantity of plastic waste used in other purpose (please specify)	NIL	GAP	GAP	GAP
8(a)	No. of Units registered manufacturing compostable plastic	NIL	GAP	GAP	GAP

ACTION PLAN FOR PLASTIC WASTE MANAGEMENT		Mizoram			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline
8(b)	Total Capacity of Units manufacturing compostable plastic	N.A	GAP	GAP	GAP
9(a)	No. of unregistered plastic manufacturing or recycling units. (Annual Report format pt.7)	NIL	NA	NA	NA
10	Whether local bodies have framed bye-laws [Rule6 (4)?	YES	NA	NA	NA
11	Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)? Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)?	YES	NA	NA	NA
12	Has complete ban on plastic carry bags been imposed? (Annual Report format pt. 3)	YES	NA	NA	NA
13	Status of action taken on non-compliance of PWM Rules (Annual Report format pt.9)	NIL	NA	NA	NA
14	Status of marking & labelling on plastic carry bags & multi layered packaging.(Rule11)	N.A as there is no manufacturing unit	NA	NA	NA
15	Whether State Level Advisory Committee is constituted or not? [Rule 16] If yes, details of number of meetings conducted in a year and implementation of suggestions of committee in the last 2 years	YES	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE MANAGEMENT		Mizoram			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline
16	Status of phasing out of manufacture and use of multi-layered plastic which is non-recyclable or non-energy recoverable or with no alternate use of plastic in two years' time [Rule9-3]	N.A as there is no manufacturing unit	NA	NA	NA
17					
a	Details of Action taken to ensure that plastic waste is not burnt (Rule-6(g))	The State Govt. has notified order on 11th June, 2018	NA	NA	NA
b	Details of Action taken w.r.t engagement of civil societies/groups with waste pickers (Rule-6(f))	Registration of Waste Pickers done	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE MANAGEMENT		Mizoram			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline
c	Details of Action taken w.r.t. creating awareness among stakeholders (Rule-6(e))	1. Senitization Workshop on Plastic Waste Management was conducted by the Aizawl Municipal Corporation in coordination with the MPCB in the month of February, 2021. 2. The MPCB attended as Resource Persons at Awareness Program organized by the Young Mizo Association, Rahsi Veng Branch Lunglei in the month of February, 2021. 3. The MPCB attended as Resource Persons in the Online Orientation Programme on Waste Management for Grrn Teachers and Green Students Organized by the MPCB, Mizoram Envis Hub and Eco Club, Govt. Thankima College on 21st December, 2021. 4. The AMC conducts surprise checking of stalls and shops on regular basis to check any violation on use and sell of single use plastic carry bag. 5. Aizawl Citywas already declared PLASTIC FREE CITY from 2nd OCTober, 2019	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		Odisha				Tripura			
Serial No.	Items	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline	Current Status TPD	Desirable Levels	Gap between current status and desirable level	Timeline
1	what is the quantity of plastic waste generated (Annual Report form VI pt. 2,6) (TPD)	136	NA	NA	NA	0.17	NA	NA	NA
2(a)	Number of registered plastic manufacturing units	25	GAP	GAP	GAP	There is no registered plastic manufacturing units in Tripura	GAP	GAP	GAP
2(b)	Capacity of registered plastic manufacturing units (TPD)	Granules 210.70 (TPD), Tar 410.95 sq. meter/day, Lumps 1.40 TPD, Pressued used PV Woven Bgas 0.66 TPD, PVC Flexible Pipes 1.92 TPD	GAP	GAP	GAP	Nil	GAP	GAP	GAP
3(a)	Total No of ULBs	114	NA	NA	NA	20 (twenty)	-	-	-
3(b)	Percentage of ULBs which have set-up of plastic waste management system as per Rule 6(2)? (including collection, segregation, channelization & processing of plastic waste)	100	100	0	GAP	100	100	No Gap	NA
3©	Percentage of ULBs having facilities for collection of segregated waste	100	100	0	NA	100	100	No Gap	NA

ACTION PLAN FOR PLASTIC WASTE		Odisha				Tripura			
Serial No.	Items	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline	Current Status TPD	Desirable Levels	Gap between current status and desirable level	Timeline
3(d)	Percentage of ULBs Material Recovery Facility	100	100	0	NA	100	100	No Gap	NA
4(a)	Total no. of Gram Panchayat	NA	NA	NA	NA	591	100	100	No Gap
4(b)	Percentage of Gram Panchayat which have setup of plastic waste management system as per Rule 7	NA	NA	NA	NA	0	GAP	GAP	GAP
4©	Percentage of GPs having facilities for Collection of segregated waste	NA	NA	NA	NA	4	100	96	31.12.2022
4(d)	Percentage of GPs having Material Recovery Facility	NA	NA	NA	NA	4	100	96	31.12.2022
5(a)	No. of registered Producers/brand owners/ importers as per Rules 9 & 13 of PWM Rules?	6	GAP	GAP	GAP	23	GAP	GAP	GAP
5(b)	Percentage of Producers/Brandowners/Importers which have engaged with ULBs for PWM	GAP	GAP	GAP	GAP	100	100	No Gap	NA
5©	Percentage of ULBs which have set up system for plastic waste management with assistance of producers been set-up? Rule (6(3))?	GAP	GAP	GAP	GAP	100	100	Nil	GAP

ACTION PLAN FOR PLASTIC WASTE		Odisha				Tripura			
Serial No.	Items	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline	Current Status TPD	Desirable Levels	Gap between current status and desirable level	Timeline
6(a)	Number of registered plastic waste recyclers	9	GAP	GAP	GAP	10	GAP	GAP	GAP
6(b)	Capacity of recycler (TPD)	GAP	GAP	GAP	GAP	4.5	GAP	GAP	GAP
7	Status-of Utilization of plastic waste (Annual Report form VI pt.4)	GAP	GAP	GAP	GAP	GAP	GAP	GAP	GAP
7(a)	Quantity of Plastic waste utilized in recycling (TPD)	121	121	0	GAP	0.15	0.16	0.018	31.03.2022
7(b)	Quantity of plastic waste utilized in recycling Road Construction	0	0	0	GAP	2.5 MT (approx) The BK Road from Boys Budhjung School to women's college, which is around 680 meteres has finally been turned around into a plastic road. It is a mixture of bitumen and plastic which is used at a 40:60 ratio.	GAP	GAP	GAP
7©	Quantity of waste Co-processed in Plastic Waste in Cement kilns	12	15	3	GAP	Nil	GAP	GAP	GAP
7(d)	Quantity of waste utilized in production of RDF	GAP	GAP	GAP	GAP	Nil	GAP	GAP	GAP
7 (e)	Quantity of plastic waste used in production of Waste to oil	GAP	GAP	GAP	GAP	Nil	GAP	GAP	GAP

ACTION PLAN FOR PLASTIC WASTE		Odisha				Tripura			
Serial No.	Items	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline	Current Status TPD	Desirable Levels	Gap between current status and desirable level	Timeline
7(f)	Quantity of plastic waste used in other purpose (please specify)	GAP	GAP	GAP	GAP	Nil	GAP	GAP	GAP
8(a)	No. of Units registered manufacturing compostable plastic	GAP	GAP	GAP	GAP	Nil	GAP	GAP	GAP
8(b)	Total Capacity of Units manufacturing compostable plastic	GAP	GAP	GAP	GAP	Nil	GAP	GAP	GAP
9(a)	No. of unregistered plastic manufacturing or recycling units. (Annual Report format pt.7)	GAP	GAP	GAP	GAP	Nil	NA	NA	NA
10	Whether local bodies have framed bye-laws [Rule6 (4)?	Yes	NA	NA	NA	Yes. 20 ULBs	20 Ulbs	GAP	GAP
11	Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)? Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)?	Yes	NA	NA	NA	Yes. All types of plastic carry bags are banned in the State of Tripura	NA	NA	NA
12	Has complete ban on plastic carry bags been imposed? (Annual Report format pt. 3)	Yes	NA	NA	NA	Yes	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		Odisha				Tripura			
Serial No.	Items	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline	Current Status TPD	Desirable Levels	Gap between current status and desirable level	Timeline
13	Status of action taken on non-compliance of PWM Rules (Annual Report format pt.9)	All 114 ULBs have adopted enforcement measures	NA	NA	NA	Yes. Several raids have been conducted in local shops, markets for enforcement of bannin order of plastic carry bags in the State. Monitory penalty is also being imposed	NA	NA	NA
14	Status of marking & labelling on plastic carry bags & multi layered packaging.(Rule11)	NA				No such industry is operating in Tripura	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		Odisha				Tripura			
Serial No.	Items	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline	Current Status TPD	Desirable Levels	Gap between current status and desirable level	Timeline
15	Whether State Level Advisory Committee is constituted or not? [Rule 16] If yes, details of number of meetings conducted in a year and implementation of suggestions of committee in the last 2 years	Yes, SLAC constituted meetings conducted on 25.09.2017, 29.06.2019, 24.11.2020 and 09.07.2021	At lease once in six months	Nil	Nil	Yes. Two meetings of State Level Advisory Committee were held on 20.04.2019 and 26.06.2019. The recommendations of the SLAc are being implemented by the concerned Depts. Further, the issues related to PWM Rules, 2016 are beig reviewed by the Chief Secretary, in the SLAC every month.	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		Odisha				Tripura			
Serial No.	Items	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline	Current Status TPD	Desirable Levels	Gap between current status and desirable level	Timeline
16	Status of phasing out of manufacture and use of multi-layered plastic which is non-recyclable or non-energy recoverable or with no alternate use of plastic in two years' time [Rule9-3]	Public Notice is issued vide letter No. 2634 dtd. 19.02.2022	NA	NA	NA	There are 3 nos multi-layered plastic item manufacturi ng units operating currently in the State. However, many awareness programmes are being conducted on a regular basis for phasing out the use of multi layered plastic which is non recyclable or non energy recoverable.	NA	NA	NA
17							NA	NA	NA
a	Details of Action taken to ensure that plastic waste is not burnt (Rule-6(g))	GAP	NA	NA	NA	All types of burning of wastes is prohibited in the State of Tripura.	NA	NA	NA
b	Details of Action taken w.r.t engagement of civil socities/groups with waste pickers (Rule-6(f))	GAP				Advertisement in the newspaper are being published to aware the local people/civil societies.	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		Odisha				Tripura			
Serial No.	Items	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline	Current Status TPD	Desirable Levels	Gap between current status and desirable level	Timeline
c	Details of Action taken w.r.t. creating awarness among stakeholders (Rule-6(e))	GAP				1. Online quiz competetion has been conducted among Eco Club students. 2. Awareness programme in schools are being conducted on regular basis. 3. Advertisement in newspaper are being published to aware the local people.	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		Puducherry				Nagaland			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline
1	what is the quantity of plastic waste generated (Annual Report form VI pt. 2,6) (TPD)	35.8	NA	NA	NA	35.06	NA	NA	NA
2(a)	Number of registered plastic manufacturing units	20	120	100	3 months	3	GAP	GAP	GAP
2(b)	Capacity of registered plastic manufacturing units (TPD)	GAP	GAP	GAP	GAP	48	GAP	GAP	GAP
3(a)	Total No of ULBs	5	NA	NA	NA	39	NA	NA	NA
3(b)	Percentage of ULBs which have set-up of plastic waste management system as per Rule 6(2)? (including collection, segregation, channelization & processing of plastic waste)	100	100	0	NA	17	100	83	GAP
3(c)	Percentage of ULBs having facilities for collection of segregated waste	100	100	0	NA	12	GAP	GAP	GAP
3(d)	Percentage of ULBs Material Recovery Facility	100	100	0	NA	23	GAP	GAP	GAP
4(a)	Total no. of Gram Panchayat	10	NA	NA	NA	19	Nil	NA	NA
4(b)	Percentage of Gram Panchayat which have setup of plastic waste management system as per Rule 7	100	100	0	NA	Nil	Nil	NA	NA
4(c)	Percentage of GPs having facilities for Collection of segregated waste	100	100	0	NA	Nil	Nil	NA	NA

ACTION PLAN FOR PLASTIC WASTE		Puducherry				Nagaland			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline
4(d)	Percentage of GPs having Material Recovery Facility	100	100	0	NA	Nil	Nil	NA	NA
5(a)	No. of registered Producers/brand owners/ importers as per Rules 9 & 13 of PWM Rules?	20	20	0	NA	Nil	Nil	NA	NA
5(b)	Percentage of Producers/Brandowners/Importers which have engaged with ULBs for PWM	20	100	80	6 months	Nil	GAP	GAP	GAP
5(c)	Percentage of ULBs which have set up system for plastic waste management with assistance of producers been set -up? Rule (6(3))?	20	100	80	6 months	Nil	GAP	GAP	GAP
6(a)	Number of registered plastic waste recyclers	16	20	4	3 months	1	GAP	GAP	GAP
6(b)	Capacity of recycler (TPD)	10.16	10.96	0.82	3 months	2	GAP	GAP	GAP
7	Status-of Utilization of plastic waste (Annual Report form VI pt.4)	2.58	2.74	0.16	3 months	700	GAP	GAP	GAP
7(a)	Quantity of Plastic waste utilized in recycling (TPD)	10.16	10.96	0.79	6 months	GAP	GAP	GAP	GAP
7(b)	Quantity of plastic waste utilized in recycling Road Construction	GAP	0.27	0.27	One year	700Kg	GAP	GAP	GAP
7(c)	Quantity of waste Co-processed in Plastic Waste in Cement kilns	2.5	2.74	0.16	6 months	Nil	GAP	GAP	GAP
7(d)	Quantity of waste utilized in production of RDF	GAP	0.27	0.27	One year	Nil	GAP	GAP	GAP
7 (e)	Quantity of plastic waste used in production of Waste to oil	GAP	GAP	GAP	GAP	Nil	GAP	GAP	GAP

ACTION PLAN FOR PLASTIC WASTE		Puducherry				Nagaland			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline
7(f)	Quantity of plastic waste used in other purpose (please specify)	GAP	GAP	GAP	GAP	Nil	GAP	GAP	GAP
8(a)	No. of Units registered manufacturing compostable plastic	4	5	1	3 months	Nil	GAP	GAP	GAP
8(b)	Total Capacity of Units manufacturing compostable plastic	21	25	4	3 months	Nil	GAP	GAP	GAP
9(a)	No. of unregistered plastic manufacturing or recycling units. (Annual Report format pt.7)	GAP	GAP	GAP	GAP	0	NA	NA	NA
10	Whether local bodies have framed bye-laws [Rule6 (4)?	Yes	NA	NA	NA	Yes	NA	NA	NA
11	Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)? Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)?	Yes, Banned	NA	NA	NA	Yes	NA	NA	NA
12	Has complete ban on plastic carry bags been imposed? (Annual Report format pt. 3)	Yes	NA	NA	NA	Yes	NA	NA	NA
13	Status of action taken on non-compliance of PWM Rules (Annual Report format pt.9)	13 units closed	NA	NA	NA	Ban imposed	NA	NA	NA
14	Status of marking & labelling on plastic carry bags & multi layered packaging.(Rule11)	Printing on MLP	NA	NA	NA	Ban imposed	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		Puducherry				Nagaland			
Serial No.	Items	Current Status	Desirable Levels	Gap between the current status and desirable level	Timeline	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline
15	Whether State Level Advisory Committee is constituted or not? [Rule 16] If yes, details of number of meetings conducted in a year and implementation of suggestions of committee in the last 2 years	Yes. 4 meetings (Minutes of the meeting is enclosed)	NA	NA	NA	Yes	NA	NA	NA
16	Status of phasing out of manufacture and use of multi-layered plastic which is non-recyclable or non-energy recoverable or with no alternate use of plastic in two years' time [Rule9-3]	All the MLP wastes are chanelized to Co-processing process in cement kiln located in Tamilnadu.	NA	NA	NA	There is no plastic manufacturers in Nagaland	NA	NA	NA
17			NA	NA	NA				
a	Details of Action taken to ensure that plastic waste is not burnt (Rule-6(g))	Dierrections were issued to Local bodies on.	NA	NA	NA	NA	NA	NA	NA
b	Details of Action taken w.r.t engagement of civil socities/groups with waste pickers (Rule-6(f))	Local bodies are involving Self Help Group in waste collection and segregation	NA	NA	NA	One day interactive & awareness programme was held at the NPCB Office on 28th Feb, 2019	NA	NA	NA
c	Details of Action taken w.r.t. creating awarness among stakeholders (Rule-6(e))	Periodical meetings & seminars/workshops are being carried out.	NA	NA	NA	One day interactive & awareness programme was held at the NPCB Office on 28th Feb, 2019	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		Uttarakhand			
Serial No.	Items	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline
1	what is the quantity of plastic waste generated (Annual Report form VI pt. 2,6) (TPD)	51.08	NA	NA	NA
2(a)	Number of registered plastic manufacturing units	7	GAP	GAP	GAP
2(b)	Capacity of registered plastic manufacturing units (TPD)	1333	GAP	GAP	GAP
3(a)	Total No of ULBs	100	NA	NA	NA
3(b)	Percentage of ULBs which have set-up of plastic waste management system as per Rule 6(2)? (including collection, segregation, channelization & processing of plastic waste)	0	100	GAP	GAP
3(c)	Percentage of ULBs having facilities for collection of segregated waste	88.88	100	11	June 2022
3(d)	Percentage of ULBs Material Recovery Facility	3	100	97	GAP
4(a)	Total no. of Gram Panchayat	7791	NA	NA	NA
4(b)	Percentage of Gram Panchayat which have setup of plastic waste management system as per Rule 7	0	100	100	GAP
4(c)	Percentage of GPs having facilities for Collection of segregated waste	25	100	75	GAP
4(d)	Percentage of GPs having Material Recovery Facility	GAP	GAP	GAP	GAP

