

BEFORE THE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH,  
NEW DELHI

ORIGINAL APPLICATION NO. 451/2019

IN THE MATTER OF:

Air Marshal Anil Chopra (Retd.)

(Report on environmental issues, waste management – Armed Forces, general issues of Cantonments and lists of major military stations and Cantonments of all the state)

INDEX

Sr. No.	Particulars	Page No.
1.	Report on compliance with Order dated 10.11.2020 passed in O.A. No. 451/2019 regarding Environmental Issues and Challenges.	1-5
2.	Annexure R-1 The detailed report on the steps taken by the Indian Navy	6-17
3.	Annexure R-2 Copy of the Minutes of the meeting dated 19.04.2021	18-19
4.	Annexure R-3 Copy of the Minutes of the meeting dated 6.5.2021	20-21
5.	Annexure R-4 Copy of the communication dated 5.3.2021	22
6.	Annexure R-5 Action taken report	23-26
7.	Annexure R-6 Copy of letter dated 25.02.2021	27-28
8.	Annexure R-7 Copy of the letter dated 26.04.2021	29-31
9.	Annexure R-8 Copy of letter dated 5.3.2021	32
10.	Annexure R-9 Copy of the communication dated 12.05.2021	33-34

THROUGH

Nidhi

Ms. NIDHI MOHAN PARASHAR  
Advocate for Ministry of Defence  
A-110, L.G.F, Defence Colony,  
New Delhi -110024  
nidhimohanparashar@gmail.com  
Mobile No. 9953899908

New Delhi  
24.05.2021

BEFORE THE NATIONAL GREEN TRIBUNAL  
PRINCIPAL BENCH,  
NEW DELHI

ORIGINAL APPLICATION NO. 451/2019

IN THE MATTER OF:

Air Marshal Anil Chopra (Retd.)

(Report on environmental issues, waste management – Armed Forces, general issues of Cantonments and lists of major military stations and Cantonments of all the state)

**Status report in terms of Order dated 10.11.2020 passed by this Hon'ble Court**

1. That this Hon'ble Tribunal vide its order dated 05.12.2019 to JS(Army) & JS(Lands) in O.A. No. 451/2019 Air Marshal Anil Chopra has sought status report on the following issues raised by Air Marshal Anil Chopra in his application dated 07.05.2019:-
  - (i) Environmental Issues and Waste Management vis-a-vis Armed Forces
  - (ii) Siachen Glacier Ecological Issues and
  - (iii) Cantonment and Military Stations
  
2. In response thereof, a detailed status report on the above issues was filed on 10.09.2020. The present status report is being filed in addition to the reports filed vide index dated 10.09.2020.
  
3. That vide order dated 10.11.2020, this Hon'ble Tribunal desired to have a suitable in-house Monitoring Mechanisms so that Environmental Issues can be adequately addressed. It was also desired that the persons designated as responsible in this regard have a meeting with Expert bodies like the Central Pollution Control Board (CPCB) so that best practises are reviewed and evolved with their help. The designated officers at different levels can also initiate awareness programmes on environmental issues and challenges which may be an ongoing process.
  
4. In this regard, it is submitted that a suitable mechanism was existing in the Indian Army for monitoring the ecological issues at each station, Command HQ and at Integrated Headquarter in Land Works & Environment Directorate. The monitoring mechanism at Military Station/ Military Cantonment is as mentioned below:-

**Mil Station**

**Mil Cantt**

Station Cdr

President Cantonment Board

Adm Comdt  
SHO

Adm Comdt  
SHO

5. The instructions to all Mil Stations/ Cantonments have been issued and all nominated stations authorities are interacting and organizing joint meetings with expert bodies at all levels to seek inputs about best practices and its implementation. Further, the Indian Army has initiated a 'Best Green Station' competition wherein the best "Green Station" based on various environment related parameters is acknowledged during the Army Commander Conference by the COAS.
6. As regards the Indian Navy, the Indian Navy has adopted Indian Navy Environment Conservation Roadmap in 2014. In this regard, Nodal agencies have already been designated. The detailed report on the steps taken by the Indian Navy are being attached as **Annexure R-1**.
7. That in compliance with the order dated 10.11.2020 passed by this Hon'ble Court, an Apex Monitoring Committee under Department of Defence was constituted to undertake the monitoring mechanism in respect of Cantonment Boards, Coast Guard and Armed Forces Medical Services with the following composition:
  - (i) Additional Secretary (NSV), Ministry of Defence – Chairperson
  - (ii) Director General, Defence Estates – Member
  - (iii) Director General, Coast Guard – Member
  - (iv) Director General, Armed Forces Medical Services – Member
  - (v) Rep. of Central Pollution Control Board (CPCB) – Member
  - (vi) Director (Environmental Awareness), The Energy and Resources Institute (TERI) – Member
  - (vii) Joint Secretary (Armed Forces), Ministry of Defence – Member
  - (viii) Joint Secretary (Lands), Ministry of Defence – Member Secretary
8. The Terms of Reference (ToRs) of the Apex Monitoring Committee are as under:
  - (i) To facilitate policy development by plugging the gaps in existing mechanism for increased sustainability and ecological well-being.
  - (ii) To examine the reports of monitoring committee at field levels in respective organisations and render advice and issue guidelines for optimal utilisation of resources aimed towards environmental protection, waste management and 'Green initiatives'.

