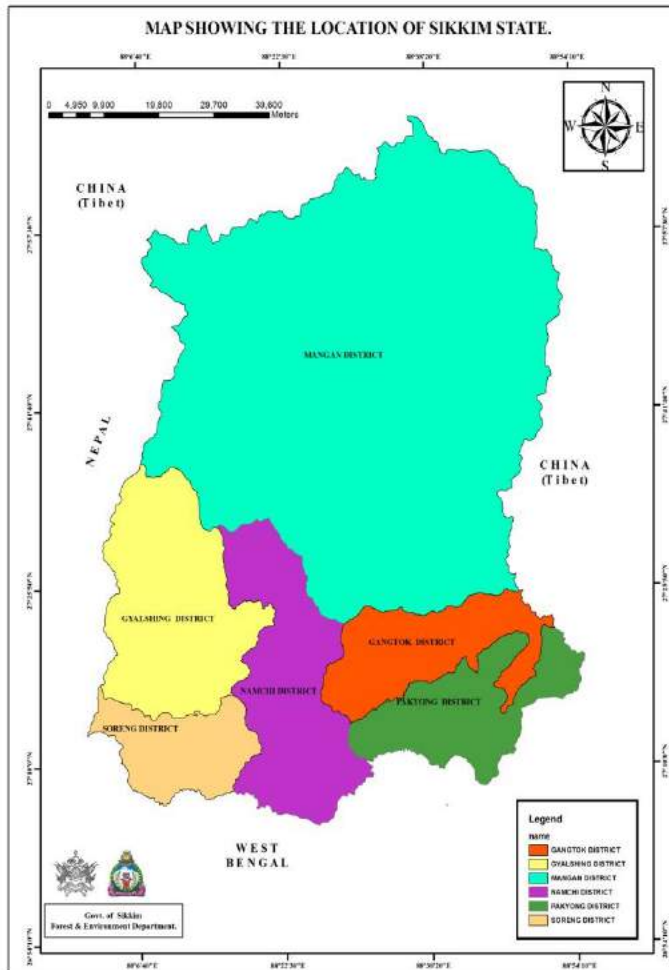


Status of compliance of Municipal Solid Waste Management Rules,2016 and Sewage Management.

Presentation on O.A. No. 606 of 2018
By
Sikkim

Sikkim



Total Population	6.10 lakh (2011 census)
Districts	06
Gram Panchayats	185
Blocks	33
Urban Local Bodies	07

Name of Seven Urban Local Bodies

- 1. Gangtok Municipal Corporation
- 2. Namchi Municipal Council
- 3. Rangpo Nagar Panchayat
- 4. Singtam Nagar Panchayat
- 5. Naya Bazar Jorethang Nagar Panchayat
- 6. Gyalshing Nagar Panchayat
- 7. Mangan Nagar Panchayat

Status of Sewage Management

- Estimated sewage generation

Urban = 18.79MLD

Rural= 28.89MLD

- Number of existing STPs= 09
- Existing treatment capacity = 22.50MLD
- Existing Sewerage Length= 135km

EXISTING STPs

Sl. No.	Town/Location	Capacity (MLD)
1.	Gangtok Zone I, Adampool	8.0
2.	Gangtok Zone I, Adampool	4.69
3.	Gangtok Zone I, Ranipool	1.27
4.	Gangtok Zone IV, Lower Sichey	3.90
5.	Singtam	0.66
6.	Melli	0.50
7.	Rangpo	1.40
8.	Gangtok Zone II, Lower Syari	1.60
9.	SMIT, Majhitar (private facility)	0.48

Status of Sewage Management

- STP under construction (3.25MLD at Tathangchen)= 01
- STP recently sanctioned (1.00 +0.75 + 1.01 MLD) = 03
(Gyalshing + Chungthang + Mangan)
- STP proposed = 04 (Soreng, Rabong, Namchi, Jorethang)
- The existing capacity is meeting the optimum waste water load at present.
- River water 100m down the STP discharge points are found to be compliant with the prescribed limit of Faecal coliform.

Status of Sewage Management

- 100 % of Rural Household have single pit septic tank to ensure untreated sewage is not discharged into the open.
- The STPs under that are currently undergoing construction as well as proposed STPs shall also cater to the rural areas.
- Households are also being encouraged to retrofit existing single pit septic tanks to twin pit model. About 2000 HH have already retrofitted to twin pit model.
- 3550 soak pits have been constructed in order to treat grey water in rural area as per land availability.