ACTION PLAN FOR PLASTIC WASTE		Uttarakhand			
Serial No.	Items	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline
5(a)	No. of registered Producers/brand owners/ importers as per Rules 9 & 13 of PWM Rules?	38	GAP	GAP	GAP
5(b)	Percentage of Producers/Brandowners/Importers which have engaged with ULBs for PWM	GAP	100	GAP	GAP
5(c)	Percentage of ULBs which have set up system for plastic waste management with assistance of producers been set - up? Rule (6(3))?	GAP	GAP	GAP	GAP
6(a)	Number of registered plastic waste recyclers	35	GAP	GAP	GAP
6(b)	Capacity of recycler (TPD)	411.95	GAP	GAP	GAP
7	Status-of Utilization of plastic waste (Annual Report form VI pt.4)	GAP	GAP	GAP	GAP
7(a)	Quantity of Plastic waste utilized in recycling (TPD)	(1) As per return submitted by recyclers in form IV 171.38 MT/Day (2) As per return submitted by WMA is 5454.994 MT/Annum in year (2021-2022)	GAP	GAP	GAP
7(b)	Quantity of plastic waste utilized in recycling Road Construction	GAP	GAP	GAP	GAP
7(c)	Quantity of waste Co-processed in Plastic Waste in Cement kilns	8.54	GAP	GAP	GAP
7(d)	Quantity of waste utilized in production of RDF	24.816	GAP	GAP	GAP
7 (e)	Quantity of plastic waste used in production of Waste to oil	0	GAP	GAP	GAP
7(f)	Quantity of plastic waste used in other purpose (please specify)	0	GAP	GAP	GAP

ACTION PLAN FOR PLASTIC WASTE		Uttarakhand			
Serial No.	Items	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline
8(a)	No. of Units registered manufacturing compostable plastic	1	GAP	GAP	GAP
8(b)	Total Capacity of Units manufacturing compostable plastic	50	GAP	GAP	GAP
9(a)	No. of unregistered plastic manufacturing or recycling units. (Annual Report format pt.7)	15	GAP	GAP	GAP
10	Whether local bodies have framed bye-laws [Rule6 (4)?	Yes	NA	NA	NA
11	Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)? Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)?	Yes	NA	NA	NA
12	Has complete ban on plastic carry bags been imposed? (Annual Report format pt. 3)	Yes	NA	NA	NA
13	Status of action taken on non-compliance of PWM Rules (Annual Report format pt.9)	1. Notice Send to 15 Unauthorised plastic waste recyclers. 2. Issued direction to all district magistrate and director urban development for compliance of PWM rule 2016	NA	NA	NA
14	Status of marking & labelling on plastic carry bags & multi layered packaging.(Rule11)	Complying	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		Uttarakhand			
Serial No.	Items	Current Status	Desirable Levels	Gap Between the current status and desirable level	Timeline
15	Whether State Level Advisory Committee is constituted or not? [Rule 16] If yes, details of number of meetings conducted in a year and implementation of suggestions of committee in the last 2 years	State level Advisory Committee is Constituted by State Govt. via Go/V(3)/2019-12(Gen)/2017, Dated 03.07.2019.	NA	NA	NA
16	Status of phasing out of manufacture and use of multi-layered plastic which is non-recyclable or non-energy recoverable or with no alternate use of plastic in two years' time [Rule9-3]	Complying Direction issued to Multilayer Plastic Manufacturing unit to submit the Action plan.	NA	NA	NA
17		(1) State government already ban burning of solid waste via office order dated 29/12/2016 (copy attach) Annx-1 (2) Urban development department directed to all ULBS to ban use of Plastic less than 50 micron and spitting of Plastic bottles on dated 23 march 2018 (Copy attach) annex -2	NA	NA	NA
a	Details of Action taken to ensure that plastic waste is not burnt (Rule-6(g))	Local NGOs like waste worriers, Gati Foundation and UNDP are engaged.	NA	NA	NA
b	Details of Action taken w.r.t engagement of civil socities/groups with waste pickers (Rule-6(f))	Urban Development directorate and local bodies are engaged in Various ICR activities and also held seminars to eliminate single use plastic in mission mode.	NA	NA	NA
c	Details of Action taken w.r.t. creating awarness among stakeholders (Rule-6(e))		NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		West Bengal			
Serial	Items	Current Status TPD	Desirable	Gap between	Timeline
1	what is the quantity of plastic waste generated (Annual Report form VI pt. 2,6) (TPD)	1145	1645	1273	December, 2022
2(a)	Number of registered plastic manufacturing units	2	GAP	GAP	GAP
2(b)	Capacity of registered plastic manufacturing units (TPD)	8326	GAP	GAP	GAP
3(a)	Total No of ULBs	125	NA	NA	NA
3(b)	Percentage of ULBs which have set-up of plastic waste management system as per Rule 6(2)? (including collection, segregation, channelization & processing of plastic waste)	2.5	100	97.5	March, 2023
3(c)	Percentage of ULBs having facilities for collection of segregated waste	40	100	60	December, 2022
3(d)	Percentage of ULBs Material Recovery Facility	1.5	100	98.5	March, 2023 On pilot basis recovery of material from dry waste has been started to a good numbers of ULBs
4(a)	Total no. of Gram Panchayat	3339	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		West Bengal			
Serial	Items	Current Status TPD	Desirable	Gap between	Timeline
4(b)	Percentage of Gram Panchayat which have setup of plastic waste management system as per Rule 7	3.89	100	96.11	GAP
4©	Percentage of GPs having facilities for Collection of segregated waste	7.93	100	92.07	GAP
4(d)	Percentage of GPs having Material Recovery Facility	3.89	100	96.11	GAP
5(a)	No. of registered Producers/brand owners/ importers as per Rules 9 & 13 of PWM Rules?	445	GAP	GAP	GAP
5(b)	Percentage of Producers/Brandowners/Importers which have engaged with ULBs for PWM	0.02	100	99.08	March, 2023
5©	Percentage of ULBs which have set up system for plastic waste management with assistance of producers been set - up? Rule (6(3))?	0.02	100	99.08	March, 2023
6(a)	Number of registered plastic waste recyclers	126	GAP	GAP	GAP
6(b)	Capacity of recycler (TPD)	227.84	GAP	GAP	GAP
7	Status-of Utilization of plastic waste (Annual Report form VI pt.4)	WBPCB conducted inventorization of plastic waste in 2020-21 which reveals that a good number of recycling units are located in residential area. As per the records maintained and available the total quantity of plastic waste utilised is	GAP	GAP	GAP
7(a)	Quantity of Plastic waste utilized in recycling (TPD)	175.84	GAP	GAP	GAP
7(b)	Quantity of plastic waste utilized in recycling Road Construction	GAP	GAP	GAP	GAP

ACTION PLAN FOR PLASTIC WASTE		West Bengal			
Serial	Items	Current Status TPD	Desirable	Gap between	Timeline
7©	Quantity of waste Co-processed in Plastic Waste in Cement kilns	227.84 (As per information available from Producers/Brand Owners in their Half-yearly Returns)	GAP	GAP	GAP
7(d)	Quantity of waste utilized in production of RDF	Nil	Does not arise	Does not arise	Does not arise
7 (e)	Quantity of plastic waste used in production of Waste to oil	Nil	GAP	GAP	GAP
7(f)	Quantity of plastic waste used in other purpose (please specify)	2.5	GAP	GAP	GAP
8(a)	No. of Units registered manufacturing compostable plastic	2	GAP	GAP	GAP
8(b)	Total Capacity of Units manufacturing compostable plastic	GAP	GAP	GAP	GAP
9(a)	No. of unregistered plastic manufacturing or recycling units. (Annual Report format pt.7)	0	GAP	GAP	GAP
10	Whether local bodies have framed bye-laws [Rule6 (4)]?	Yes	NA	NA	NA
11	Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)]? Whether plastic carry bags & plastic sheet of thickness < 50 micron banned or not [Rule4(c)]?	Yes	NA	NA	NA
12	Has complete ban on plastic carry bags been imposed? (Annual Report format pt. 3)	Initiatives are being taken on complete ban on plastic carry bags.	NA	NA	NA
13	Status of action taken on non-compliance of PWM Rules (Annual Report format pt.9)	Show-Cause letter issued & fine imposed	NA	NA	NA

ACTION PLAN FOR PLASTIC WASTE		West Bengal			
Serial	Items	Current Status TPD	Desirable	Gap between	Timeline
14	Status of marking & labelling on plastic carry bags & multi layered packaging.(Rule11)	Partially complied	NA	NA	NA
15	Whether State Level Advisory Committee is constituted or not? [Rule 16] If yes, details of number of meetings conducted in a year and implementation of suggestions of committee in the last 2 years	Yes. One meeting conducted.	NA	NA	NA
16	Status of phasing out of manufacture and use of multi-layered plastic which is non-recyclable or non-energy recoverable or with no alternate use of plastic in two years' time [Rule9-3]	Initiatives are being taken. Public Notice is being issued.	GAP	GAP	GAP
17					
a	Details of Action taken to ensure that plastic waste is not burnt (Rule-6(g))	Notification issued.	NA	NA	NA
b	Details of Action taken w.r.t engagement of civil societies/groups with waste pickers (Rule-6(f))	Actions are being taken by SUDA.	NA	NA	NA
c	Details of Action taken w.r.t. creating awareness among stakeholders (Rule-6(e))	40 nos. Awareness workshop/seminars conducted from WBPCB, SUDA, ULBS.	NA	NA	NA

Details of units producing restricted Single Use Plastic		Assam				
S.No.	Items	Total No of units	Operating Units (No.)	Capacity of operating units (TPD)	Closed Units (No.)	Capacity of closed units (TPD)
1	Ear buds with plastic sticks	nil	NA	NA	NA	NA
2	Plastic sticks for balloons	nil	NA	NA	NA	NA
3	Plastic flags	nil	NA	NA	NA	NA
4	Candy sticks	nil	NA	NA	NA	NA
5	Ice-cream sticks	nil	NA	NA	NA	NA
6	Polystyrene [Thermocol] for decoration	nil	NA	NA	NA	NA
7	Plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays,	6	6	38	NA	NA
8	Wrapping or packing films around sweet boxes, invitation cards, and cigarette packets	nil	NA	NA	NA	NA
9	Plastic or PVC banners less than 100 micron, stirrers	nil	NA	NA	NA	NA
10	Plastic Sheets < 50 micron	nil	NA	NA	NA	NA
11	Plastic Bags < 75 micron	nil	NA	NA	NA	NA

Details of units producing restricted Single Use Plastic		Chandigarh				
S.No.	Items	Total No of units	Operating Units (No.)	Capacity of operating units (TPD)	Closed Units (No.)	Capacity of closed units (TPD)
1	Ear buds with plastic sticks	NIL	NA	NA	NA	NA
2	Plastic sticks for balloons	NIL	NA	NA	NA	NA
3	Plastic flags	NIL	NA	NA	NA	NA
4	Candy sticks	NIL	NA	NA	NA	NA
5	Ice-cream sticks	NIL	NA	NA	NA	NA
6	Polystyrene [Thermocol] for decoration	NIL	NA	NA	NA	NA
7	Plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays,	NIL	NA	NA	NA	NA
8	Wrapping or packing films around sweet boxes, invitation cards, and cigarette packets	NIL	NA	NA	NA	NA
9	Plastic or PVC banners less than 100 micron, stirrers	NIL	NA	NA	NA	NA
10	Plastic Sheets < 50 micron	NIL	NA	NA	NA	NA
11	Plastic Bags < 75 micron	NIL	NA	NA	NA	NA

Details of units producing restricted Single Use Plastic		Mizoram				
S.No.	Items	Total No of units	Operating Units (No.)	Capacity of operating units (TPD)	Closed Units (No.)	Capacity of closed units (TPD)
1	Ear buds with plastic sticks	NIL	NIL	NA	NA	NA
2	Plastic sticks for balloons	NIL	NIL	NA	NA	NA
3	Plastic flags	NIL	NIL	NA	NA	NA
4	Candy sticks	NIL	NIL	NA	NA	NA
5	Ice-cream sticks	NIL	NIL	NA	NA	NA
6	Polystyrene [Thermocol] for decoration	NIL	NIL	NA	NA	NA
7	Plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays,	NIL	NIL	NA	NA	NA
8	Wrapping or packing films around sweet boxes, invitation cards, and cigarette packets	NIL	NIL	NA	NA	NA
9	Plastic or PVC banners less than 100 micron, stirrers	NIL	NIL	NA	NA	NA
10	Plastic Sheets < 50 micron	NIL	NIL	NA	NA	NA
11	Plastic Bags < 75 micron	NIL	NIL	NA	NA	NA

Details of units producing restricted Single Use Plastic		Puducherry				
S.No.	Items	Total No of units	Operating Units (No.)	Capacity of operating units (TPD)	Closed Units (No.)	Capacity of closed units (TPD)
1	Ear buds with plastic sticks	Nil	NA	NA	NA	NA
2	Plastic sticks for balloons	Nil	NA	NA	NA	NA
3	Plastic flags	Nil	NA	NA	NA	NA
4	Candy sticks	Nil	NA	NA	NA	NA
5	Ice-cream sticks	Nil	NA	NA	NA	NA
6	Polystyrene [Thermocol] for decoration	Nil	NA	NA	NA	NA
7	Plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays,	Plates	8	40	GAP	Operational
8	Wrapping or packing films around sweet boxes, invitation cards, and cigarette packets	Nil	NA	NA	NA	NA
9	Plastic or PVC banners less than 100 micron, stirrers	Nil	NA	NA	NA	NA
10	Plastic Sheets < 50 micron	Nil	NA	NA	NA	NA
11	Plastic Bags < 75 micron	22	GAP	GAP	22	100 TPD closed

Details of units producing restricted Single Use Plastic		Sikkim				
S.No.	Items	Total No. of units	Operating Units (No.)	Capacity of operating units (TPD)	Closed Units (No.)	Capacity of closed units (TPD)
1	Ear buds with plastic sticks	NIL	NA	NA	NA	NA
2	Plastic sticks for balloons	NIL	NA	NA	NA	NA
3	Plastic flags	NIL	NA	NA	NA	NA
4	Candy sticks	NIL	NA	NA	NA	NA
5	Ice-cream sticks	NIL	NA	NA	NA	NA
6	Polystyrene [Thermocol] for decoration	NIL	NA	NA	NA	NA
7	Plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays,	NIL	NA	NA	NA	NA
8	Wrapping or packing films around sweet boxes, invitation cards, and cigarette packets	NIL	NA	NA	NA	NA
9	Plastic or PVC banners less than 100 micron, stirrers	NIL	NA	NA	NA	NA
10	Plastic Sheets < 50 micron	NIL	NA	NA	NA	NA
11	Plastic Bags < 75 micron	NIL	NA	NA	NA	NA