- (iii) To examine the legal framework applicable to the organisations and suggest mechanism to improve upon the exiting provisions in the interest of public health and environment.
- (iv) To approve annual plans / programmes of the organisations for conducting environment awareness programmes and monitor their impact and outcomes.

9. DGDE, Coast Guard & Armed Forces Medical Services were requested to finalise a monitoring mechanism at various levels within their organisations and furnish the same to this Ministry.

10. Apex Monitoring Committee conducted two meetings dated 19.04.2021 and 06.05.2021 to review the action taken by DGDE, ICG and DG AFMS in creating monitoring mechanism at all levels in their organisations in compliance with order dated 10.11.2020 and measures to be put in place as per terms of references of the Apex Monitoring Committee. Representatives of TERI & CPCB have also participated in the said meetings. Copy of the Minutes of the meeting are annexed as **Annexure R-2** and **Annexure R-3** respectively. DGDE, ICG and DG AFMS were directed to submit their detailed ATR including monitoring mechanism, targets and timelines based on fixed parameters as per their domain in compliance of NGT order to the Ministry. Valuable inputs on management of different wastes and environmental protection received from CPCB and TERI were also shared with these organizations for their effective implementation.

11. In this context, DGDE vide their ID dated 05.03.2021 has intimated that instructions have been issued to Directorates, DE to take necessary action as per NGT order dated 10.11.2020. Further DGDE vide ID dated 20.05.2021 has further submitted that as far as **Monitoring mechanism** is concerned, the implementation of directions of this Hon'ble Tribunal is carried out by the CEOs of the 62 Cantonment Boards. The implementation is monitored by a committee headed by a senior officers i.e. Director, Defence Estates, Command, for all commands except Eastern Command, where implementation is monitored by a Joint Director. These officers regularly hold meeting with the CEOs concerned and provide them guidance. At the level of Directorate General, Defence Estates, implementation is monitored by Additional DG (Cantonments) who functions under the supervision of DG. Implementation is monitored through regular review meetings and seeking reports from the CEOs. Copy of the communicated dated 5.3.2021 is annexed as **Annexure R-4**. Action taken report in this regard is annexed as **Annexure R-5**.

12. Indian Coast Guard (ICG) Headquarters vide their ID dated 25.02.2021 has informed that they have initiated such mechanisms for protection of marine

environment not only at sea but on ICG ships and shore establishments too. They have already initiated a policy to its Regions and a mechanism is underway for solid waste management in accordance with the guidelines issued by Ministry of Environment, Forests and Climate Change (MoEFCC), Solid Waste Management (SWM) Rules, 2016. The waste management organisation and practises have been laid down in the policy letter alongwith the mandate of such organisation. It includes formation of core group, waste management orders and conduct of progress review meetings. Copy of letter dated 25.02.2021 is annexed as **Annexure R-6**.

13. Further, ICG vide ID dated 26.04.2021 has submitted their response towards the environmental protection, waste management and green initiatives with respect to mandate, interface with coastal communities and waste management in ICG. Copy of the letter dated 26.04.2021 is annexed as **Annexure R-7**.

14. Armed Forces Medical Services (AFMS/Coord) vide their ID dated 05.03.2021 submitted that Bio-Medical Waste (BMW) Management in the Armed Forces is laid down under guidelines issued vide DGAFMS letter dated 10.12.2016 and as amended from time to time. DGAFMS is the prescribed authority for enforcement of provisions of BWM rules in Armed Forces. BWM management is controlled by an Advisory Committee. Similarly, there are nodal officers detailed at Service HQs and Command HQs. Copy of letter dated 5.3.2021 is annexed as **Annexure R-8**.

15. Further, BMW Management Committee is formulated at all Health Care echelons to oversee and monitor implementation of BMW rules and regulations. AFMS vide their ID dated 12.05.2021 has further submitted their feedback / inputs on (i) promulgation of time-frame for action by Hospitals under AFMS and (ii) Check list for inspecting officers while examining Health Care Establishments (HCEs) for BMW Management. Copy of the communication dated 12.05.2021 is annexed as **Annexure R-9**.

THROUGH

Nidhi

Ms. NIDHI MOHAN PARASHAR  
Advocate for Ministry of Defence  
A-110, L.G.F, Defence Colony,  
New Delhi -110024  
nidhimohanparashar@gmail.com  
Mobile No. 9953899908

New Delhi  
24.05.2021

## Annexure R-1

### REPORT ON ENVIRONMENT ISSUES AND WASTE MANAGEMENT IN IN LAW NGT ORDER DATED 10 NOV 20

#### Background.

1. NGT vide its order dated 10 Nov 20 has recommended the constitution of an in-house Monitoring Mechanism to regulate and keep a track of environmental issues in the Armed Forces and a report has been sought on the progress by Apr 21. A report on the Green initiatives and measures instituted for implementation pan Navy along are enumerated in the succeeding paragraphs.