Scattered Households & Terrain in Rural Areas



ANALYSIS REPORT OF STP TREATED WATER

SMIT SIKKIM MANIPAL UNIVERSITY
SIKKIM MANIPAL INSTITUTE OF TECHNOLOGY

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Ph: +91-3592-246353; 2462230
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1. Test done for: Chief Engineer, SMIT
2. Name of the Work: Chemical Analysis of STP water Both Inlet and Outlet
3. Type of Test: Chemical Test of Sewage Water

Sl No	Characteristics	Inlet	Outlet	
01	pH	7.5	8.3	✓ 10
02	BOD (3 days @ 27°C) (mg/l)	24	7.8	✓ 10
03	TSS (mg/l)	45	22.5	✓ 100

Abhramil Adak
25.06.2022
Mr. Abhramil Adak
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Department of Civil Engineering
Date: 25.06.2022
SMIT

River water monitoring by SPCB-Sikkim below STP discharge point at Adampool



Status of Implementation of action plans submitted in compliance to the Hon'ble NGT orders in O.A. 673/2018 of the four polluted river stretches (Priority V) in the state of Sikkim- 2021

Sl. No.	Parameters	Range	River/ Station Code			
			Chungthang-Teesta (1801)	Manykhola (1803)	Ranichu (1806)	Rangit-Triveni (2034,2035,2036,2037,2038) Average
1.	BOD (3mg/l)	Min.	0.8	1.0	1.1	1.02
		Max.	2.4	2.5	2.5	2.34
2.	Faecal coliform (500MPN/100ml)	Min.	30	35	42	21
		Max.	55	75	95	68

Status of Implementation of action plans submitted in compliance to the Hon'ble NGT orders in O.A. 673/2018 of the four polluted river stretches in the state of Sikkim- January to September 2022

Sl. No.	Parameters	Range	River/Station Code			
			Chungthang -Teesta (1801)	Manykhola (1803)	Ranichu (1806)	Rangit-Triveni (2034,2035,2036,2037,2038) Average
1.	BOD (3mg/l)	Min.	0.9	1.0	1.2	1.02
		Max.	2.30	2.7	2.6	2.38
2.	Faecal coliform (500MPN/100ml)	Min.	15	40	45	23
		Max.	65	110	105	88

Status of Solid Waste Management

STATUS OF SOLID WASTE MANAGEMENT

	2019-2020	2021-2022
MSW Generated (TPD)	74.9	65.5
Wet Waste Processed (TPD)	35.31	37.60
Dry Waste sent for recycling (TPD)	26.19	25.64
MSW Landfill (TPD)	13.4	2.26

SOLID WASTE GENERATION ULBwise

URBAN LOCAL BODIES	WASTE GENERATION TPD
GANGTOK	46
NAMCHI	4.6
GYALSHING	1.9
NAYABAZAR-JORETHANG	5
MANGAN	1
RANGPO	4.5
SINGTAM	2.5
TOTAL	65.5

Solid Waste Management Facilities

	Existing	Remarks	Time frame
Waste Segregation Facility (MRF)	07	Augmentation under progress	06 months
Biodegradable waste composting/ bio-digester	04	-	-

Solid Waste Management Facilities

	Existing	Remarks	Timeframe
Non-biodegradable (Recycling)	-	Recycling facility not available in the State	-
Waste disposal (inert landfill)	01	One proposal under review by SEIAA	-

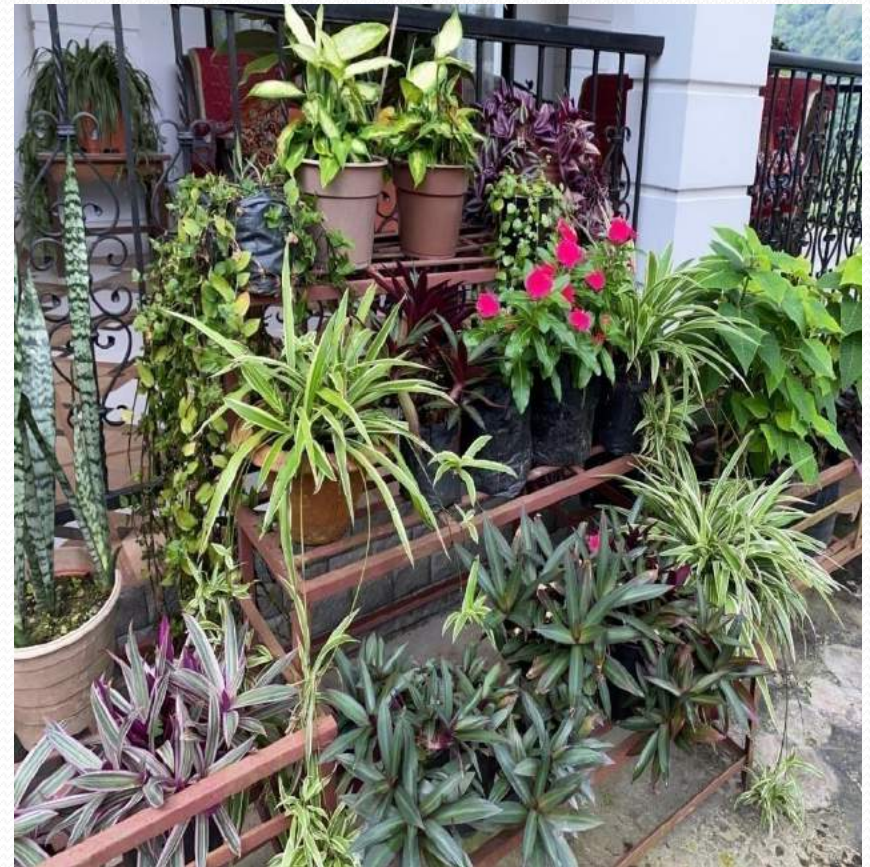
Solid Waste Management in Rural Areas

- Biodegradable waste used as feed for domestic animals/composting.
- Community compost pits have been constructed wherever feasible.
- Non-biodegradable waste collected in Resource Recovery Centres (RRCs) and further segregated for recycling. 26 RRCs have been constructed in 33 Blocks.
- At least one Plastic waste management unit for each Block planned and four are being installed.