Details of units producing restricted Single Use Plastic		Uttarakhand				
S.No.	Items	Total No of Units	Operating Units (No.)	Capacity of operating units (TPD)	Closed Units (No.)	Capacity of closed units (TPD)
1	Ear buds with plastic sticks	GAP	GAP	GAP	GAP	GAP
2	Plastic sticks for balloons	GAP	GAP	GAP	GAP	GAP
3	Plastic flags	GAP	GAP	GAP	GAP	GAP
4	Candy sticks	GAP	GAP	GAP	GAP	GAP
5	Ice-cream sticks	GAP	GAP	GAP	GAP	GAP
6	Polystyrene [Thermocol] for decoration	1	1	42.5 MT/Month	GAP	GAP
7	Plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays,	9	9	368.7 MT/Month	GAP	GAP
8	Wrapping or packing films around sweet boxes, invitation cards, and cigarette packets	GAP	GAP	GAP	GAP	GAP
9	Plastic or PVC banners less than 100 micron, stirrers	GAP	GAP	GAP	GAP	GAP
10	Plastic Sheets < 50 micron	GAP	GAP	GAP	GAP	GAP
11	Plastic Bags < 75 micron	GAP	GAP	GAP	GAP	GAP

Details of units producing restricted Single Use Plastic		Nagaland				
S.No.	Items	Total No of Units	Operating Units (No.)	Capacity of operating units (TPD)	Closed Units (No.)	Capacity of closed units (TPD)
1	Ear buds with plastic sticks	NA	NA	NA	NA	NA
2	Plastic sticks for balloons	NA	NA	NA	NA	NA
3	Plastic flags	NA	NA	NA	NA	NA
4	Candy sticks	NA	NA	NA	NA	NA
5	Ice-cream sticks	NA	NA	NA	NA	NA
6	Polystyrene [Thermocol] for decoration	NA	NA	NA	NA	NA
7	Plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays,	NA	NA	NA	NA	NA
8	Wrapping or packing films around sweet boxes, invitation cards, and cigarette packets	NA	NA	NA	NA	NA
9	Plastic or PVC banners less than 100 micron, stirrers	NA	NA	NA	NA	NA
10	Plastic Sheets < 50 micron	NA	NA	NA	NA	NA
11	Plastic Bags < 75 micron	NA	NA	NA	NA	NA

Details of units producing restricted Single Use Plastic		Maharashtra				
S.No.	Items	Total No of Units	Operating Units (No.)	Capacity of operating units (TPD)	Closed Units (No.)	Capacity of closed units (TPD)
1	Ear buds with plastic sticks	0	0	0	0	0
2	Plastic sticks for balloons	0	0	0	0	0
3	Plastic flags	0	0	0	0	0
4	Candy sticks	0	0	0	0	0
5	Ice-cream sticks	0	0	0	0	0
6	Polystyrene [Thermocol] for decoration	0	0	0	0	0
7	Plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays,	0	0	0	0	0
8	Wrapping or packing films around sweet boxes, invitation cards, and cigarette packets	1	0	0	1	0
9	Plastic or PVC banners less than 100 micron, stirrers	0	0	0	0	0
10	Plastic Sheets < 50 micron	0	0	0	11	11.5
11	Plastic Bags < 75 micron	0	0	0	13	6.5

Details of units producing restricted Single Use Plastic		West Bengal				
S.No.	Items	Total No of units	Operating Units (No.)	Capacity of operating units (TPD)	Closed Units (No.)	Capacity of closed units (TPD)
1	Ear buds with plastic sticks	GAP	GAP	GAP	GAP	GAP
2	Plastic sticks for balloons	GAP	GAP	GAP	GAP	GAP
3	Plastic flags	5	5	2.5	GAP	GAP
4	Candy sticks	GAP	GAP	GAP	GAP	GAP
5	Ice-cream sticks	4	4	0.06	-	-
6	Polystyrene [Thermocol] for decoration	GAP	GAP	GAP	GAP	GAP
7	Plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays,	GAP	GAP	GAP	GAP	GAP
8	Wrapping or packing films around sweet boxes, invitation cards, and cigarette packets	GAP	GAP	GAP	GAP	GAP
9	Plastic or PVC banners less than 100 micron, stirrers	2	2	0.1	GAP	GAP
10	Plastic Sheets < 50 micron	191	191	GAP	GAP	GAP
11	Plastic Bags < 75 micron	238	230	376	GAP	GAP

Details of units producing restricted Single Use Plastic		Odisha				
S.No.	Items	Total No of units	Operating Units (No.)	Capacity of operating units (TPD)	Closed Units (No.)	Capacity of closed units (TPD)
1	Ear buds with plastic sticks	GAP	GAP	GAP	GAP	GAP
2	Plastic sticks for balloons	GAP	GAP	GAP	GAP	GAP
3	Plastic flags	GAP	GAP	GAP	GAP	GAP
4	Candy sticks	GAP	GAP	GAP	GAP	GAP
5	Ice-cream sticks	GAP	GAP	GAP	GAP	GAP
6	Polystyrene [Thermocol] for decoration	GAP	GAP	GAP	GAP	GAP
7	Plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays,	GAP	GAP	GAP	GAP	GAP
8	Wrapping or packing films around sweet boxes, invitation cards, and cigarette packets	GAP	GAP	GAP	GAP	GAP
9	Plastic or PVC banners less than 100 micron, stirrers	GAP	GAP	GAP	GAP	GAP
10	Plastic Sheets < 50 micron	GAP	GAP	GAP	GAP	GAP
11	Plastic Bags < 75 micron	GAP	GAP	GAP	GAP	GAP

Details of units producing restricted Single Use Plastic		Tripura				
S.No.	Items	Total No of units	Operating Units (No.)	Capacity of operating units (TPD)	Closed Units (No.)	Capacity of closed units (TPD)
1	Ear buds with plastic sticks	GAP	GAP	GAP	GAP	GAP
2	Plastic sticks for balloons	GAP	GAP	GAP	GAP	GAP
3	Plastic flags	GAP	GAP	GAP	GAP	GAP
4	Candy sticks	GAP	GAP	GAP	GAP	GAP
5	Ice-cream sticks	GAP	GAP	GAP	GAP	GAP
6	Polystyrene [Thermocol] for decoration	GAP	GAP	GAP	GAP	GAP
7	Plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays,	GAP	GAP	GAP	GAP	GAP
8	Wrapping or packing films around sweet boxes, invitation cards, and cigarette packets	GAP	GAP	GAP	GAP	GAP
9	Plastic or PVC banners less than 100 micron, stirrers	GAP	GAP	GAP	GAP	GAP
10	Plastic Sheets < 50 micron	GAP	GAP	GAP	GAP	GAP
11	Plastic Bags < 75 micron	GAP	GAP	GAP	GAP	GAP

Details of Registered Plastic Manufacturers (Column 6)

Assam					
S.No.	Name of the unit	Capacity	MLP/ Rigid/ Flexible/ Recycler/ Co- processing/ Compostable / Others (Please specify)	Status (Operating/ Closed)	Production capacity (TPD)
1	M/s. Manjushree Innovations Pvt. Ltd., Vill.: Gauripur, Amingaon, Guwahati- 781031, Dist.: Kamrup (R)	GAP	MLP	GAP	22
2	M/s. Bhuyan Associates Pvt. Ltd. MIE, Kalapahar, Guwahati-16, Dist.: Kamrup (M)	GAP	carrybags	GAP	5
3	M/s. GD Tech India (P) Ltd. EPIP, Amingaon, Dist.: Kamrup (R)	GAP	carrybags	GAP	75
4	M/s. Essel Propack Limited, NH-31, Baihata Chariali Road, Vill.: Katenipara, Madanpur Changsari, Pin- 781101, Dist.: Kamrup	GAP	flexible packaging	GAP	
5	M/s. North East Granulators, Chaygaon, Chatabari, Pin-781123, Dist.: Kamrup	GAP	flexible packaging	GAP	10
6	M/s. North East Plastic Product, MIE, Kalapahar, Guwahati-16 Dist.: Kamrup (M)	GAP	flexible packaging	GAP	2
7	M/s. TCPL Packaging Limited, Plot No. 19, Chatabari, Pin – 781023, Dist.: Kamrup (R)	GAP	flexible packaging	GAP	55
8	M/s. Shree Binayale Polypack Industries, P.O.: Palashbari, Vill.: Parly, Dist.: Kamrup (R)	GAP	flexible packaging	GAP	3
9	M/s. Huhtamaki PPL Ltd., Vill.: Abhoypur, North Guwahati, Dist.: Kamrup (R) (Assam)	GAP	MLP	GAP	12
10	M/s. Synergy Films Pvt. Ltd., Kalapahar Industrial Area, Gopinath Nagar, Guwahati-16, Dist.: Kamrup (M)	GAP	MLP	GAP	3
11	M/s. K.C. & Sons, IID Centre, Moranjana, Rangia, Dist.: Kamrup (R)	GAP	carrybags	GAP	1
12	M/s. Creative Polypack Ltd., Sindurighopa, Chowkigate, Changsari, Dist.: Kamrup (R)	GAP	MLP	GAP	10
13	M/s. Manjushree Packaging, AK Deb Road, Datalpara, Guwahati-25, Dist.: Kamrup (M)	GAP	flexible packaging	GAP	6

Details of Registered Plastic Manufacturers (Column 6)

Assam					
S.No.	Name of the unit	Capacity	MLP/ Rigid/ Flexible/ Recycler/ Co- processing/ Compostable / Others (Please specify)	Status (Operating/ Closed)	Production capacity (TPD)
14	M/s. Manjushree Polypack Pvt. Ltd. AK Deb Road, Datalpara, Guwahati-25	GAP	flexible packaging	GAP	5
15	M/s. Prince Pack Industries, Near NECC Transport Godown, Fatasil, Guwahati-9	GAP	flexible packaging	GAP	0.5
16	M/s. Excellent Gravure Industries Limited, Kalapahar Industrial Area (C.I.T.I. Campus) Gopinath Nagar, Guwahati-16 Dist.: Kamrup (M).	GAP	carry bags	GAP	3
17	M/s. Avichal Buildcon Private Limited Bonda Industrial Area, Birkuchi,Narengi, Guwahati- 781026,Dist.: Kamrup (M) (Assam).	GAP	MLP	GAP	13
18	M/s. Tirupati Diary Tech, EPIP, Amingaon, Guwahati-31, Dist.: Kamrup (R)	GAP	recycler	GAP	
19	M/s. Moonsoon Polymers (P) Ltd. CITI, Kalapahar Industrial Area, Guwahati-781016, Dist.: Kamrup (M)	11 TPD	recycler	GAP	
20	M/s. R.K. Hitech Plast, Lachitpur, Amingaon, Dist.: Kamrup (R)	7.5	recycler	GAP	
21	M/s. Kusum Udyog, Vill.: Naukuchi, Mo	8 TPD	recycler	GAP	
22	M/s. North East Plastic Product Unit-II, Milan Nagar, Guwahati-34, Dist.: Kamrup (M)	13 TPD	recycler	GAP	

Details of Registered Plastic Manufacturers (Column 6)

Chandigarh					
S.No.	Name of the unit	Capacity	MLP/ Rigid/ Flexible/ Recycler/ Co-processing/ Compostable / Others (Please specify)	Status (Operating/Closed)	Production capacity (TPD)
1	There is no manufacturing unit in Chandigarh.	NA	NA	NA	NA

Details of Registered Plastic Manufacturers (Column 6)

Maharashtra					
S.No.	Name of the unit	Capacity	MLP /Rigid/Flexible/ Recycler/Co-processing / Compostable /other (please specify)	Status (Operating / Closed)	Production Capacity (TPD)
1	Yash Polymers	600	Air Bubble Film/Flexible Laminated Multilayer Plastic Rolls/bags for packaging of groceries and grain products (with printing)	Operational	1.64
2	Plastomatic Industries	1500	Multilayer Films, Stretch Films, Milk Pouch, Industrial Liner (more than 50 microns and with printing)	Operational	4.11
3	Shri Radha Madhav Packaging Unit JLFPL	420	PVC Shrink Films, Stretch Films, Milk Pouch, Industrial Liner (more than 50 micron, Box Strap Patti)	Operational	1.15
4	Medispray Laboratories Pvt. Ltd.	44	Polybags for processing during medicines Manufacturing: 120000 Nos./Y PP Measuring Cups: 5000000 Nos/Y PP Bottle Caps: 5000000 Nos/Y HDPE Bottles: 5000000 Nos./Y Polyolefin film for final packing or medicine (Shrink Wrapping): 4 Ton/Y PVC/PVDC film for primary packing of Tablets and capsules: 40 T/Y	Operational	0.12
5	Meditab Specialities Pvt. Ltd.	13	PET Bottles 19800000 Nos./Y 2 PP Measuring Cups: 18800000 Nos./Y 3 Plastic/CR Caps: 1500000 Nos/Y 4 Polybags for Processing during Medicines Manufacturing 13000 Nos./Y 5 LDPE Shrink film 50 micron 430 MM for final packing of medicine (Shrink Wrapping) 13 T/Y	Operational	0.04
6	Vasudeo Polymers	24	Polybags (Single layer and Multilayer Food grade packaging above 51 microns) 2.00 MT/M	Operational	0.07

Details of Registered Plastic Manufacturers (Column 6)

Mizoram					
S.No.	Name of the unit	Capacity	MLP/ Rigid/ Flexible/ Recycler/ Co-processing/ Compostable / Others (Please specify)	Status (Operating/Closed)	Production capacity (TPD)
1	NIL	NA	NA	NA	NA

Details of Registered Plastic Manufacturers (Column 6)

Nagaland					
S.No.	Name of the unit	Capacity	MLP /Rigid/Flexible/ Recycler/Co-processing / Compostable /other (please specify	Status (Operating / Closed)	Production Capacity (TPD)
1	M/s. Northeast Polyplast Company, 3rd mile, Kohima Road, Opp. ARTC, Dimapur Nagaland	44-45 TPD	Water Storage Tanks	Operating	44-45
2	M/s. Nagaland Polymer Industrial Estate, New Complex, Dimapur, Nagaland	800-850 kg	Flower pots, Buckets Jugs & Mugs	Operating	1
3	M/s. Sri Maa Padamawati Plastic Industry, Industrial Estate, Old Complex, Dimapur, Nagaland	1 TPD	Plastic pipes, Jerry Cans, Twines & Doors	Operating	2

Details of Registered Plastic Manufacturers (Column 6)

Odisha					
S.No.	Name of the unit	Capacity	MLP/ Rigid/ Flexible/ Recycler/ Co-processing/ Compostable / Others (Please specify)	Status (Operating/Closed)	Production capacity (TPD)
GAP					

Details of Registered Plastic Manufacturers (Column 6)

Puducherry					
S.No.	Name of the unit	MLP/Rigid/Flexible/Recycler/CO-processing/Compostable/Others(Please Specity)	Capacity	Status (Operating/Closed)	Production capacity (TPD)
1	M/s. Poseidon Enterprises, Thuthipet, Puducherry	Compostable Bags	1500 TPA	Operating	1500 TPA
2	5M/s. Rajaganapathy Bio Polymers, Puducherry	Compostable Bags	750 TPA	Yet to Operate	750 TPA
3	M/s. RajaganapathyAgrobase Polymers, Puducherry	Compostable Bags	4500 TPA	Yet to Operate	4500 TPA
4	M/s. FF Polymer Plot. No.B-12, 13 & 14, PIPDIC Industrial Estate, Sedrapet, Puducherry.	Recyclers	300 TPA	Operating	300 TPA
5	M/s Priya Plastics, 250/3A, 50&51, Odiampet, Pondicherry Municipality, Puducherry.	Recyclers	110 TPA	Operating	110 TPA
6	M/s Vasanth Poly industry 75/2, Pillayarkuppam, VCP, Puducherry	Recyclers	300 TPA	Closed	300 TPA
7	M/s. Padma Polymers R.S. No. 134/12, ThirubuvanaiPalayam, Thiruvandarkoil Post, Puducherry – 605 102.	Recyclers	600 TPA	Operating	600 TPA
8	M/s Daniel Plastics Plot No. A-20, R.S.No.158/1, 158/2,157, Kattukuppam Industrial Estate, Puducherry,	Recyclers	189.8 TPA	Operating	189.8 TPA