#### Indian Navy Environment Conservation Roadmap (INECR).

2 **Introduction.** Green Initiatives for IN were initially identified as a Navy Thrust Area in 2014. An Indian Navy Environment Conservation Roadmap (INECR) was promulgated with specific action plans covering the entire gamut of IN-operations, maintenance, administration and infrastructure/ community living with demarcation of responsibilities for directorates at IHQ/MoD(N). The Roadmap covers all the Goals under the following heads:-

- (a) **Operations.** Green fuels, MARPOL Compliance, Alternative energy and power.
- (b) **Maintenance.** Recycling, Water treatment, Zero carbon footprint, Energy conservation and efficiency.
- (c) **Infrastructure/ Community Living.** Renewable energy, Green Buildings, Waste recycling/ management, Water supply and distribution, Alternative energy and power, Environmental remediation, Zero carbon footprint.
- (d) **Administration.** Carbon credits, Energy Conservation and efficiency, Green fuels.

3 Towards ensuring a definite methodology for implementation, Short Term, Mid-Term and Long Term Goals were formulated and promulgated in Jun 14 to all Commands under the following Key Enablers:-

- (a) Green Fuels and MARPOL Compliance.
- (b) Alternative Energy/ Power generation.
- (c) Re-cycling and reuse of materials.

- (d) Water management.
- (e) Waste management.
- (f) Environmental remediation.
- (g) Energy conservation/ efficiency.

4. Significant efforts towards realization of the set targets/ goals as per INECR have yielded fruitful results across Commands in the past 7 years. Successful completion of trials of Biodiesel on FICs/ Barges/MT vehicles, 98% migration to LED (Light-emitting diode) lighting, induction of 752 battery operated vehicles, fitment of SCADA (Supervisory control and data acquisition) systems for energy management at Yards, installation of 20 Bio gas plants at Yards/units, 525 Solar heaters/ cookers, 984 turbo ventilators, 77 capacitor banks for power factor correction across units have not only resulted in power, as well as, cost savings but are a pointer towards enhanced focus and consciousness towards energy savings. Apart from power savings, substantial environment remediation has also been progressed, notable achievements being plantation of 4,92,055 saplings, coastal cleanship drives, steps towards Mangrove restoration, concept of creating 'Miyawaki' forests, re-use of RO plant waste water, use of drip irrigation, enhanced use of composters and waste disposal plants etc.

5. **Monitoring Mechanisms within IN.** *IN already has an in-house Monitoring Mechanism* to address issues pertaining to clean energy, zero carbon footprint, energy conservation, waste management etc., in accordance with INECR. Specific Command wise plans are prepared as per *INECR* and a six monthly report is forwarded to IHQ MoD(N) for monitoring progress. Composition of Navy Monitoring Mechanism for environmental issues are:-

- (a) Naval Headquarters, Directorate of Marine Engineering (nodal agency).
- (b) Designated Environment officers at Command level:-
  - (i) Western Naval Command (HQWNC, Mumbai).
  - (ii) Eastern Naval Command (HQENC, Visakhapatnam).
  - (iii) Southern Naval Command (HQSNC, Kochi)
  - (iv) Andaman and Nicobar Command (HQANC/ Port Blair).

### **Major Environment Conservation initiatives.**

6. **Waste Management.** The initiatives taken in line with the Prime Minister's '**Swachh Bharat Abhiyaan**' across various Naval establishments have started yielding tangible results. 5600 kgs of manure, 450 kgs biogas (Methane), which

is being used in lieu of LPG, is being generated every month from bio-degradable waste and Biogas plants using Organic Waste Converters. Equipment such as Sewage Treatment plants (STPs), incinerators, Oily Water Separator (OWS) have been setup onboard ships towards ensuring waste treatment and MARPOL (The International Convention for the Prevention of Pollution from Ships) compliance. Apart from ships, measures have also been instituted at yards, such as setting up of separate hazardous waste disposal facility, waste segregation at source including bio-medical waste, vermicomposting pits, installation of incinerators, removal of scrap waste and flotsam in harbour waters, incorporation of effluent treatment plants etc. In addition, the Naval repair yards at Mumbai and Vizag are certified under ISO 14001:2015 (Environment Management System) as well as adhering to the respective State pollution control norms. A **Pollution control response team** has also been established for controlling harbour pollution in Naval yards. Some of the recent additions at Naval repair yards are:-

- (a) HQENC has installed a Portable Bio Gas plant of 1500 Ltrs capacity for better disposal of Galley Waste. The gas thus generated through the bio plant enables a single burner gas stove for 2-2.5 hrs/day. Further, the by-product of the bio gas plant is enriched organic (digestate), which is utilised as manure for the plants in kitchen gardens of the unit. The facility is an effective way of disposing galley waste in very hygienic way.
- (b) Impetus is also being afforded to ensure that pollution is kept minimal in our harbours and seas. **Effluent Treatment Plants** to neutralize toxic wastes prior their discharge, use of oil skimmers, flotsam collection/ disposal through Sullage Barges and induction of equipment which enable compliance to IMO norms is being ensured for the purpose.
- (c) Installation of **Energy Recovery Plant** has been undertaken at Naval Dockyard, Vishakhapatnam using pyrolysis technique. The plant will convert 10 tons of unsegregated municipal solid waste and hazardous bio-medical waste using pyrolysis technology into Water (40 %), black carbon, furnace oil and syngas.
- (d) Naval Materials Research Laboratory (NMRL) has developed an accelerated **Bioremediation technology** based 'BESAFE' Powder to combat oil spillage/ discharge in harbour waters. It consists of a consortium of micro-organisms known as 'Biomix' along with its feedstock 'Nutrimix'. The mixture needs to be sprayed evenly onto the spillage area by using a spray pump which degrades the oil in harbour water over 24 hours duration. This product has been put into use at Naval Harbours in Mumbai and vizag.