Gangtok- Waste segregation and collection



Gangtok – Composting at HH level



Gangtok- Composting at Khangchendzonga shopping complex- biggest vegetable market



Recyclables are sold to Recyclers



Gangtok – Cleaning of streams (Jhoras)



Waste Initiatives in Gram Panchayats (GP)

1. Focus on waste reduction
2. Actualize door to door collection with segregation at source
3. Maximise resource recovery through RRC
4. Consistent awareness and education programmes
5. Targeted cleanup of waste hotspots with waste audits



Waste Initiatives in GP - Collection of segregated waste and Resource Recovery



Glimpses of SWM in different GPs

PET bottles collected for recycling



SUP Alternative



Glimpses of SWM in different GPs

Eco-friendly packaging



Reusable Sanitary napkin



Glimpses of SWM in different GPs- Waste to Wealth



IEC Activities on SWM



IEC Activities on SWM



Targeted clean-up of hotspots



Community based waste management by PSS- Tsomgo Lake



Legacy Waste

- In the previous review meeting, the state was asked to review the status of legacy waste in the state.
- About 10607 MT legacy waste has been estimated for the period of three years i.e. 2019-2020, 2020-2021 and 2021-2022 and accordingly, sufficient budgetary provision has been made available under SBM for remediation in Martam, Sipsu and Chadey.
- Further, an Expression of Interest (EoI) has also been invited to prepare DPR for formulation of robust future action plan to deal with the solid waste management.
- Proposals from competent firms for the same have been received by the UDD, GoS and the selection of the firm is at final stage.

IEC ACTIVITY FOCUSSING ON SUP ALTERNATIVE



WASTE MANAGEMENT INITIATIVES



- The Govt. of Sikkim vide Gazette notification no. 145 dated 8th of July 1998 amended the Sikkim Trade License and Miscellaneous Provisions Rule 1985 wherein the use of plastic wrappers or bags for purchase of any goods or materials was prohibited.
- Sikkim being an organic state , most of the bio-degradable waste are composted and used as organic manure at household level itself.

WASTE MANAGEMENT INITIATIVES

- The Govt. of Sikkim vide notification number 25/Home/2016 dated 19.05.2016 directed that the packaged drinking water bottles may not be used in any Govt. meetings/functions in order to reduce plastic waste.
- The Govt. of Sikkim vide notification number 26/Home/2016 dated 19.05.2016 announced the ban on sale and use of disposable items made from Styrofoam throughout the State keeping in view its various ill effects to environment and human health.

WASTE MANAGEMENT INITIATIVES

- The Govt. of Sikkim vide Gazette notification no. 344 dated 9th of August 2019 imposed ban on sale and use of plastic having less than 50micron thickness and SUP in all forms such as carry bags, pouches, cups, plates, spoons, straws and other use and throw items made of plastic.
- The Govt. of Sikkim vide notification number 135/GOS/F&ED/ PCCF-ACS dated 29.12.2021 imposes ban on use, manufacture, import and sale of plastic water bottles of capacity 2litres and below w.e.f. 1st January 2022 in the State. This notification is in supersession of notification number 25/Home/2016 dated 19.05.2016

SIKKIM- ORGANIC FARMING

- Agriculture is still the main stay of rural population of Sikkim and the policies and programmes on organic farming in tune with our natural endowments envisage in making Sikkim a Model Organic State.



ACTION PLAN BEING IMPLEMENTED

- Public hearing for proposal of waste processing facility for North District completed. Report has been prepared by SPCB-Sikkim and forwarded to SEIAA for review.
- 18 NGOs have been selected as outsource groups for collection Solid waste for Gangtok Municipal Corporation.
- Mass IEC activities like banners, quiz/essay competition, cleanliness drive, PSAs, advertisement through newspapers, radio jingles, animated videos, flash mob, etc. on municipal solid waste are being conducted at department and ULB level.

Action Plan being implemented

- Byelaws on Plastic waste Management for ULBs have been notified vide GoS Gazette No. 226 dated 07/06/2022
- Action Plan on Plastic Waste Management for ULBs have been notified vide GoS Gazette No. 227 dated 07/06/2022
- Market inspection & confiscation of banned SUPs is being carried out 4 days in a month in all ULBs
- Self Help groups, NGOs, club/association etc are being involved in IEC regarding plastic waste management & SUP alternatives.
- Grievance portal/ helpline number related to pollution complaints has been set up by SPCB

THANKYOU