Details of Registered Plastic Manufacturers (Column 6)

Puducherry					
S.No.	Name of the unit	MLP/Rigid/Flexible/Recycler/CO-processing/Compostable/Others(Please Specity)	Capacity	Status (Operating/Closed)	Production capacity (TPD)
9	M/s. Sri Lakshmi Plastics Unit-II Plot No. 37/2 & 37/4, 4th Cross, PIPDIC Indl. Estate, Sedarapet, Puducherry – 605 111.	Recyclers	360 TPA	Operating	360 TPA
10	M/s. J.J. Traders R.S.No.2/1, Plot No. 15 & 16, II Cross, Kurumbapet, Villianur Commune Panchayat, Puducherry.	Recyclers	20 TPA	Closed	20 TPA
11	M/s Meera Polymers R.S.No. 52/13, Nallur Village, Pallinaliyanur Post, Mannadipet Commune, Puducherry.	Recyclers	600 TPA	Operating	600 TPA
12	M/s Selva Ganapathy Traders PIPDIC Industrial Estate, R.S.No.108/8/9B, Kirumampakkam, Puducherry	Recyclers	170 TPA	Operating	170 TPA
13	M/s. Poly Product Industries R.S. No.2, Plot No.125 to 127, IInd Cross Street, Kurumbapet, VCP, Puducherry	Recyclers	60 TPA	Operating	60 TPA
14	M/s. Diamond Polymers R.S.No.67/3, Thiruvandarkoil, Mannadipet Commune, Puducherry	Recyclers	360 TPA	Closed	360 TPA

Details of Registered Plastic Manufacturers (Column 6)

Puducherry					
S.No.	Name of the unit	MLP/Rigid/Flexible/Recycler/CO-processing/Compostable/Others(Please Specity)	Capacity	Status (Operating/Closed)	Production capacity (TPD)
15	M/s. Sri Balaji Plastics R.S.No.10/39, Thirukkanur Road, Vambupet, Puducherry- 605502	Recyclers	250 TPA	Operating	250 TPA
16	M/s.Sakthi Ganapathy Polymers Shed No.A4, Rural Industrial Estate, Kattukuppam, Puducherry	Recyclers	170 TPA	Operating	170 TPA
17	M/s. Servo Packaging Limited 88/1, CuddlorePondy Main Road, Kattukuppam, Puducherry	Recyclers	17 TPA	Operating	17 TPA
18	M/s. Krishna Industries Plot No- A-3, Rural Industrial Estate, Kattukuppam, Puducherry	Recyclers	150 TPA	Operating	150 TPA
19	M/s. MSR Plastics R.s. No. 124/4b/1, Pondy Main Road, Thiruvandarkoil, Mannadipet, Puducherry	Recyclers	140 TPA	Operating	140 TPA
20	M/s. Servo Packaging Limited 88/1, CuddlorePondy Main Road, Kattukuppam, Puducherry	Recyclers	17 TPA	Operating	17 TPA
21	M/s. Krishna Industries Plot No- A-3, Rural Industrial Estate, Kattukuppam, Puducherry	Recyclers	150 TPA	Operating	150 TPA

Details of Registered Plastic Manufacturers (Column 6)

Puducherry					
S.No.	Name of the unit	MLP/Rigid/Flexible/Recycler/CO-processing/Compostable/Others(Please Specity)	Capacity	Status (Operating/Closed)	Production capacity (TPD)
22	M/s. MSR Plastics R.s. No. 124/4b/1, Pondy Main Road, Thiruvandarkoil, Mannadipet, Puducherry	Recyclers	140 TPA	Operating	140 TPA
23	M/s. Amcor Flexibles India Private Limited, R.S.No.151/4, 151/5, Kandanpet Village, Manapet P.O., Bahour Commune, Puducherry	MLP Manufacturers	1193.9 TPA	Operating	1193.9 TPA
24	M/s. Rajalakshmy Packaging Private Limited, R.S.No.92/7, Plot No.14 & 15, Sri Gokulam Nagar, Korukkumedu Road, Thavalakuppam, Puducherry	MLP Manufacturers	600 TPA	Operating	600 TPA
25	M/s. Aparna Paper Processing Industry (P) Limited, R.S.No.17/3-5,7 & 10, Sedarapet, Puducherry- 605111	MLP Manufacturers	4000 TPA	Operating	4000 TPA
26	M/s. Aparna Paper Processing Industry (P) Limited-Unit II, R.S.No.15/2B, 3A, 3B & 15/4, Sedarapet Village, Puducherry	MLP Manufacturers	500 TPA	Operating	500 TPA
27	M/s. Ecof Industries Pvt. Ltd., Villianur, Puducherry	MLP Manufacturers	36 TPA	Operating	36 TPA
28	M/s. Sri SaiSrinivasa Polymers, Yanam	MLP Manufacturers	150 TPA	Operating	150 TPA

Details of Registered Plastic Manufacturers (Column 6)

Sikkim					
S.No.	Name of the unit	Capacity	MLP/Rigid/Flexible/ Recycler/CO-processing/ Compostable/Others(Please Specity)	Status (Operating /Closed	Production capacity (TPD)
1	NIL	NA	There is no registered Plastic Manufacturers in the state of sikkim	NA	NA

Details of Registered Plastic Manufacturers (Column 6)

Tripura					
S.No.	Name of the unit	Capacity	MLP/ Rigid/ Flexible/ Recycler/ Co-processing/ Compostable / Others (Please specify)	Status (Operating/ Closed)	Production capacity (TPD)
1	RND Polymers	25 T/month	HDPE	Operating	25 T/month
2	Progressive P-4 International Industries	50 nos./day	LLDPE		50 nos./day
3	Balaji Plastic Products	450kg/day	Nursery bags, rubber collection cup	Operating	450 kg/day
4	Jagannath	200 kg/month	Nursery bags, rubber collection cup, flower pot	Operating	200 kg/month
5	Joy Santoshi Plastic Works	160 nos/day	Water storage tank	Operating	-
6	Sarada Plastic Industry	250 kg/month	Baby toys & sports items	Operating	250 kg/month
7	Deep Poly Industries	7.96 MT/day	Nursery bag, PVC pipe	Operating	-
8	National Plastic	30 QT/month	Nursery bag	Operating	30 QT/month
9	Radha Krishna Poly Industry	15 pieces/day	Plastic pipe	Operating	15 pieces/day
10	Tarasanakar Plastic Industries	150MT/month	Table, chair, drum, stool etc.	Operating	17.4 MT/day
11	Agartala Plastics Pvt. Ltd.	17.4 MT/day	UPVC pipe	Operating	17.4 MT/day
12	Mina Plastic Factory	300 Nos./day	Plastic balls, plastic bats	Operating	300 Nos./day
13	Prandeep Plasto Industries	552 Tons/month	Bucket, Jug, Mug, Basin	Operating	552 Tons/month
14	Rotomec Industries	16 Nos/day	LLDPE	Operating	16 Nos/day
15	B.P. Enterprise	10 Nos/day	PVC Door	Operating	10 Nos/day
16	Seven Star Plastic Industries	400 Nos/month	Water can, Poultry feed container	Operating	400 Nos/month
17	Calcutta Polymer	20 Nos/day	LLDPE&HDPE	Operating	20 Nos/day
18	Bengal Pv Pipe Industry	1 MT/day	PVC Pipe	Operating	1 MT/day
19	Maa Polipipe Industries	10 MT/month	PVC Pipe	Operating	10 MT/month
20	Renu Poly Udyog	3 MT/month	PP, HM, LLDPE film	Operating	3 MT/month
21	Pioner Plastic Industry, Agartala	5 MT/day	HDPE pipe	Operating	5 MT/day

Details of Registered Plastic Manufacturers (Column 6)

Tripura					
S.No.	Name of the unit	Capacity	MLP/ Rigid/ Flexible/ Recycler/ Co- processing/ Compostable / Others (Please specify)	Status (Operating/ Closed)	Production capacity (TPD)
22	PBS Royal Plastic Industries, Bodhjungnagar Industrial Estate, P.O: R.K. Nagar, West Tripura	5 MT/day	PVC pipe	Operating	5 MT/day
23	Star Vision, East Pratapnagar, Agaratala	200 pieces/day	Plastic balls, plastic bats	Operating	200 pieces/day

Details of Registered Plastic Manufacturers (Column 6)

Uttarakhand					
S.No.	Name of the unit	Capacity	MLP /Rigid/Flexible/ Recycler/Co- processing / Compostable /other (please specify	Status (Operating / Closed)	Production Capacity (TPD)
1	M/s Polyplex Corporation Limited Lohia Head Road Khatima, Udham Singh Nagar.	GAP	1.Ployster Chips 2.Polyster film 3.Metalized Pet/B.O.P. P film & Paper	GAP	1.Polyster Chips: - 50 MT/Day 2. polyester film; - 66.66MT/Day 3. Metalized Pet/B.O.P. P film & Paper: - 33.33 MT/Day
2	M/s Polyplex Corporatin Ltd. (Bazpur) Banna kheraq Road village: - vikrampur, Tehsil Bazpur Distt: - Udham Singh Nagar	GAP	1.Pet Chips 2.B.O.P.P Film 3.B.O.P.P/B.O.Pet Metalized Film 4. B.O.Pet Lacquer Coated BOPET and BOPP	GAP	1.Pet Chips: - 157.80 MT/Day 2. B.O.P.P film: - 131.50 MT/Day 3.B.O.P. P/B.O.Pet Metalized Film:- 29.58 MT/Day 4.B.O.PET 95.34 MT/Day 5. Lacquer Coated BOPET and BOPP fim (clear and Metallized): - 15 MT/Day
3	M/s Ester Industries Ltd sohan Nagar, P.O Charubeta, Khatima, Udham Sinmgh Nagar.	GAP	1.Engineering plastic 2. Chips/ Speciality Polymer Chips 3. Polyester Film 4. Methanol /THF	GAP	1.Engineering Plastic 33.33 MT/Day 2. Chips/ Speciality Polymer Chips: - 330 3. Polyester Film 150 MT/Day 4. Methanol /THF 0.66 MT/Day
4	M/s Ultimate Fexipack Ltd. Plot No. 12 Sector - 11, IIE Sidcul, Haridwar.	GAP	Multi-Layered Plastic	GAP	Multi-layered Plastic 1233.33 MT/day
5	M/s Ultimate felxipack Ltd., Plot No. 94 J and 94 K, Sectore 6A, IIE Sidcul Haridwar.	GAP	Multi -Layered Plastic	GAP	Multi -Layered Plastic: - 720 MT/Day
6.	M/s Siddi Packaging Plot No: - 134 gha to 141 ka-Mohebewlala Industrial Area, Dhradun.	GAP	Compostable Bags, Plastic Film, Rolls & Bags	GAP	Compostable Bags, Plastic Film, Rolls & Bags: - 1.66 T/Day

Details of Registered Plastic Manufacturers (Column 6)

West Bengal					
S.No.	Name of the unit	Capacity	MLP/ Rigid/ Flexible/ Recycler/ Co-processing/ Compostable / Others (Please specify)	Status (Operating/ Closed)	Production capacity (TPD)
01.	M/s. Haldia Petrochemicals Ltd.	3039000 MT/Year	HDPE, LLDP EF, PP, Ethylene, Propylene etc.	Operating	3039000 MT/Year
02.	M/s. TVL Dhunseri Ptrochem Industries Pvt. Ltd.	600 TPD	PET Resin	Operating	600 TPD

Details of Unregistered Manufacturers							
S.No	State	Name of the unit	Capacity	MLP/ Rigid/ Flexible/ Recycler/ Co-processing/ Compostable / Others (Please specify)	Status (Operatin g/Closed)	Production capacity (TPD)	Details of Action taken against the unregistered unit
1	Assam	Assam					
2	Chandigarh	There is no manufacturing unit in Chandigarh.	NA	NA	NA	NA	NA
3	Mizoram	Mizoram	NA	NA	NA	NA	NA
4	Puducherry	Puducherry		Producers - 115 Reporcessor -19 Dierected to obtain registration under PWM Rules, 2016			
5	Sikkim	There is no Unregistered Manufacturers in the State of Sikkim	0	0	0	0	0
6	Uttarakhand	M/s SRF Limited Plot No -12, Rampura Ramnagar Road Kashipur, Udham Singh Nagar.	GAP	1.Polyester Film: 2.Polyester film for packaging:	GAP	1.Polyester Film: - 21.66 T/Day 2.Polyester film for packaging: - 13.86 MT/Day	GAP
7	Nagland	NA	NA	NA	NA	NA	NA
8	Maharashtra	There is no Unregistered Manufacturers in the State of Sikkim	0	0	0	0	0
9	Odisha	GAP	GAP	GAP	GAP	GAP	GAP
10	West Bengal	GAP	GAP	GAP	GAP	GAP	GAP

Details of violations & action taken on non-compliance of provisions of PWM Rules, 2016, as amended, 2018			A&N		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action Taken
1	4©	Carry bag made of virgin or recycled plastic, shall not be less than fifty microns in thickness;	NA	NA	The Andaman & Nicobar Administration has imposed complete Ban on use, storage, import, manufacture, transportation, distribution or sale and disposal of plastic carry bags irrespective of thickness, size, colour & nature in the UT of Andaman & Nicobar Islands, Notified in the Andaman & Nicobar Gazette vide No.: 202, dated 02.08.2010. Subsequent amendment Notified in Andaman & Nicobar Gazette Vide No.: 225, dated 24.09.2019, allowing 100% compostable/ biodegradable bags duly certified by CPCB, MoE&CC, GoI, allowed for usage, storage, import, manufacture, transportation, distribution or sale and disposal in UT of Andaman & Nicobar Islands.
2	4(d)	Plastic sheet or like, which is not an integral part of multi-layered packaging and cover made of plastic sheet used for packaging, wrapping the commodity shall not be less than fifty microns in thickness except where the thickness of such plastic sheets impair the functionality of the product	NA	NA	The Andaman & Nicobar Administration has imposed complete Ban on use, storage, import, manufacture, transportation, distribution or sale and disposal of plastic carry bags irrespective of thickness, size, colour & nature in the UT of Andaman & Nicobar Islands, Notified in the Andaman & Nicobar Gazette vide No.: 202, dated 02.08.2010. Subsequent amendment Notified in Andaman & Nicobar Gazette Vide No.: 225, dated 24.09.2019, allowing 100% compostable/ biodegradable bags duly certified by CPCB, MoE&CC, GoI, allowed for usage, storage, import, manufacture, transportation, distribution or sale and disposal in UT of Andaman & Nicobar Islands.
3	4(f)	Sachets using plastic material shall not be used for storing, packing or selling gutkha, tobacco and pan masala;	NA	NA	There are no manufacturers of gutkha, tobacco, cigarette and pan masala in the A& N Islands.

Details of violations & action taken on non-compliance of provisions of PWM Rules, 2016, as amended, 2018			A&N		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action Taken
4	4(h)	Carry bags made from compostable plastics shall conform to the Indian Standard: IS 17088:2008 titled as Specifications for Compostable Plastics, as amended from time to time. The manufacturers or seller of compostable plastic carrybags shall obtain a certified from the Central Pollution Control Board before marketing or selling;	NIL	NIL	ANPCC has issued the consent to establish to one no. of compostable plastic manufacturers unit namely M/s Greentech, Garacharma, Port Blair vide consent No 10-72/Gen-Consent/Bio-Degradable carry Bags/2019/226 dated 10-06-2020 having CPCB Certificate no. B-17011/7/PWM(COMP)/2020(GT)1782
5	6(1) & (7)	Every local body shall be responsible for development and setting up of infrastructure for segregation, collection, storage, transportation, processing, and disposal of the plastic waste either on its own or by engaging agencies or producers.	NIL	NIL	11 Nos. of Solid & Liquid Resource Management (SLRM) Centres have been constructed and made operational for dry wastes by Port Blair Municipal Council(PBMC).