Bio- Composter at  
INS Venduruthy, Kochi



Plastic processing Machine  
at INS Venduruthy, Kochi



Portable Biogas plant  
at INS Eksila, Vizag



Waste to Compost Converter Machine  
at INHS Asvini. Mumbai

Fig 1. Waste Management Initiative

7. Energy Conservation. The shore establishments/ industrial units have incorporated various measures towards energy conservation/ efficiency such as use of Acrylic sheets, turbo ventilators on roof tops, installation of SCADA system in Main receiving station for monitoring electricity consumption, Use of LED lights, use of 5-star rated equipment, battery operated vehicles etc. **Savings over last 02 years is 1013.4MW.** Few notable steps undertaken by *IN* towards Energy conservation is as follows:-

- (a) Green Rating for Integrated Habitat Assessment (GRIHA) Norms. The GRIHA norms were conceptualised to make buildings and structures more environment friendly. All Naval Shore Establishments are adhering to GRIHA norms, whilst developing planning parameters of new projects.
- (b) Fitment of Sky-Pipes. In order to reduce the power consumption in shopfloors and harness the solar energy, Naval Dockyards and Shore establishments have taken up a case for fitment of Sky-Pipes. The system not

only collects/ concentrates the sunlight but also reduces the temperature by not allowing direct sunlight into the shop floors.

(c) **SCADA System for Energy Monitoring.** Towards effective energy management, Naval Dockyards has commissioned central monitoring facility, which brings out instantaneous energy use. This system is primarily aimed at monitoring various high power equipment and additionally aids in trending of energy consumption patterns for effective energy management.

(d) **Solar Power Fencing.** Few units have in Western Naval Command has Installed solar based Power Fencing and Perimeter Lighting which is a major step towards energy conservation.

(e) **Energy Audit.** In order to ensure energy efficiency with tangible cost benefits and reduction in carbon footprint, **energy audit and carbon footprint analysis** of various yards have been undertaken by an external auditor. The recommendations of the energy audits have been pursued proactively and complied with in consultation with Military Engineering Service (MES).



**GRIHA Compliant Building  
at INS Venduruthy, Kochi**



**Battery Operated vehicle  
at INHS Asvini, Mumbai**



**Sky Pipes for Day Light Harvesting  
at INS Shivaji, Lonavla**

8. **Renewable Energy Generation using Solar Power.** In accordance with the National Mission of *Mega Watt to Giga Watt* to achieve the target of 100 GW Solar Photovoltaic (SPV) installation by 2022, the contributions of *IN* is significant. The SPV projects were sanctioned as a part of Jawaharlal Nehru Solar Mission (JNNSM) of Ministry of New and Renewable Energy (MNRE) and is executed through local unit authorities. *IN* was allotted a target of 51 MW capacity, and presently 10 MW has been commissioned at INS Valsura (2 MW-Jamnagar, Gujarat), INS Shivaji (2 MW-Lonavala, Maharashtra), INS Ezhimala (3 MW-Kannur, Kerala), INS Chilka (1 MW-Barkul, Odisha), NAD (A) (2-MW-Mumbai, Maharashtra). An additional 14 MW capacity is at tendering/ execution stages at various Naval stations.



**Power generation using Solar Energy**

**Fig 2. Renewable Energy Initiative**

9. **Water Conservation.** Various initiatives in place for conservation and reuse of water in Navy are as follows:-

(a) **SCADA Monitoring System.** To ensure water conservation and prevent overflows etc, the large overhead tanks and water sump of various Naval units are provisioned with SCADA system which controls the water flow, gate valves and gather real time data to track, monitor/ control the entire water distribution system from a central location. The system has been integrated to provide improved capabilities and functionalities so as to ensure that once the tank water levels have reached to the predefined set value the pumps/ valves are automatically controlled through the central unit and water over flow and manual intervention are limited. In addition, a core team has been nominated for regular monitoring of water / electrical wastage if any, and to ensure necessary remedial action through Military Engineering Service (MES) / in-House efforts.

(b) **Sewage Water Recycle Plant.** Treatment plants of various capacities are installed in almost all Shore Establishments for treatment of sewage water (based on bio-filtration techniques) and the recycled water is used effectively for arboriculture, gardening of community and station gardens.

(c) **Water Harvesting.** The Naval yards are equipped with rain water harvesting system. The entire arrangements are built in-house by the cumulative efforts of defence employees. The harvested water is used for the purpose of gardening and washroom areas.

(d) **Regeneration of Water.** Naval Dockyard, Vizag has undertaken innovative steps to generate water from existing Refrigeration & Air Condition systems using carbon filters, micro filters and UV lamps using condensation product (which gets drained into waste). The prototype model generates 300 ltrs. of pure water daily from 4 ton condensing unit. The model was also selected for display at Innovation Pavilion at New Delhi during Navy Day.

(e) **Water ATM.** Automated Fresh Water systems (Water ATMs) installed at Naval Dockyard, Mumbai disburse water to Ships as per their convenience, without pressure loss and helps in reducing the water wastage.

#### 10. **Environment Protection Initiatives.**

(a) **Green Buildings.** Eastern Naval Command has developed a Green building at INS Eksila. The building is resource efficient, made up of **ash/mud based bricks**, improvised locations of ventilation openings, smart appliances, LED lights etc. and complies with GRIHA 3 star ratings.