Details of violations & action taken on non-compliance of provisions of PWM Rules, 2016, as amended, 2018			A&N		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action Taken
6	6(2)(g)&7©	Ensuring that open burning of plastic waste does not take place			

Details of violations & action taken on non-compliance of provisions of PWM Rules, 2016, as amended, 2018			A&N		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action Taken
7	8(1)(a)	The waste generator shall take steps to minimise generation of plastic waste and segregate plastic waste at source			PBMC has started 100% surce segregation in all 24 wards, so far 83.34% of total waste is either processed(composted, waste plastic used in road construction in compliance of EPR commitments, etc) or transported to mainland for recycling. The waste being dumped earlier at Brookshabad has been stopped since 27.01.2020 and as on date, only the inert waste approximately 16.66% are being dumped. PBMC has authorised unorganised waste collectors/ dealers by issuing an Identity cards. They will be allowed to collect all type of waste at the door level of households & any establishments and also from the streets, etc. PBMC have authorised 21 Nos. of waste vendors for dealing with collection. segregation , pre-processing and recycling through mainland at PBMC's SLRM & Dry Resource centres. The Directorate of RD,PRI and ULD has authorised 01 No. of vendor for collection, storage and transportation to mainland from GP SWM clusters. PBMC has identified 02 waste who have installed shredding units for supplying shredddded plastic waste to construction agencies within Port Blair city. For integration of informal workers, Port Blair Municipal Council started to engage the informal workers those were work ing on the compost yard, dry resource centre of PBMC facility. PBMC started to Integrate them through orientation programme and registering themselves as SHGs and get involved in the municipality activities

Details of violations & action taken on non-compliance of provisions of PWM Rules, 2016, as amended, 2018			A&N		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action Taken
8	8(1)(b)	The waste generator shall not litter the plastic waste			In order to ensure the compliance of the Direction on ban on Single Use Plastics (SUPs) (Carry bags & Non-woven carry bags), the Secretary, PBMC formulated a committee comprising Revenue Officer Team vide No.: 36, dated 25.01.2019. And, Sub-sequently the Sub-Divisional Magistrate/ Member Secretary, DLTFC (SA), A&N Administration vide No.: 51, dated 21st June, 2019, constituted a committee for effective implementation of SUPs Ban.

Details of violations & action taken on non-compliance of provisions of PWM Rules, 2016, as amended, 2018			A&N		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action Taken
9	13(2)	Every producer or band-owner shall, for the purpose of registration or for renewal of registration, make an application in Form-I to i. "The concerned State Pollution Control Board or Pollution Control Committee of the Union territory, if operating one or two States or Union Territories"; or ii. "The Central Pollution Control Board, if operating in more than two State or Union Territories".	NIL	NIL	Rule 9 of PWM Rules, 2016 – implementation of Extended Producers Responsibility (EPR) o A Committee had been constituted vide Order No.69 dated 19.07.2019 for examining the import of single use plastic items/packaging and to put in place Extended Producers Responsibility (EPR) modalities under Rule 9 of The Plastic Waste Management Rules, 2016. o An EPR Policy was finalized by the Administration and Public Notice dated 13.12.2019 and a compliance undertaking was issued to all PIBOs wherein it was decided that conditional permission will be granted only to those who follow the EPR Policy (100% take back of waste plastic) and shipments of non-complying entities will be disallowed from February 2020. o A&N Administration has developed Andaman & Nicobar Islands Extended Producers Responsibility (ANEPR) portal. The objective of this portal is the creation of a mechanism where the PIBOs and other stakeholders can themselves feed the data related to plastic waste for compliance of Extended Producers Responsibility in the A&N Islands.

Details of violations & action taken on non-compliance of provisions of PWM Rules, 2016, as amended, 2018			A&N		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action Taken
10	13(3)	Every person recycling or processing waste or proposing to recycle or process plastic waste shall make an application to the State Pollution Control Board or the Pollution Control Committee, for grant of registration or renewal of registration for the recycling unit, in Form II.	NIL	NIL	No plastic waste recycling units in ANI.
11	13(4)	Every manufacturer engaged in manufacturer of plastic to be used as raw material by the producer shall make an application to the State Pollution Control Board or the Pollution Control Committee, of the Union Territory concerned, for the grant of registration or renewal of registration for the recycling unit, in Form III.	NIL	NIL	No manufacturing units of plastic products.

Details of violations & action taken on non-compliance of provisions of PWM Rules, 2016, as amended, 2018			A&N		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action Taken
12	14(1)	Retailers or street vendors shall not sell or provide commodities to consumer in carry bags or plastic sheet or multi-layered packaging, which are not manufactured and labelled or marked, as per prescribed under these rules	NIL	NIL	The A&N Administration banned manufacture, storage, use, import, transportation, distribution and sale of single use plastic items vide Notification No.186 dated 05.09.2019. The ban is effective from 05.11.2019
13		Any other (please specify)	GAP	GAP	• Task force constituted vide order no. 22 dt. 27.04.21 • 1st meeting of Special Task Force (STF) convened on 27.04.21 • Meeting of core committee members held on 12.08.21 • Draft Action Plan on phasing out of Single Use Plastic with inputs received from concerned departments has been prepared.

Details of violations & action taken on non-compliance of provisions of PWM Rules, 2016, as amended, 2018			Arunachal Pradesh			Kerala		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken	Violator	Nature of Violation	Action taken
1	4©	Carry bag made of virgin or recycled plastic, shall not be less than fifty microns in thickness;	GAP	GAP	Notification issued by the State Government.	Single use plastic is banned in Kerala		
2	4(d)	Plastic sheet or like, which is not an integral part of multi-layered packaging and cver made of plastic sheet used for packaging, wrapping the commudity shall not be less than fifty microns in thickness except where the thickness of such plastic sheets impair the functionality of the product	GAP	GAP	Notification issued by Pasighat Municipal Council.	Single use plastic is banned in Kerala		
3	4(f)	Sachets using plastic material shall not be used for storing, packing or selling gutkha, tobacco and pan masala;	GAP	GAP	One of the Municipal Council namely Pasighat Municipal Council has issued Notification in this regard.	Banned		

Details of violations & action taken on non-compliance of provisions of PWM Rules, 2016, as amended, 2018			Arunachal Pradesh			Kerala		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken	Violator	Nature of Violation	Action taken
4	4(h)	Carry bags made from compostable plastics shall conform to the Indian Standard: IS 17088:2008 titled as Specifications for Compostable Plastics, as amended from time to time. The manufacturers or seller of compostable plastic carrybags shall obtain a certified from the Central Pollution Control Board before marketing or selling;	GAP	GAP	GAP	Ban of compostable carry bag is subjected to judgement dated 06/02/2021 in WP(C)4291/2020.		
5	6(1) & (7)	Every local body shall be responsible for development and setting up of infrastructure for segregation, collection, storage, transportation, processing, and disposal of the plastic waste either on its own or by engaging agencies or producers.	GAP	GAP	One of the Municipal Council namely Pasighat Municipal Council has installed MRF.	950 Harithakarma senas, 997 MCFs and 178 RRFs		
6	6(2)(g) & 7©	Ensuring that open burning of plastic waste does not take place	GAP	GAP	Nil	Instruction given to local bodies		
7	8(1)(a)	The waste generator shall take steps to minimise generation of plastic waste and segregate plastic waste at source	GAP	GAP	One of the local body namely Longding has held awareness at Longding Town about source segregation.	950 Harithakarma senas, 997 MCFs and 178 RRFs		

Details of violations & action taken on non-compliance of provisions of PWM Rules, 2016, as amended, 2018			Arunachal Pradesh			Kerala		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken	Violator	Nature of Violation	Action taken
8	8(1)(b)	The waste generator shall not litter the plastic waste	GAP	GAP	One of the local body namely Longding has held awareness at Longding Town about source segregation.	950 Harithakarma senas, 997 MCFs and 178 RRFs		

Details of violations & action taken on non-compliance of provisions of PWM Rules, 2016, as amended, 2018			Arunachal Pradesh			Kerala		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken	Violator	Nature of Violation	Action taken
9	13(2)	Every producer or band-owner shall, for the purpose of registration or for renewal of registration, make an application in Form-I to i. "The concerned State Pollution Control Board or Pollution Control Committee of the Union territory, if operating one or two States or Union Territories"; or ii. "The Central Pollution Control Board, if operating in more than two State or Union Territories".	GAP	GAP	As per Rule 13 (2)(ii) there are 10 (ten) registered PIBOs having its operational jurisdiction in Arunachal Pradesh. They are as follows: 1. M/s A.V. Thomas & Co. Ltd. 2. M/s Heritage Foods Ltd. 3. M/s PrayaghNutri Products Pvt. Ltd. 4. M/s Oriflame India Pvt. Ltd. 5. M/s Desai Foods Pvt. Ltd. 6. M/s Unibic Foods India Pvt. Ltd. 7. M/s Drums Food International Pvt. Ltd. 8. M/s Sheelpe Enterprises Pvt. Ltd. 9. M/s Pahal Foods Pvt. Limited 10. M/s Harsh Bakers. However, none of the above have applied in Form-1 to SPCB.			The proposal for EPR under the consideration of Government

Details of violations & action taken on non-compliance of provisions of PWM Rules, 2016, as amended, 2018			Arunachal Pradesh			Kerala		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken	Violator	Nature of Violation	Action taken
10	13(3)	Every person recycling or processing waste or proposing to recycle or process plastic waste shall make an application to the State Pollution Control Board or the Pollution Control Committee, for grant of registration or renewal of registration for the recycling unit, in Form II.	GAP	GAP	Nil. There are no person recycling or processing waste or proposing to recycle or process plastic waste in the State. No application received in Form-II.	Number of registered recyclers in the State- 187		
11	13(4)	Every manufacturer engaged in manufacturer of plastic to be used as raw material by the producer shall make an application to the State Pollution Control Board or the Pollution Control Committee, of the Union Territory concerned, for the grant of registration or renewal of registration for the recycling unit, in Form III.	GAP	GAP	Nil. No application received in Form-III.	Number of registered manufacturers/ producers in the State-1348		
12	14(1)	Retailers or street vendors shall not sell or provide commodities to consumer in carry bags or plastic sheet or multi-layered packaging, which are not manufactured and labelled or marked, as per prescribed under these rules	GAP	GAP	---	Single use plastic is banned in Kerala		
13		Any other (please specify)	GAP	GAP		Nil		

Details of violations & action taken on non-compliance of			Assam		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken
1	4©	Carry bag made of virgin or recycled plastic, shall not be less than fifty microns in thickness;	violation not observed	NA	NA
2	4(d)	Plastic sheet or like, which is not an integral part of multi-layered packaging and cover made of plastic sheet used for packaging, wrapping the commodity shall not be less than fifty microns in thickness except where the thickness of such plastic sheets impair the functionality of the product	violation not observed	NA	NA
3	4(f)	Sachets using plastic material shall not be used for storing, packing or selling gutkha, tobacco and pan masala;	violation not observed	NA	NA
4	4(h)	Carry bags made from compostable plastics shall conform to the Indian Standard: IS 17088:2008 titled as Specifications for Compostable Plastics, as amended from time to time. The manufacturers or seller of compostable plastic carrybags shall obtain a certified from the Central Pollution Control Board before marketing or selling;	violation not observed	NA	NA
5	6(1) & (7)	Every local body shall be responsible for development and setting up of infrastructure for segregation, collection, storage, transportation, processing, and disposal of the plastic waste either on its own or by engaging agencies or producers.	no plastic waste processing facility set up by any ULBs	NA	directions issued
6	6(2)(g) & 7©	Ensuring that open burning of plastic waste does not take place	GAP	GAP	challans issued by ULBs

Details of violations & action taken on non-compliance of			Assam		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken
7	8(1)(a)	The waste generator shall take steps to minimise generation of plastic waste and segregate plastic waste at source			directions issued to ULBs
8	8(1)(b)	The waste generator shall not litter the plastic waste	action taken by ULBs		challans issued by ULBs
9	13(2)	Every producer or band-owner shall, for the purpose of registration or for renewal of registration, make an application in Form-I to i. "The concerned State Pollution Control Board or Pollution Control Committee of the Union territory, if operating one or two States or Union Territories"; or ii. "The Central Pollution Control Board, if operating in more than two State or Union Territories".	identification of violators under process	GAP	public notice issued
10	13(3)	Every person recycling or processing waste or proposing to recycle or process plastic waste shall make an application to the State Pollution Control Board or the Pollution Control Committee, for grant of registration or renewal of registration for the recycling unit, in Form II.	identification of violators under process		public notice issued
11	13(4)	Every manufacturer engaged in manufacturer of plastic to be used as raw material by the producer shall make an application to the State Pollution Control Board or the Pollution Control Committee, of the Union Territory concerned, for the grant of registration or renewal of registration for the recycling unit, in Form III.	no violations observed		

Details of violations & action taken on non-compliance of			Assam		
Sl. No.	Rule	Provisions	Violator	Nature of Voilation	Action taken
12	14(1)	Retailers or street vendors shall not sell or provide commodities to consumer in carry bags or plastic sheet or multi-layered packaging, which are not manufactured and labelled or marked, as per prescribed under these rules	action taken by ULBs	GAP	challans issued
13		Any other (please specify)		GAP	

Details of violations & action taken on non-			Chandigarh			Mizoram		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken	Violator	Nature of Violation	Action taken
1	4©	Carry bag made of virgin or recycled plastic, shall not be less than fifty microns in thickness;	The Municipal Corporation Chandigarh has issued 961 nos. of challans issued to Defaulters/Violators (In Calender year 2021)	General Plastic and SUP	EC has been imposed.	Data not provided by ULB and Urban Town	Data not provided by ULB and Urban Town	N.A
2	4(d)	Plastic sheet or like, which is not an integral part of multi-layered packaging and cver made of plastic sheet used for packaging, wrapping the commudity shall not be less than fifty microns in thickness except where the thickness of such plastic sheets impair the functionality of the product	The Municipal Corporation Chandigarh has issued 961 nos. of challans issued to Defaulters/Violators (In Calender year 2021)	General Plastic and SUP	EC has been imposed.	136 shops	Using polythene less than 50 microns for packing	Confiscate d and fine imposed
3	4(f)	Sachets using plastic material shall not be used for storing, packing or selling gutkha, tobacco and pan masala;	The Municipal Corporation Chandigarh has issued 961 nos. of challans issued to Defaulters/Violators (In Calender year 2021)	General Plastic and SUP	EC has been imposed.	Not applicable as there are no gutkha, tobacco and pan masala manufacturers	NA	NA

Details of violations & action taken on non-			Chandigarh			Mizoram		
Sl. No.	Rule	Provisions	Violator	Nature of Voilation	Action taken	Violator	Nature of Violation	Action taken
4	4(h)	Carry bags made from compostable plastics shall conform to the Indian Standard: IS 17088:2008 titled as Specifications for Compostable Plastics, as amended from time to time. The manufacturers or seller of compostable plastic carrybags shall obtain a certified from the Central Pollution Control Board before marketing or selling;	Nil	NA	NA	Not applicable as there are no compstable plastic manufacturers	NA	NA
5	6(1) & (7)	Every local body shall be responsible for development and setting up of infrastructure for segregation, collection, storage, transportation, processing, and disposal of the plastic waste either on its own or by engaging agencies or producers.	Nil	NA	NA	Data not provided by AMC/UD&PA	NA	NA
6	6(2)(g) & 7©	Ensuring that open burning of plastic waste does not take place	Nil	NA	NA	1	open burning of mixed solid wastes	Fined by Mizoram PCB

Details of violations & action taken on non-			Chandigarh			Mizoram		
Sl. No.	Rule	Provisions	Violator	Nature of Voilation	Action taken	Violator	Nature of Violation	Action taken
7	8(1)(a)	The waste generator shall take steps to minimise generation of plastic waste and segregate plastic waste at source	Nil	NA	NA	No records	Improper segregation	Refuse to collect mixed wastes and directed generators to desegregate
8	8(1)(b)	The waste generator shall not litter the plastic waste	Nil	NA	NA	Report not provided by the AMC/UD&PA		
9	13(2)	Every producer or band-owner shall, for the purpose of registration or for renewal of registration, make an application in Form-I to i. "The concerned State Pollution Control Board or Pollution Control Committee of the Union territory, if operating one or two States or Union Territories"; or ii. "The Central Pollution Control Board, if operating in more than two State or Union Territories".	Nil	NA	NA	4	Invalid registration	Direction served