**Green Building at Vizag**

(b) **Hiring of CNG Vehicles in A1 cities.** *Hiring of CNG vehicles* has commenced at Delhi and Mumbai and is being incorporated in future rate contracts. In addition to above, directives have been issued by Headquarters to undertake replacement of buses against condemnation with CNG powered buses.

(c) **Biodiesel Trials.** Time-bound trials of 820 blend of *Jatropha based* biodiesel developed by DRDO have been undertaken on MT vehicles, DG sets onboard Fuel Barge, shore generator and FICs. IOCL is engaged in the preparation of a logistics chart for the supply of Biodiesel to *IN*.

(d) **Afforestation.** Units have carried out development of green patches - an area demarcated for plantation, given the area restriction in naval premises. In addition, green plantation drives are carried out from time to time to promote afforestation, increasing tree cover and environment conservation actions. Considering the positive impact of afforestation, over 14000 saplings have been planted over the course of the preceding year. These are being nurtured by Naval personnel and mitigate an estimated 284 tonnes of CO<sub>2</sub>. Few outstanding steps by Southern Naval Command is as follows:-

(i) In collaboration with the State Forest Department, HQSNC has undertaken plantations of 3500 saplings and 100 % survivability is being ensured.

(ii) The command has taken the maiden initiative towards restoration and conservation of mangroves. A special mangrove plantation drive in coordination with Forest Department was conducted on 20 Sep 20 to celebrate **World River Day** and a total of 300 mangrove saplings reared in special bamboo caskets were planted.

(e) **Plastic Waste Management.** As part of environment conservation and healthy practices, various naval units such as Naval Dockyards, Training Establishments, and few other Shore Establishments have already been declared as **"No Plastic Zones"**. Unit level guidelines on waste management are already in vogue towards disposal of *plastic wastes* i.a.w. the extant rules. A policy letter was issued on 22 May 17, **which has banned sale/ use of plastic bags and burning of plastic in all Naval units and residential/ industrial areas. Further, it has been directed to manage plastic waste (i.e. collection, segregation and disposal) i.a.w. Plastic Waste Management Rules 2016.**

(f) **Reduction in Carbon Footprint.** Engine Exploitation Factors (EEF) has been promulgated for all *IN* ships and feedback in the form of returns are periodically received at IHQ MoD(N). **Adherence to EEF ensures optimal exploitation of engines thereby reducing the overall fuel consumption and cost savings. Daily savings of 594 T of fuel has been achieved over the last two years.** Concerted efforts are being undertaken to reduce energy use (both electricity and fuel). Use of BEE (Bureau of Energy Efficiency) star rated equipment, migration to LED lighting (both ships and ashore), use of natural lighting and ventilation in industrial premises and power factor management to curb losses are the measures adopted to conserve electricity use. In addition, energy audit of yards are also being progressively undertaken to establish means of energy savings.

### **Personnel Training in Green Technology.**

11. With a view to broaden the horizon on Green Technologies and undertake implementation of the same in Naval units, extensive interaction has been undertaken with Govt R&D institutes, IITs and associated incubation/ innovation centers, startups in clean technologies and reputed firms in this field. As per the capabilities, these institutions were visited and are planned to be made as the nodal centers of excellence for further study and adoption of suitable Green Technologies. Accordingly, Memorandum of Understanding (MoUs) for the following courses were initiated:-

(a) **M.Tech. Course.** In order to provide a detailed exposure in the field of renewable energy, IN Officers have also been undergoing post-graduation course in renewable energy (M.Tech. in Energy Science and Engineering, IIT Bombay). During the course, the officers are trained regarding various topics pertaining to renewable resources, waste management, energy management etc.

(b) **Renewable Energy Course.** Capacity building through training of personnel has been identified as an important aspect towards promoting usage of renewable energy within IN as well as achieve INECR objectives. Towards this, a five day course on 'Renewable Energy Technology Expertise and Maintenance' is being organised biannually at National Institute of Solar Energy (NISE), Gurgaon. During the course, the participating officers are taken to various project locations at NISE and TERI (The Energy Resource Institute) to familiarize the officers with various initiatives being undertaken in renewable domain.

### **CNS Trophy**

12. With an aim to encourage the efforts aimed at energy efficiency and environment protection and consolidation of our unified approach towards achieving the common goal, a "CNS Rolling Trophy" has been instituted in 2014. The trophy is awarded every year on Navy Day, in industrial and non- industrial categories, to the units which excel in adoption of guidelines promulgated by INECR. The best practices being adopted by various establishment are thereafter forwarded to other units/ establishments for pan Navy implementation. For the year 2020, Naval Dockyard (Mumbai) and INS Venduruthy were adjudged as winners in industrial and non-industrial categories respectively. The units has undertaken various notable initiatives, a summary of which is as follows:-

(a) **Naval Dockyard (Mumbai) – Industrial Category**

(i) The unit has achieved 6.6 % reduction in the total energy consumption from last year by using LED fixtures at shop floors, docks and in street lights.

(ii) In Duncan dock, a new source of fresh water was identified at the dock level. In order to utilize this water, the unit undertook a project of lifting the water from the dock to the jetty and utilize it as industrial water for meeting yard requirements. This initiative is noteworthy.

(iii) Installation of an electric incinerator which uses electric coil to burn the paper instead of coal. Additionally, a 2TPD Black Hole incinerator has been procured by the yard which can incinerate all kind of garbage except ceramic and metal waste.

(iv) The unit has achieved 100 percent GRIHA-3 compliance for new projects. The initiatives for green building concepts being incorporated includes installation of high star rating ACs, Water Coolers, Fridges, LED lights, False ceiling in all ACs spaces, smart office lightings etc.

(v) Towards reduction of vehicular pollution, the unit has procured 14 e- carts, 04 e-trolleys, 33 battery operated forklifts.

(b) **INS Venduruthy - Non Industrial Category**

(i) The unit has done commendable contribution towards rejuvenation of Venduruthy channel including numerous cleanship drives along with dredging. The channel is now ready to re-commence watermanship activities after a gap of over 30 years.

(ii) Unit has taken up an unique initiative of converting all Bio-degradable wastes into organic fertilizers. A milestone of 100 % organic fertilizers for maintenance of green cover in the base has been achieved.

(iii) MoU with Indian Medical Association Goes Eco Friendly (IMAGE) for smooth handling of huge quantities of Bio-medical waste.

(iv) Towards reduction of vehicular pollution, the unit has procured 02 e-trolleys and 04 e-scooters for the staff. Also 'No vehicle day' is promulgated on every Thursday in the unit.

(v) 100% replacement of all Hoardings and banners with cloth banners.

### Policy Directives.

13. Various policies as listed below have been promulgated for pan Navy application, in order to have a unified approach towards achieving the targets of INECR:-

- (a) Policy on Plastic Waste Management in Naval units was promulgated in Sep19
- (b) Policy on Efficient Usage of STP and Shipboard Incinerators on *IN* ships was promulgated in Sep 18.
- (c) Directive to reduce consumption of single use plastics was published in Sep 18.
- (d) Policy on Hazardous/ other waste and plastic waste management in Naval units was released in May 17).
- (e) Policy on Fuel Conservation Measures onboard *IN* ships was promulgated in Aug 15).

### Awards/ Achievements in Past Three Years.

14. Undermentioned are few awards which Naval units have been bestowed with considering their contribution towards environmental protection measures, energy conservation, reduction of carbon footprint, legal compliance, environmental governance, training, monitoring of environmental performance and clean technology.

- (a) The **Golden Peacock Environment Management Award** (GPEMA) is one of the most esteemed award in the field of environment management. **HQSNC has been awarded with GPEMA for the year 2020.** This receipt of the prestigious National award is a milestone achievement and a reflective of commitment and concerted effort towards energy conservation and protection of environment.
- (b) INS Venduruthy (HQSNC) has been bestowed with **Vanamitra award for Ernakulum district in 2021** for their contribution in biodiversity conservation, afforestation drives, etc.
- (c) HQANC has been recognized with the National award for **Swatchta Hi Sewa in 2018** for the outstanding steps in the field of environment conservation and waste management.

### New Initiatives in Environmental Domain.

15. During scrutinization of *INECR* reports of various units, some initiatives undertaken by the individual units were examined at this Directorate and found suitable for implementation by other units of *IN*. Various initiatives recommended for implementation are water conservation, solar battery operated vehicles, segregated waste collection, automation of jetty firemain, re-use of RO plant reject water etc. Directives have been issued from time-to-time vide IHQ MoD(N)/ DME letters to ensure Pan Navy Implementation. Additionally, few Environmental research concepts in progress at Naval Headquarters are:-

(a) **Use of Hydrogen/ Hydrogen road map.** Hydrogen as an alternate fuel is seen as a promising energy carrier and a clean alternative for the energy sector challenges related with fossil fuels. The fuel, however, is at an early stage of penetration in the energy sector and, presently, broad based R&D projects on the different aspects of a 'hydrogen economy' are being progressed worldwide as well as by the Indian industry and research/ academic community. Based on this, a roadmap for future use of hydrogen has been prepared. Additionally, a synergic R&D project is being progressed by INS Shivaji, Lonavala with IIT Mumbai and the OEM M/s IHAT Technologies Canada. The project utilizes hydrogen generated by a hydrolysis 'add-on' unit and injects it into the engine air intake. This is an ideal example of the 'consume as you produce' mode of hydrogen generation.

(b) **Conservation of Mangroves Forest.** The Navy, as a self-driven and environmentally responsible force, has committed towards protection of our coastal regions and in-turn mangrove forest areas. Naval units which are co-located/ near mangrove forests are taking suitable environment-friendly steps towards conservation and restoration of Mangrove cover. In addition to this, a policy letter is under formulation at Headquarters towards Mangrove resuscitation.