Details of violations & action taken on non-			Chandigarh			Mizoram		
Sl. No.	Rule	Provisions	Violator	Nature of Voilation	Action taken	Violator	Nature of Violation	Action taken
10	13(3)	Every person recycling or processing waste or proposing to recycle or process plastic waste shall make an application to the State Pollution Control Board or the Pollution Control Committee, for grant of registration or renewal of registration for the recycling unit, in Form II.	Nil	NA	NA	NIL		
11	13(4)	Every manufacturer engaged in manufacturer of plastic to be used as raw material by the producer shall make an application to the State Pollution Control Board or the Pollution Control Committee, of the Union Territory concerned, for the grant of registration or renewal of registration for the recycling unit, in Form III.	Nil	NA	NA	NIL		
12	14(1)	Retailers or street vendors shall not sell or provide commodities to consumer in carry bags or plastic sheet or multi-layered packaging, which are not manufactured and labelled or marked, as per prescribed under these rules	See Note 1	NA	NA	Data not provided by the AMC/UD&PA	NA	NA
13		Any other (please specify)	Nil	NA	NA	NA	NA	NA

Details of violations & action taken on non-compliance			Maharashtra			Odisha		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action Taken	Violator	Nature of Violation	Action taken
1	4©	Carry bag made of virgin or recycled plastic, shall not be less than fifty microns in thickness;	70	Manufacturing banned plastic carry bags	CD issued to industries & closed down their activities & dismantled plant and machinery	GAP	GAP	Fine is being imposed by ULBs under the guidance of SUDA and Direction from WBPCB.
2	4(d)	Plastic sheet or like, which is not an integral part of multi-layered packaging and cver made of plastic sheet used for packaging, wrapping the commudity shall not be less than fifty microns in thickness except where the thickness of such plastic sheets impair the functionality of the product	Nil	Nil	Nil	GAP	GAP	Fine is being imposed by ULBs under the guidance of SUDA and Direction from WBPCB.
3	4(f)	Sachets using plastic material shall not be used for storing, packing or selling gutkha, tobacco and pan masala;	Nil	Nil	Nil	GAP	GAP	GAP
4	4(h)	Carry bags made from compostable plastics shall conform to the Indian Standard: IS 17088:2008 titled as Specifications for Compostable Plastics, as amended from time to time. The manufacturers or seller of compostable plastic carrybags shall obtain a certified from the Central Pollution Control Board before marketing or selling;	Nil	Nil	Nil	GAP	GAP	GAP

Details of violations & action taken on non-compliance			Maharashtra			Odisha		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action Taken	Violator	Nature of Violation	Action taken
5	6(1) & (7)	Every local body shall be responsible for development and setting up of infrastructure for segregation, collection, storage, transportation, processing, and disposal of the plastic waste either on its own or by engaging agencies or producers.	Nil	Nil	Nil	GAP	GAP	GAP
6	6(2)(g) & 7©	Ensuring that open burning of plastic waste does not take place	Nil	Nil	Nil	GAP	GAP	Direction has been issued.
7	8(1)(a)	The waste generator shall take steps to minimise generation of plastic waste and segregate plastic waste at source	Nil	Nil	Nil	GAP	GAP	Awareness workshops are being organised to sensitize people. Bins are being provided from ULBs to households.
8	8(1)(b)	The waste generator shall not litter the plastic waste	Nil	Nil	Nil	GAP	GAP	-

Details of violations & action taken on non-compliance			Maharashtra			Odisha		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action Taken	Violator	Nature of Violation	Action taken
9	13(2)	Every producer or band-owner shall, for the purpose of registration or for renewal of registration, make an application in Form-I to i. "The concerned State Pollution Control Board or Pollution Control Committee of the Union territory, if operating one or two States or Union Territories"; or ii. "The Central Pollution Control Board, if operating in more than two State or Union Territories".	Nil	Nil	Nil	GAP	GAP	Show-cause notices have been issued.
10	13(3)	Every person recycling or processing waste or proposing to recycle or process plastic waste shall make an application to the State Pollution Control Board or the Pollution Control Committee, for grant of registration or renewal of registration for the recycling unit, in Form II.	Nil	Nil	Nil	GAP	GAP	Actions are being taken in accordance with the rules.

Details of violations & action taken on non-compliance			Maharashtra			Odisha		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action Taken	Violator	Nature of Violation	Action taken
11	13(4)	Every manufacturer engaged in manufacturer of plastic to be used as raw material by the producer shall make an application to the State Pollution Control Board or the Pollution Control Committee, of the Union Territory concerned, for the grant of registration or renewal of registration for the recycling unit, in Form III.	Nil	Nil	Nil	GAP	GAP	Complied
12	14(1)	Retailers or street vendors shall not sell or provide commodities to consumer in carry bags or plastic sheet or multi-layered packaging, which are not manufactured and labelled or marked, as per prescribed under these rules	Nil	Nil	Nil	GAP	GAP	Action are being taken in accordance with PWM Rules , 2016 (as amended)
13		Any other (please specify)	Nil	Nil	Nil	GAP	GAP	GAP

Details of violations & action taken on non-compliance of provisions of PWM Rules, 2016, as amended, 2018			Manipur		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken
1	4©	Carry bag made of virgin or recycled plastic, shall not be less than fifty microns in thickness;	15	Selling sub-standard and non-labelling plastic carry bags.	Item seized and utilized in Road construction.
2	4(d)	Plastic sheet or like, which is not an integral part of multi-layered packaging and cver made of plastic sheet used for packaging, wrapping the commudity shall not be less than fifty microns in thickness except where the thickness of such plastic sheets impair the functionality of the product	8	Selling and storing of plastic sheet or like which is<50 microns in thickness.	Item seized and utilized in Road construction.
3	4(f)	Sachets using plastic material shall not be used for storing, packing or selling gutkha, tobacco and pan masala;	GAP	GAP	GAP
4	4(h)	Carry bags made from compostable plastics shall conform to the Indian Standard: IS 17088:2008 titled as Specifications for Compostable Plastics, as amendedfrom time to time. The manufacturers or seller of compostable plastic carrybags shall obtain a certified from the Central Pollution Control Board before marketing or selling;	Nil	Nil	Nil

Details of violations & action taken on non-compliance of provisions of PWM Rules, 2016, as amended, 2018			Manipur		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken
5	6(1) & (7)	Every local body shall be responsible for development and setting up of infrastructure for segregation, collection, storage, transportation, processing, and disposal of the plastic waste either on its own or by engaging agencies or producers.			
6	6(2)(g) & 7©	Ensuring that open burning of plastic waste does not take place			
7	8(1)(a)	The waste generator shall take steps to minimise generation of plastic waste and segregate plastic waste at source			
8	8(1)(b)	The waste generator shall not litter the plastic waste			
9	13(2)	Every producer or brand-owner shall, for the purpose of registration or for renewal of registration, make an application in Form-I to i. "The concerned State Pollution Control Board or Pollution Control Committee of the Union territory, if operating one or two States or Union Territories"; or ii. "The Central Pollution Control Board, if operating in more than two State or Union Territories".			

Details of violations & action taken on non-compliance of provisions of PWM Rules, 2016, as amended, 2018			Manipur		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken
10	13(3)	Every person recycling or processing waste or proposing to recycle or process plastic waste shall make an application to the State Pollution Control Board or the Pollution Control Committee, for grant of registration or renewal of registration for the recycling unit, in Form II.			
11	13(4)	Every manufacturer engaged in manufacturer of plastic to be used as raw material by the producer shall make an application to the State Pollution Control Board or the Pollution Control Committee, of the Union Territory concerned, for the grant of registration or renewal of registration for the recycling unit, in Form III.			
12	14(1)	Retailers or street vendors shall not sell or provide commodities to consumer in carry bags or plastic sheet or multi-layered packaging, which are not manufactured and labelled or marked, as per prescribed under these rules			
13		Any other (please specify)			

Details of violations & action taken on			Nagland		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken
1	4©	Carry bag made of virgin or recycled plastic, shall not be less than fifty microns in thickness;	GAP	NA	The Govt. of Nagaland had vide notification no. UDD/7-GEN-07-PWM/2018 dated 17th June, 2019 banned all the Single use plastics in Nagaland, namely: 1. All Plastic carry bags, with or without handles, irrespective of thickness and size; 2. Plastic cutlery including plates, plastic cups, straws, stirrers etc. 3. Cutlery and other decorative made of Styrofoam (Thermocol) 4. Polythene 5. Nylon 6. Poly-Vinyl-Carbohydrates (PVC) 7. Poly-Propylene 8. Poly-Styrene
2	4(d)	Plastic sheet or like, which is not an integral part of multi-layered packaging and cver made of plastic sheet used for packaging, wrapping the commudity shall not be less than fifty microns in thickness except where the thickness of such plastic sheets impair the functionality of the product	GAP	NA	The Govt. of Nagaland had vide notification no. UDD/7-GEN-07-PWM/2018 dated 17th June, 2019 banned all the Single use plastics in Nagaland, namely: 1. All Plastic carry bags, with or without handles, irrespective of thickness and size; 2. Plastic cutlery including plates, plastic cups, straws, stirrers etc. 3. Cutlery and other decorative made of Styrofoam (Thermocol) 4. Polythene 5. Nylon 6. Poly-Vinyl-Carbohydrates (PVC) 7. Poly-Propylene 8. Poly-Styrene
3	4(f)	Sachets using plastic material shall not be used for storing, packing or selling gutkha, tobacco and pan masala;	GAP	NA	GAP

Details of violations & action taken on			Nagland		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken
4	4(h)	Carry bags made from compostable plastics shall conform to the Indian Standard: IS 17088:2008 titled as Specifications for Compostable Plastics, as amended from time to time. The manufacturers or seller of compostable plastic carrybags shall obtain a certified from the Central Pollution Control Board before marketing or selling;	GAP	NA	GAP
5	6(1) & (7)	Every local body shall be responsible for development and setting up of infrastructure for segregation, collection, storage, transportation, processing, and disposal of the plastic waste either on its own or by engaging agencies or producers.	GAP	NA	GAP
6	6(2)(g) & 7©	Ensuring that open burning of plastic waste does not take place	GAP	NA	GAP

Details of violations & action taken on			Nagland		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken
7	8(1)(a)	The waste generator shall take steps to minimise generation of plastic waste and segregate plastic waste at source	GAP	NA	GAP
8	8(1)(b)	The waste generator shall not litter the plastic waste	GAP	NA	
9	13(2)	Every producer or band-owner shall, for the purpose of registration or for renewal of registration, make an application in Form-I to i. "The concerned State Pollution Control Board or Pollution Control Committee of the Union territory, if operating one or two States or Union Territories"; or ii. "The Central Pollution Control Board, if operating in more than two State or Union Territories".	GAP	NA	GAP

Details of violations & action taken on			Nagland		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken
10	13(3)	Every person recycling or processing waste or proposing to recycle or process plastic waste shall make an application to the State Pollution Control Board or the Pollution Control Committee, for grant of registration or renewal of registration for the recycling unit, in Form II.	GAP	NA	GAP
11	13(4)	Every manufacturer engaged in manufacturer of plastic to be used as raw material by the producer shall make an application to the State Pollution Control Board or the Pollution Control Committee, of the Union Territory concerned, for the grant of registration or renewal of registration for the recycling unit, in Form III.	GAP	NA	GAP

Details of violations & action taken on			Nagland		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken
12	14(1)	Retailers or street vendors shall not sell or provide commodities to consumer in carry bags or plastic sheet or multi-layered packaging, which are not manufactured and labelled or marked, as per prescribed under these rules	GAP	NA	GAP
13		Any other (please specify)	GAP	NA	The Govt. of Nagaland had vide notification no. UDD/7-GEN-07-PWM/2018 dated 17th June, 2019 banned all the Single use plastics in Nagaland, namely: 1. All Plastic carry bags, with or without handles, irrespective of thickness and size; 2. Plastic cutlery including plates, plastic cups, straws, stirrers etc. 3. Cutlery and other decorative made of Styrofoam (Thermocol) 4. Polythene 5. Nylon 6. Poly-Vinyl-Carbohydrates (PVC) 7. Poly-Propylene 8. Poly-Styrene

Details of violations & action taken on non-			Puducherry			Sikkim			
Sl. No.	Rule	Provisions	Violator	Nature of Voilation	Action taken	Violator	Nature of	Action taken	Remarks
1	4©	Carry bag made of virgin or recycled plastic, shall not be less than fifty microns in thickness;	10	<50 microns	closed	Nil	Nil	NA	There is no manufacturing unit in the state of Sikkim
2	4(d)	Plastic sheet or like, which is not an integral part of multi-layered packaging and cver made of plastic sheet used for packaging, wrapping the commudity shall not be less than fifty microns in thickness except where the thickness of such plastic sheets impair the functionality of the product	3	<50 microns	closed	Nil	Nil	NA	Banned under Sikkim Trade Licence and Miscellaneous Provision Rules, 1985 vide notification No. GOS/UD&HD/97-98/6(85) dated 4th June 1998
3	4(f)	Sachets using plastic material shall not be used for storing, packing or selling gutkha, tobacco and pan masala;	NA	NA	NA	Nil	Nil	NA	There is no manufacturing unit in the state of Sikkim
4	4(h)	Carry bags made from compostable plastics shall conform to the Indian Standard: IS 17088:2008 titled as Specifications for Compostable Plastics, as amended from time to time. The manufacturers or seller of compostable plastic carrybags shall obtain a certified from the Central Pollution Control Board before marketing or selling;	Yes	NA	NA	Nil	Nil	NA	There is no manufacturing unit in the state of Sikkim

Details of violations & action taken on non-			Puducherry			Sikkim			
Sl. No.	Rule	Provisions	Violator	Nature of Voilation	Action taken	Violator	Nature of	Action taken	Remarks
5	6(1) & (7)	Every local body shall be responsible for development and setting up of infrastructure for segregation, collection, storage, transportation, processing, and disposal of the plastic waste either on its own or by engaging agencies or producers.	Yes	NA	NA	Nil	Nil	NA	All ULBs are sensitized in this issues and matter under process
6	6(2)(g) & 7©	Ensuring that open burning of plastic waste does not take place	Yes	NA	NA	Nil	Nil	NA	Buring of agricultural waste, leaves, litter, paper wastes and garbage within the State of Sikkim is banned vide notification vide.196/FEWMD dated 05.01.2015
7	8(1)(a)	The waste generator shall take steps to minimise generation of plastic waste and segregate plastic waste at source	Yes	NA	NA	Nil	Nil	NA	GAP
8	8(1)(b)	The waste generator shall not litter the plastic waste	Yes	NA	NA	Nil	Nil	NA	As per notification No.5/UD HD dated 29.04.2019 in Bye law No. 4.1 Littering any waste imposed fine of Rs200

Details of violations & action taken on non-			Puducherry			Sikkim			
Sl. No.	Rule	Provisions	Violator	Nature of Voilation	Action taken	Violator	Nature of	Action taken	Remarks
9	13(2)	Every producer or band-owner shall, for the purpose of registration or for renewal of registration, make an application in Form-I to i. "The concerned State Pollution Control Board or Pollution Control Committee of the Union territory, if operating one or two States or Union Territories"; or ii. "The Central Pollution Control Board, if operating in more than two State or Union Territories".	Yes	NA	NA	Nil	Nil	NA	
10	13(3)	Every person recycling or processing waste or proposing to recycle or process plastic waste shall make an application to the State Pollution Control Board or the Pollution Control Committee, for grant of registration or renewal of registration for the recycling unit, in Form II.	Yes	NA	NA	Nil	Nil	NA	There is no recycling or processing waste or proposing to recycle unit in the state of Sikkim

Details of violations & action taken on non-			Puducherry			Sikkim			
Sl. No.	Rule	Provisions	Violator	Nature of Voilation	Action taken	Violator	Nature of	Action taken	Remarks
11	13(4)	Every manufacturer engaged in manufacturer of plastic to be used as raw material by the producer shall make an application to the State Pollution Control Board or the Pollution Control Committee, of the Union Territory concerned, for the grant of registration or renewal of registration for the recycling unit, in Form III.	GAP	NA	NA	Nil	Nil	NA	There is no manufacturing unit in the state of Sikkim
12	14(1)	Retailers or street vendors shall not sell or provide commodities to consumer in carry bags or plastic sheet or multi-layered packaging, which are not manufactured and labelled or marked, as per prescribed under these rules	GAP	NA	NA	Nil	Nil	NA	Sikkim Trade Licence and Miscellaneous Provision Rules, 1985 has banned through notification No. GOS/UD&HD/97-98/6(85) dated 4th June 1998
13		Any other (please specify)	GAP	NA	NA				