**Mangrove Plantation Drive at  
INS Venduruthy Channel, Kochi**



**Coastal Cleanship Drives  
INHS ASvini, Mumbai**

**Minutes of the meeting dated 19.04.2021 of Apex Monitoring Committee on Environmental Issues and Challenges in compliance of NGT Order dated 10.11.2020 in O.A. No. 451/2019 Air Marshal Anil Chopra.**

1. A meeting of the Apex Monitoring Committee on Environmental Issues and Challenges in compliance of NGT Order dated 10.11.2020 in O.A. No. 451/2019 titled Air Marshal Anil Chopra was held under the chairpersonship of Additional Secretary (NSV) on 19.04.2021 in Room No. 111, South Block. Representatives of DGDE, DG AFMS & DG Coast Guard attended the meeting through VC.
2. At the outset, JS(E) briefed about the three issues i.e. (i) Environmental Issues and Waste Management vis-a-vis Armed Forces (ii) Siachen Glacier Ecological Issues and (iii) Cantonment and Military Stations, which were part of NGT order. It is informed that the issue of Cantonments & Military Stations is being dealt by D/o Defence and the other issues were dealt by D/o Military Affairs at their end. He further informed about the need of creating monitoring mechanism at all levels in all organisations in compliance of NGT order and measures to be put in place as per terms of references of the Apex Monitoring Committee. Subsequently, DGDE, DG AFMS and DG Coast Guard were requested to present action taken report in their organisation.
3. Addl.DG(Cantts), DGDE has intimated about the measures taken so far by constituting monitoring committees at the level of Commands and Cantonment Boards and various awareness programs undertaken in coordination with NGOs & RWAs. DG AFMS & DG Coast Guard have also shared their views / action taken so far on the issues.
4. In this regard, Director (TERI) stressed about the importance of environmental protection at all levels by implementing guidelines which were part of six rules on waste management, bio-medical waste management, plastic management, e-waste management, construction and other wastes, list of which will be shared with the Ministry.
5. Based on the above discussions, the following directions were given:
  - For optimum utilisation of resources aimed towards environmental protection, waste management and Green initiatives, DGDE to submit Cantonment-wise details of action taken in a week's time. DG AFMS & DG Coast Guard also to submit ATR in respect of their organisations.
  - Best practises on waste management of other civic bodies / municipalities may be adopted, if required.

- Action should be taken in totality from overall ecological perspective / green initiatives and not just limited to waste management.
- DGDE to submit status compliance report on adoption of Solid Waste Management Rules, 2016 by all the Cantonment Boards.
- The information should be furnished by the organisations within a week's time.

6. The meeting ended with Thanks to the Chair.

\* \* \*

**Minutes of the meeting dated 06.05.2021 of Apex Monitoring Committee on Environmental Issues and Challenges in compliance of NGT Order dated 10.11.2020 in O.A. No. 451/2019 Air Marshal Anil Chopra.**

1. A meeting of the Apex Monitoring Committee on Environmental Issues and Challenges in compliance of NGT Order dated 10.11.2020 in O.A. No. 451/2019 titled Air Marshal Anil Chopra was held under the chairpersonship of Additional Secretary (NSV) on 06.05.2021 through Video Conferencing to review the ATR as per decisions taken in meeting dated 19.04.2021. Representatives of DGDE, DG AFMS, DG Coast Guard, TERI & CPCB attended the meeting through VC.
2. At the outset, JS(E) briefed about the issues that were part of NGT order. He informed about the decisions taken in the earlier meeting dated 19.04.2021 and the need for creating monitoring mechanism at all levels in all organisations in compliance of NGT order and measures to be put in place as per terms of reference of the Apex Monitoring Committee.
3. In this regard, representative of CPCB informed about the importance of environmental protection at all levels in line with environmental parameters and Government guidelines.
4. Representatives of DGDE, ICG and DG AFMS presented the status in respect of their organisations and action taken so far in compliance of NGT order.
5. AS(NSV) expressed displeasure over non-submission of Action Taken Report by DGDE with regard to creation of monitoring mechanisms & its working at various levels under Defence Estates Organisation. She noted with concern that DGDE has not yet finalised the parameters based on their domain of functioning and the targets to be achieved by Cantonment Boards. No action plan has been prepared for implementation in Cantonments. It appeared as if the basic understanding of the issue is lacking. DGDE has to examine the present system of waste disposal as well as other issues regarding control of air, water, noise pollution in light of regulatory framework and formulate an action plan and implementation framework to achieve the targets. DGDE may consult CPCB or TERI wherever required. A regular monitoring system needs to be in place so that the progress made by each Cantonment Board is examined and necessary help by way of handholding may be provided to them. AS(NSV) directed the representative of DGDE that necessary action may be taken immediately under intimation to this Ministry.

6. As regards ICG, AS(NSV) directed their representatives to submit report in a pro-forma indicating the action taken in respect of each of the parameters separately, and the monitoring mechanism in place at various levels.
7. With regard to Military Hospitals, AS(NSV) directed that the DG AFMS should have a parallel monitoring mechanism apart from CPCB inspections to ensure that timely actions are taken to address the observations of CPCB, and oversee the functioning of hospitals in this regard.
8. CPCB was also requested to furnish their inputs / report to the Ministry which would be shared with DGDE, DG AFMS & DG Coast Guard for further action.
9. It was decided that DGDE, ICG and DG AFMS shall submit their detailed ATR including monitoring mechanism, targets and timelines based on fixed parameters as per their domain in compliance of NGT order by 12.05.2021 to the Ministry.
10. The meeting ended with Thanks to the Chair.

\* \* \*

# Annexure R-4



Ministry of Defence  
Directorate General, Defence Estates

No. 76/40/Court Case/OA No. 451/2019/C/DE/2020

Dated: 08 March, 2021

**SUBJECT: CONSTITUTION OF AN APEX MONITORING COMMITTEE ON ENVIRONMENTAL ISSUES AND CHALLENGES IN COMPLIANCE OF NGT ORDER DATED 10.11.2020 IN O.A. NO. 451/2019 AIR MARSHAL ANIL CHOPRA - REGARDING.**

Reference MoD ID No. 0001/2020-D(Q&C) dated 24.02.2021.