Details of violations & action taken on non-compliance of			Uttarakhand		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken
1	4©	Carry bag made of virgin or recycled plastic, shall not be less than fifty microns in thickness;	15214 Challans	Use of ban Plastic	Total fine collected 126.18 Lakh
2	4(d)	Plastic sheet or like, which is not an integral part of multi-layered packaging and cover made of plastic sheet used for packaging, wrapping the commodity shall not be less than fifty microns in thickness except where the thickness of such plastic sheets impair the functionality of the product	NA	NA	NA
3	4(f)	Sachets using plastic material shall not be used for storing, packing or selling gutkha, tobacco and pan masala;	NA	NA	NA
4	4(h)	Carry bags made from compostable plastics shall conform to the Indian Standard: IS 17088:2008 titled as Specifications for Compostable Plastics, as amended from time to time. The manufacturers or seller of compostable plastic carrybags shall obtain a certified from the Central Pollution Control Board before marketing or selling;	NA	NA	NA
5	6(1) & (7)	Every local body shall be responsible for development and setting up of infrastructure for segregation, collection, storage, transportation, processing, and disposal of the plastic waste either on its own or by engaging agencies or producers.	NA	NA	Direction issue to all ULBs and District magistrate
6	6(2)(g) & 7©	Ensuring that open burning of plastic waste does not take place	NA	NA	Data yet to Collected
7	8(1)(a)	The waste generator shall take steps to minimise generation of plastic waste and segregate plastic waste at source	GAP	GAP	Workshop done to above topics
8	8(1)(b)	The waste generator shall not litter the plastic waste	—	—	—

Details of violations & action taken on non-compliance of			Uttarakhand		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken
9	13(2)	Every producer or band-owner shall, for the purpose of registration or for renewal of registration, make an application in Form-I to i. "The concerned State Pollution Control Board or Pollution Control Committee of the Union territory, if operating one or two States or Union Territories"; or ii. "The Central Pollution Control Board, if operating in more than two State or Union Territories".	—	—	Direction issue
10	13(3)	Every person recycling or processing waste or proposing to recycle or process plastic waste shall make an application to the State Pollution Control Board or the Pollution Control Committee, for grant of registration or renewal of registration for the recycling unit, in Form II.	GAP	GAP	Direction issue
11	13(4)	Every manufacturer engaged in manufacturer of plastic to be used as raw material by the producer shall make an application to the State Pollution Control Board or the Pollution Control Committee, of the Union Territory concerned, for the grant of registration or renewal of registration for the recycling unit, in Form III.	GAP	GAP	Direction issue
12	14(1)	Retailers or street vendors shall not sell or provide commodities to consumer in carry bags or plastic sheet or multi-layered packaging, which are not manufactured and labelled or marked, as per prescribed under these rules	GAP	GAP	GAP
13		Any other (please specify)			

Details of violations & action taken on non-compliance of provisions of PWM Rules, 2016, as amended, 2018			West Bengal			Tripura		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken	Violator	Nature of Violation	Action taken
1	4©	Carry bag made of virgin or recycled plastic, shall not be less than fifty microns in thickness;	52	Thickness of plastic carry bags less than 50 micron.	Fine is being imposed by ULBs under the guidance of SUDA and Direction from	Nil	NA	NA
2	4(d)	Plastic sheet or like, which is not an integral part of multi-layered packaging and cver made of plastic sheet used for packaging, wrapping the commudity shall not be less than fifty microns in thickness except where the thickness of such plastic sheets impair the functionality of the product	GAP	GAP	NA	Nil	NA	NA
3	4(f)	Sachets using plastic material shall not be used for storing, packing or selling gutkha, tobacco and pan masala;	GAP	GAP	NA	Nil	NA	NA
4	4(h)	Carry bags made from compostable plastics shall conform to the Indian Standard: IS 17088:2008 titled as Specifications for Compostable Plastics, as amendedfrom time to time. The manufacturers or seller of compostable plastic carrybags shall obtain a certified from the Central Pollution Control Board before marketing or selling;	GAP	GAP	NA	Nil	NA	NA

Details of violations & action taken on non-compliance of provisions of PWM Rules, 2016, as amended, 2018			West Bengal			Tripura		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken	Violator	Nature of Violation	Action taken
5	6(1) & (7)	Every local body shall be responsible for development and setting up of infrastructure for segregation, collection, storage, transportation, processing, and disposal of the plastic waste either on its own or by engaging agencies or producers.	GAP	GAP	A good numbers of ULBs have already started 100 % source segregation and management of plastic waste as per guideline of CPCB. SUDA has already directed all ULBs to install MRFs for effective management of plastic wastes.	Nil	NA	NA
6	6(2)(g) & 7©	Ensuring that open burning of plastic waste does not take place	GAP	GAP	Direction has been issued.	Nil	NA	NA
7	8(1)(a)	The waste generator shall take steps to minimise generation of plastic waste and segregate plastic waste at source	GAP	GAP	Awareness workshops are being organised to sensitize people. Bins are being provided from ULBs	Nil	NA	NA

Details of violations & action taken on non-compliance of provisions of PWM Rules, 2016, as amended, 2018			West Bengal			Tripura		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken	Violator	Nature of Violation	Action taken
8	8(1)(b))	The waste generator shall not litter the plastic waste	GAP	GAP		Nil	NA	NA
9	13(2)	Every producer or band-owner shall, for the purpose of registration or for renewal of registration, make an application in Form-I to i. "The concerned State Pollution Control Board or Pollution Control Committee of the Union territory, if operating one or two States or Union Territories"; or ii. "The Central Pollution Control Board, if operating in more than two State or Union Territories".	GAP	GAP	Show-cause notices have been issued	Nil	NA	NA
10	13(3)	Every person recycling or processing waste or proposing to recycle or process plastic waste shall make an application to the State Pollution Control Board or the Pollution Control Committee, for grant of registration or renewal of registration for the recycling unit, in Form II.	GAP	GAP	Actions are being taken in accordance with the rules.	Nil	NA	NA

Details of violations & action taken on non-compliance of provisions of PWM Rules, 2016, as amended, 2018			West Bengal			Tripura		
Sl. No.	Rule	Provisions	Violator	Nature of Violation	Action taken	Violator	Nature of Violation	Action taken
11	13(4)	Every manufacturer engaged in manufacture of plastic to be used as raw material by the producer shall make an application to the State Pollution Control Board or the Pollution Control Committee, of the Union Territory concerned, for the grant of registration or renewal of registration for the recycling unit, in Form III.	GAP	GAP	Complied	Nil	NA	NA
12	14(1)	Retailers or street vendors shall not sell or provide commodities to consumer in carry bags or plastic sheet or multi-layered packaging, which are not manufactured and labelled or marked, as per prescribed under these rules	GAP	GAP	Action are being taken in accordance with PWM Rules , 2016 (as amended)	45 Jont raids were conducted in 2020-21 jointly with ULBs, SDM, Police	NA	NA
13		Any other (please specify)	GAP	GAP	NA	Nil	NA	NA

Status of submission of Annual Report by ULBs/VPs to SPCB/PCC		Assam	Chandigarh	Mizoram	Puducherry	Sikkim
Sl. No.	Item	No.	No.	No.	No.	No.
1	Total No. ULBs	96	1	ULB : 1 (Aizawl Municipal Corporation) Urban Towns : 22 (under UD&PA Deptt)	5	7
a	Total NO. of ULBs which have provided complete Annual Report	45	1	ULB : 1 (Aizawl Municipal Corporation) Urban Towns : 16 (under UD&PA Deptt)	3	7
2	Total No. GPs		0	155 Village Councils in Urban Towns	10	16
a	Total No. of GPs which have provided complete Annual Report	nil	0	141 Village Councils	7	0
3	Any other local bodies (please specify)	GAP	0	NIL	GAP	0
a	Any other local bodies which have provided complete Annual Report	GAP	0	NA	GAP	0

Status of submission of Annual Report by ULBs/VPs to SPCB/PCC		Uttarakhand	Nagaland	Odisha	Maharashtra	West Bengal	Tripura
Sl. No.	Item	No.	No.	No.	No.	No.	No.
1	Total No. ULBs	100	39	114	403	125	20
a	Total NO. of ULBs which have provided complete Annual Report	67	39	114	394	125	20
2	Total No. GPs	7791	19	NA	27,891	3339	591
a	Total No. of GPs which have provided complete Annual Report	Nil	NA	NA	GAP	Nil	GAP
3	Any other local bodies (please specify)	GAP	None	NA	GAP	Nil	GAP
a	Any other local bodies which have provided complete Annual Report	GAP	None	NA	GAP	Nil	GAP

Rating of States / UTs under PWM		
Sl. No	ITEMS	NUMBER
A	Overview of Waste management	25
1	Per Capita PW generation (TPD)	10 5: <2000 TPA 4: 2000-5000 3: 5000-10000 TPA 2: 10000-150000 TPA 1: >15000 TPA
2	% of ULB submitted the information	5 (5: 100%-80%; 4: 80-60%; 3: 60-40%; 2:40%-20%; 1: <20%)
3	Unregistered plastic units (Y/N)	5
4	Provision for Marking & Leveling implemented (Y/N)	5
B	Action Plan	50
8	Action Plan Provided (Y/N)	10
9	% of ULBs which have set-up of plastic waste management system as per Rule 6(2)?	10
10	% of processed waste	10
11	waste processed through recycling	3
	waste processed through co-processing	3
	waste processed through waste to energy	3
12	waste processed through Waste to oil	3
13	waste processed through road making	3
	% of ULB engaged with Producers/Brand Owners / Importers for PWM.	5(5: 100%-80%; 4: 80-60%; 3: 60-40%; 2:40%-20%; 1: <20%)
C	Compostable plastic	15
14	Manufacturing Units of compostable plastic exist (Y/N)	5
15	% generation of compostable plastic vs total generation of PW	10(0-30%:5, 30-70%:7, 70-100%:10)
D	Best Practices	10

S.No.	ITEMS	Marks distribution	A&N Islands	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar
A	total waste generation		492.34	39626.45	3755.9	58765	74263.69
	Population		614287.415	54975720.73	1380124.815	34199449.1	109461851
1	Per capita PW generation (gram/year)	10 5: <2000 TPA 4: 2000-5000 3: 5000-10000 TPA 2: 10000-150000 TPA 1: >15000 TPA	801.481502	720.7990995	2721.420525	1718.302533	678.4435791
	Marks obtained		5	5	4	5	5
2	% of ULB submitted the information	5 (5: 100%-80%; 4: 80-60%; 3: 60-40%; 2:40%-20%; 1: <20%)	100	100	GAP	46.875	100
	Marks obtained		5	5	0	3	5
3	Unregistered plastic units (Y/N)	Y-0 N-5	No	No	No	No	Yes
	Marks obtained		5	5	5	5	0
4	Provision of Marking & Labeling implemented (Y/N)	Y-5 N-0	Yes	Yes	Yes	Yes	Yes
	Marks obtained		5	5	5	5	5
B	Action Plan	50					
5	Action Plan Provided (Y/N)	10 10- Y(Complete) 5-Y(Partial) 0-Not submitted	Yes	No	No	Yes	No
	Marks obtained		5	0	0	10	0
6	% of ULBs which have set-up of plastic waste management as per Rule 6(2)	10	100	100	70	67	GAP
	Marks obtained		10	10	10	10	0
7	% of processed waste	10 100-90%-10 90-80%-9	17.00037779	0	3.993716553	16.14906832	10.3329098

615

S.No.	ITEMS	Marks distribution	A&N Islands	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar
	Marks obtained		2	0	1	2	2
8	waste processed through recycling (TPD)	3	GAP	GAP	0.24	GAP	21
	Marks obtained		0	0	3	0	3
9	waste processing through co-processing	3	GAP	GAP	GAP	26	GAP
	Marks obtained		0	0	0	3	0
10	waste processed through waste to energy/RDF	3	GAP	GAP	GAP	GAP	GAP
	Marks obtained		0	0	0	0	0
11	waste processed through waste to oil	3	GAP	GAP	GAP	GAP	GAP
	Marks obtained		0	0	0	0	0
12	waste processed through road making	3	0.22	GAP	0.16	GAP	GAP
	Marks obtained		3	0	3	0	0
13	% of ULB engaged with Producers/Brand Owners/Importers for PWM	5(5: 100%-80%; 4: 80-60%; 3: 60-40%; 2:40%-20%; 1: <20%)	There are no registered Producers/band owners/importers of plastic products.	GAP	0	0	GAP
	Marks obtained		5	0	0	0	0
C	Compostable Plastic	15					
14	Manufacturing Units of compostable plastic exist (Y/N)	5-Y 0-N	Yes	Yes	No	No	No
	Marks obtained		5	5	0	0	0
15	% generation of compostable plastic vs total generation of PW	10(0-30%:5, 30-70%:7, 70-100%:10)	3.046675062	0.79	0	0	0
	Marks obtained		5	5	0	0	0
D	Best Practices	10					

S.No.	ITEMS	Marks distribution	Chandigarh	Chhattisgarh	Daman	Delhi	Goa
A	total waste generation		13107.15	47450	4726	345000	29441
	Popullation		2220357.002	27353011.57	920010.7656	24490464.69	2224326.878
1	Per capita PW generation (gram/year)	10 5: <2000 TPA 4: 2000-5000 3: 5000-10000 TPA 2: 10000-150000 TPA 1: >15000 TPA	5903.172322	1734.726718	5136.896411	14087.11531	13235.91433
	Marks obtained		3	5	3	2	2
2	% of ULB submitted the information	5 (5: 100%-80%; 4: 80-60%; 3: 60-40%; 2:40%-20%; 1: <20%)	100	100	100	100	GAP
	Marks obtained		5	5	5	5	0
3	Unregistered plastic units (Y/N)	Y-0 N-5	No	No	GAP	No	No
	Marks obtained		5	5	0	5	5
4	Provision of Marking & Labeling implemented (Y/N)	Y-5 N-0	Yes	Yes	GAP	GAP	Yes
	Marks obtained		5	5	0	0	5
B	Action Plan	50					
5	Action Plan Provided (Y/N)	10 10- Y(Complete) 5-Y(Partial) 0-Not submitted	Yes	No	No	No	No
	Marks obtained		10	0	0	0	0
6	% of ULBs which have set-up of plastic waste management as per Rule 6(2)	10	100	GAP	GAP	GAP	GAP
	Marks obtained		10	0	0	0	0
7	% of processed waste	10 100-90%-10 90-80%-9	11.78097451	0	GAP	0.333333333	0

S.No.	ITEMS	Marks distribution	Chandigarh	Chhattisgarh	Daman	Delhi	Goa
	Marks obtained		2	0	0	1	0
8	waste processed through recycling (TPD)	3	GAP	GAP	GAP	3.1	GAP
	Marks obtained		0	0	0	3	0
9	waste processing through co-processing	3	GAP	GAP	GAP	GAP	GAP
	Marks obtained		0	0	0	0	0
10	waste processsd through waste to energy/RDF	3	4.23	GAP	GAP	GAP	GAP
	Marks obtained		3	0	0	0	0
11	waste processed though waste to oil	3	GAP	GAP	GAP	GAP	GAP
	Marks obtained		0	0	0	0	0
12	waste processed through road making	3	GAP	GAP	GAP	GAP	GAP
	Marks obtained		0	0	0	0	0
13	% of ULB engaged with Producers/Brand Owners/Importers for PWM	5(5: 100%-80%; 4: 80-60%; 3: 60-40%; 2:40%-20%; 1: <20%)	0	GAP	GAP	GAP	GAP
	Marks obtained		0	0	0	0	0
C	Compostable Plastic	15					
14	Manufacutring Units of compostable plastic exist (Y/N)	5-Y 0-N	No	Yes	Yes	Yes	Yes
	Marks obtained		0	5	5	5	5
15	% generation of compostable plastic vs total generation of PW	10(0-30%:5,30-70%:7, 70-100%:10)	0	2.3	1671	0.904927536	1.834176828
	Marks obtained		0	5	10	5	5
D	Best Practices	10					
	Marks obtained		7	8	4	7	8

S.No.	ITEMS	Marks distribution	Gujarat	Haryana	Himachal Pradesh	Jammu & Kashmir	Jharkhand
A	total waste generation		337693.96	185168	6206.78	51710.6	20263.45
	Population		65532000	29377807.41	7363372.503	12996912.68	35673382.18
1	Per capita PW generation (gram/year)	10 5: <2000 TPA 4: 2000-5000 3: 5000-10000 TPA 2: 10000-150000 TPA 1: >15000 TPA	5153.115425	6302.989104	842.9262539	3978.683345	568.027161
	Marks obtained		3	3	5	4	5
2	% of ULB submitted the information	5 (5: 100%-80%; 4: 80-60%; 3: 60-40%; 2:40%-20%; 1: <20%)	GAP	100	GAP	100	100
	Marks obtained		0	5	0	5	5
3	Unregistered plastic units (Y/N)	Y-0 N-5	No	No	No	No	No
	Marks obtained		5	5	5	5	5
4	Provision of Marking & Labeling implemented (Y/N)	Y-5 N-0	Yes	Yes	Yes	Yes	Yes
	Marks obtained		5	5	5	5	5
B	Action Plan	50					
5	Action Plan Provided (Y/N)	10 10- Y(Complete) 5-Y(Partial) 0-Not submitted	No	No	No	No	No
	Marks obtained		0	0	0	0	0
6	% of ULBs which have set-up of plastic waste management as per Rule 6(2)	10	GAP	GAP	GAP	GAP	GAP
	Marks obtained		0	0	0	0	0
7	% of processed waste	10 100-90%-10 90-80%-9	19.37257036	0.396936836	13.34991305	0	45.32891171

S.No.	ITEMS	Marks distribution	Gujarat	Haryana	Himachal Pradesh	Jammu & Kashmir	Jharkhand
	Marks obtained		2	1	2	0	5
8	waste processed through recycling (TPD)	3	GAP	GAP	2.3	GAP	25.16
	Marks obtained		0	0	3	0	3
9	waste processing through co-processing	3	179.23	GAP	GAP	GAP	GAP
	Marks obtained		3	0	0	0	0
10	waste processsd through waste to energy/RDF	3	GAP	GAP	GAP	GAP	GAP
	Marks obtained		0	0	0	0	0
11	waste processed though waste to oil	3	GAP	GAP	GAP	GAP	GAP
	Marks obtained		0	0	0	0	0
12	waste processed through road making	3	GAP	2.01	GAP	GAP	GAP
	Marks obtained		0	3	0	0	0
13	% of ULB engaged with Producers/Brand Owners/Importers for PWM	5(5: 100%-80%; 4: 80-60%; 3: 60-40%; 2:40%-20%; 1: <20%)	GAP	GAP	GAP	GAP	GAP
	Marks obtained		0	0	0	0	0
C	Compostable Plastic	15					
14	Manufacutring Units of compostable plastic exist (Y/N)	5-Y 0-N	Yes	Yes	Yes	Yes	No
	Marks obtained		5	5	5	5	0
15	% generation of compostable plastic vs total generation of PW	10(0-30%:5,30-70%:7, 70-100%:10)	5.44	1.35	17.07809847	0	0
	Marks obtained		5	5	5	0	0
D	Best Practices	10					
	Marks obtained		8	8	8	6	8

S.No.	ITEMS	Marks distribution	Karnataka	Kerala	Lakshadweep	Madhya Pradesh	Maharashtra
A	total waste generation		368080	120063.87	531	138483.58	311254
	Population		64887514.08	36579788.09	86011.90476	83180157.53	127111429
1	Per capita PW generation (gram/year)	10 5: <2000 TPA 4: 2000-5000 3: 5000-10000 TPA 2: 10000-150000 TPA 1: >15000 TPA	5672.58594	3282.246188	6173.564014	1664.863161	2448.67045
	Marks obtained		3	4	3	5	4
2	% of ULB submitted the information	5 (5: 100%-80%; 4: 80-60%; 3: 60-40%; 2:40%-20%; 1: <20%)	100	70.96774194	GAP	99.47780679	97.76674938
	Marks obtained		5	4	5	5	5
3	Unregistered plastic units (Y/N)	Y-0 N-5	No	Yes	No	No	No
	Marks obtained		5	0	5	5	5
4	Provision of Marking & Labeling implemented (Y/N)	Y-5 N-0	GAP	Yes	GAP	Yes	Yes
	Marks obtained		0	5	0	5	5
B	Action Plan	50					
5	Action Plan Provided (Y/N)	10 10- Y(Complete) 5-Y(Partial) 0-Not submitted	No	Yes (Ann. I-III)	No	No	Yes
	Marks obtained		0	5	0	0	10
6	% of ULBs which have set-up of plastic waste management as per Rule 6(2)	10	GAP	98.9	GAP	GAP	95
	Marks obtained		0	10	0	0	10
7	% of processed waste	10 100-90%-10 90-80%-9	3.912193002	62.64623779	0	85.9225693	62.1518117

S.No.	ITEMS	Marks distribution	Karnataka	Kerala	Lakshadweep	Madhya Pradesh	Maharashtra
	Marks obtained		1	7	0	9	7
8	waste processed through recycling (TPD)	3	29.5	200	GAP	173.7	81
	Marks obtained		3	3	0	3	3
9	waste processing through co-processing	3	9.86	3.56	GAP	151.19	70
	Marks obtained		3	3	0	3	3
10	waste processsd through waste to energy/RDF	3	GAP	GAP	GAP	GAP	342
	Marks obtained		0	0	0	0	3
11	waste processed though waste to oil	3	GAP	GAP	GAP	GAP	GAP
	Marks obtained		0	0	0	0	0
12	waste processed through road making	3	GAP	2.51	GAP	1.11	37
	Marks obtained		0	3	0	3	3
13	% of ULB engaged with Producers/Brand Owners/Importers for PWM	5(5: 100%-80%; 4: 80-60%; 3: 60-40%; 2:40%-20%; 1: <20%)	GAP	0	GAP	GAP	GAP
	Marks obtained		0	0	0	0	0
C	Compostable Plastic	15					
14	Manufacutring Units of compostable plastic exist (Y/N)	5-Y 0-N	Yes	Yes	No	Yes	Yes
	Marks obtained		5	5	0	5	5
15	% generation of compostable plastic vs total generation of PW	10(0-30%:5,30-70%:7, 70-100%:10)	2.79	1.767392639	0	0.350944134	13.5
	Marks obtained		5	5	0	5	5
D	Best Practices	10					
	Marks obtained		5	8	5	8	9

S.No.	ITEMS	Marks distribution	Manipur	Meghalaya	Mizoram	Nagaland	Odisha
A	total waste generation		10303	191.34	1514.51	4785.94	51267.9
	Popullation		2723233.82	2914254.895	1116091.241	2500215.566	44076240.37
1	Per capita PW generation (gram/year)	10 5: <2000 TPA 4: 2000-5000 3: 5000-10000 TPA 2: 10000-150000 TPA 1: >15000 TPA	3783.369583	65.65657668	1356.976871	1914.210944	1163.16409
	Marks obtained		4	5	5	5	5
2	% of ULB submitted the information	5 (5: 100%-80%; 4: 80-60%; 3: 60-40%; 2:40%-20%; 1: <20%)	100	100	73.91304348	100	100
	Marks obtained		5	5	4	5	5
3	Unregistered plastic units (Y/N)	Y-0 N-5	No	No	No	No	No
	Marks obtained		5	5	5	5	5
4	Provision of Marking & Labeling implemented (Y/N)	Y-5 N-0	Yes	Yes	Yes	Yes	No
	Marks obtained		5	5	5	5	0
B	Action Plan	50					
5	Action Plan Provided (Y/N)	10 10- Y(Complete) 5-Y(Partial) 0-Not submitted	Yes (Ann. I-III)	No	Yes	Yes	Yes
	Marks obtained		5	0	10	10	10
6	% of ULBs which have set-up of plastic waste management as per Rule 6(2)	10	81	GAP	0	17	100
	Marks obtained		10	0	0	10	10
7	% of processed waste	10 100-90%-10 90-80%-9	1.771328739	0	0.446216928	0.014626176	94.68518565

S.No.	ITEMS	Marks distribution	Manipur	Meghalaya	Mizoram	Nagaland	Odisha
	Marks obtained		1	0	1	1	10
8	waste processed through recycling (TPD)	3	0.5	GAP	0	GAP	121
	Marks obtained		3	0	0	0	3
9	waste processing through co-processing	3	GAP	GAP	0.02	GAP	12
	Marks obtained		0	0	3	0	3
10	waste processsed through waste to energy/RDF	3	GAP	GAP	GAP	GAP	GAP
	Marks obtained		0	0	0	0	0
11	waste processed though waste to oil	3	GAP	GAP	GAP	GAP	GAP
	Marks obtained		0	0	0	0	0
12	waste processed through road making	3	GAP	GAP	GAP	0	GAP
	Marks obtained		0	0	0	0	0
13	% of ULB engaged with Producers/Brand Owners/Importers for PWM	5(5: 100%-80%; 4: 80-60%; 3: 60-40%; 2:40%-20%; 1: <20%)	100	GAP	0	0	0
	Marks obtained		5	0	0	0	0
C	Compostable Plastic	15					
14	Manufacutring Units of compostable plastic exist (Y/N)	5-Y 0-N	No	No	No	No	Yes
	Marks obtained		0	0	0	0	5
15	% generation of compostable plastic vs total generation of PW	10(0-30%:5,30-70%:7, 70-100%:10)	0	0	0	0	0.071194646
	Marks obtained		0	0	0	0	5
D	Best Practices	10					
	Marks obtained		7	7	8	8	8

S.No.	ITEMS	Marks distribution	Puducherry	Punjab	Rajasthan	Sikkim	Tamil Nadu
A	total waste generation		12754	108332.06	66324.57	82.75	430107
	Popullation		2023092.077	30335817.63	77701430.62	679053.973	70891059.49
1	Per capita PW generation (gram/year)	10 5: <2000 TPA 4: 2000-5000 3: 5000-10000 TPA 2: 10000-150000 TPA 1: >15000 TPA	6304.211333	3571.094121	853.5823533	121.8607111	6067.15435
	Marks obtained		3	4	5	5	3
2	% of ULB submitted the information	5 (5: 100%-80%; 4: 80-60%; 3: 60-40%; 2:40%-20%; 1: <20%)	60	100	100	100	100
	Marks obtained		4	5	5	5	5
3	Unregistered plastic units (Y/N)	Y-0 N-5	No	Yes	No	No	No
	Marks obtained		5	0	5	5	5
4	Provision of Marking & Labeling implemented (Y/N)	Y-5 N-0	Yes	Yes	Yes	Yes	Yes
	Marks obtained		5	5	5	5	5
B	Action Plan	50					
5	Action Plan Provided (Y/N)	10 10- Y(Complete) 5-Y(Partial) 0-Not submitted	Yes	No	No	Yes	No
	Marks obtained		10	0	0	10	0
6	% of ULBs which have set-up of plastic waste management as per Rule 6(2)	10	100	GAP	GAP	GAP	GAP
	Marks obtained		10	0	0	0	0
7	% of processed waste	10 100-90%-10 90-80%-9	37.72933981	0	0.400816771	0	88.94461146

S.No.	ITEMS	Marks distribution	Puducherry	Punjab	Rajasthan	Sikkim	Tamil Nadu
	Marks obtained		4	0	1	0	9
8	waste processed through recycling (TPD)	3	10.6	GAP	GAP	GAP	809.5
	Marks obtained		3	0	0	0	3
9	waste processing through co-processing	3	2.58	GAP	0.73	GAP	195
	Marks obtained		3	0	3	0	3
10	waste processsd through waste to energy/RDF	3	GAP	GAP	GAP	GAP	GAP
	Marks obtained		0	0	0	0	0
11	waste processed though waste to oil	3	GAP	GAP	GAP	GAP	GAP
	Marks obtained		0	0	0	0	0
12	waste processed through road making	3	GAP	GAP	GAP	GAP	43.4
	Marks obtained		0	0	0	0	3
13	% of ULB engaged with Producers/Brand Owners/Importers for PWM	5(5: 100%-80%; 4: 80-60%; 3: 60-40%; 2:40%-20%; 1: <20%)	20	GAP	GAP	0	GAP
	Marks obtained		2	0	0	0	0
C	Compostable Plastic	15					
14	Manufacutring Units of compostable plastic exist (Y/N)	5-Y 0-N	Yes	Yes	Yes	No	Yes
	Marks obtained		5	5	5	0	5
15	% generation of compostable plastic vs total generation of PW	10(0-30%:5,30-70%:7, 70-100%:10)	19.60169359	5.53760355	4.05	0	7.18
	Marks obtained		5	5	5	0	5
D	Best Practices	10					
	Marks obtained		8	7	7	7	9

S.No.	ITEMS	Marks distribution	Telangana	Tripura	Uttarakhand	Uttar Pradesh	West Bengal
A	total waste generation		472675	61.65	375950	18647.75	417925
	Popullation		41111818.93	4020346.934	234744953.5	11249286.19	97396992.84
1	Per capita PW generation (gram/year)	10 5: <2000 TPA 4: 2000-5000 3: 5000-10000 TPA 2: 10000-150000 TPA 1: >15000 TPA	11497.30205	15.3344975	1601.525377	1657.682957	2144.626809
	Marks obtained		2	5	5	5	4
2	% of ULB submitted the information	5 (5: 100%-80%; 4: 80-60%; 3: 60-40%; 2:40%-20%; 1: <20%)	GAP	100	67	100	100
	Marks obtained		0	5	4	5	5
3	Unregistered plastic units (Y/N)	Y-0 N-5	No	No	Yes	No	No
	Marks obtained		5	5	0	5	5
4	Provision of Marking & Labeling implemented (Y/N)	Y-5 N-0	Yes	GAP	GAP	Yes	Yes
	Marks obtained		5	0	0	5	5
B	Action Plan	50					
5	Action Plan Provided (Y/N)	10 10- Y(Complete) 5-Y(Partial) 0-Not submitted	No	No	Yes	No	Yes
	Marks obtained		0	0	10	0	10
6	% of ULBs which have set-up of plastic waste management as per Rule 6(2)	10	GAP	100	0	GAP	2.5
	Marks obtained		0	10	0	0	10
7	% of processed waste	10 100-90%-10 90-80%-9	0	93.26845093	2.7	65.2	35.19

S.No.	ITEMS	Marks distribution	Telangana	Tripura	Uttarakhand	Uttar Pradesh	West Bengal
	Marks obtained		0	10	1	7	4
8	waste processed through recycling (TPD)	3	GAP	0.15	0	GAP	175.8
	Marks obtained		0	3	0	0	3
9	waste processing through co-processing	3	GAP	GAP	8.53	28	GAP
	Marks obtained		0	0	3	3	0
10	waste processsed through waste to energy/RDF	3	GAP	GAP	24.8	GAP	GAP
	Marks obtained		0	0	3	0	0
11	waste processed though waste to oil	3	GAP	GAP	GAP	GAP	GAP
	Marks obtained		0	0	0	0	0
12	waste processed through road making	3	GAP	0.01	GAP	GAP	GAP
	Marks obtained		0	3	0	0	0
13	% of ULB engaged with Producers/Brand Owners/Importers for PWM	5(5: 100%-80%; 4: 80-60%; 3: 60-40%; 2:40%-20%; 1: <20%)	GAP	0	1	GAP	0.02
	Marks obtained		0	0	1	0	1
C	Compostable Plastic	15					
14	Manufacutring Units of compostable plastic exist (Y/N)	5-Y 0-N	Yes	No	Yes	Yes	Yes
	Marks obtained		5	0	5	5	5
15	% generation of compostable plastic vs total generation of PW	10(0-30%:5,30-70%:7, 70-100%:10)	16.42	0	1.108392073	12.16232521	1.793372452
	Marks obtained		5	0	5	5	5
D	Best Practices	10					
	Marks obtained		8	7	8	8	6