2. It is intimated that this Dte Gen, vide letter of even No. dated 10.02.2021, has issued instructions to the Directorates, DE, to take necessary action as desired vide para 8 of the order dated 10.11.2020 of Hon'ble National Green Tribunal. Further, the Dtes have also been requested to nominate Nodal Officers (Director level) in this regard.

3. This Dte Gen, vide letter of even No. dated 04.03.2021 has requested the Dtes to take necessary action as mentioned in MoD O.M. No. 0001/2020-D(Q&C) dated 09.02.2021.

**Dam, Olkgh**  
Asstt DG (Cants)  
For DGDE

Deputy Director D(Q&C)  
Ministry of Defence

Signature  
9/3/21

**Subject: Constitution of an Apex Monitoring Committee on Environmental Issues and Challenges in compliance of NGT order dated 10.11.2020 in O.A. No. 451/2019 Air Marsha) Anil Chopra - Regarding**

Reference minutes of meeting dated 06.05.2021 and DO letter dated 13.05.2021 on the subject matter.

2. It is intimated that earnest efforts have been made to implement the directions of NGT and substantial progress has been achieved in this respect.
3. As far as Monitoring mechanism is concerned, it is stated that the implementation of directions of NGT is carried out by the CEOs of the 62 Cantonment Boards. The implementation is monitored by a committee headed by a senior officers i.e. Director, Defence Estates, Command, for all commands except Eastern Command, where implementation is monitored by a Joint Director. These officers regularly hold meeting with the CEOs concerned and provide them guidance. At the level of Directorate General, Defence Estates, implementation is monitored by Additional DG (Cantonments) who functions under the supervision of DG. Implementation is monitored through regular review meetings and seeking reports from the CEOs.
4. Action taken report including target and time lines based on fixed parameters in compliance of NGT order by 12.02.2021 is as follows:
  - I. Solid waste management
    - a. Parameters for monitoring identified are 100% door to door collection of garbage, 100% segregation of waste at household level, setting up of MRF & Extraction of recyclable waste, 100% processing of biodegradable waste, waste to energy plants and SLF, Mechanism for collecting & processing of horticulture waste & environmental compensation imposed/realized for defaulters . The implementation of door to door collection and segregation of waste is satisfactory as most of the Cantts have achieved 80 to 100% target. Regarding transportation, processing and recycling of waste the CBs where compliance with the norms has been found lacking have been advised to ensure that the waste is disposed of properly as per rules
    - b. The gaps/constraints are basically lack of awareness, lack of capital investment for construction of waste to energy plants & SLF, shortage of

manpower and machinery like composting machines, SWM plants, and also lack of expertise with the Cantonment Boards.

c. To address the issues CBs are advised persistent awareness drive, training of public on composting process & its uses and to forward proposals for SWM plants under smart city mission wherever applicable.

d. Further progress on these actions would be reviewed after 03 months.

## II. Biomedical Waste Management (BMW)

a. Following parameters have been identified for monitoring - disposal of waste as per BMW norms, , regular picking up & disposal of waste, Record keeping for generation and disposal of BMW, separate colour coded bins / colour coded bags, Temporary waste storage room, Mode of transportation of wastes from source to the temporary storage/on-site treatment facility, installation of Effluent Treatment Plant, availability of record keeping system, maintaining informative posters / placards in the hospitals, taking special care with regard to mercury spillage / breakage, Generator Set.

b. It is observed that most of the CBs are complying with the BMW norms. The waste is either being handed over to the expert agency for disposal at Common Biomedical Waste Treatment and Disposal Facility (34 CBs) or is being disposed of in the Captive Facility. The waste is being kept in color coded bins / bags. 32 CBs have separate well maintained temporary storage room as well. Most of the CBs are also maintaining proper record of the waste, informative posters / placards have been displayed in the hospitals. 25 CBs also have the generator sets for emergency use.

c. The CBs where compliance with the norms has been found lacking have been advised to ensure that the BMW is disposed of properly as per rules. In this regard they have been advised to liaise with the MH or the neighbouring Government hospitals. The 03 CBs, where treatment plants need to be set up, have been advised to expeditiously submit proposals for installation of ETP. Also, they have been advised to procure generator sets of adequate capacity.

d. Further progress on these actions would be reviewed after 06 months.

## III. E-Waste Management

a. Following parameters have been identified for monitoring - Mechanism for collection and interim storage of e-waste, compliance of Extended Producer Responsibility (EPR), environmental compensation for non-compliance.

b. It is observed that most of the CBs have set up interim storage facility for extracting and storing e-waste. However, the mechanism to enforce EPR is

not clear. Also, the CBs have not reported imposing penalties for violation of the e-Waste Management Rules.

- c. The CBs have been advised to generate awareness among the public not to ensure not to mix any e-waste with the household waste, and 100% separate collection at source. The CBs have been advised to actively work with the vendors / manufacturers to identify the representatives so the EPR can be enforced. Also the Cantonment Boards where interim storage facilities have not been set up, have been advised to ensure expeditious compliance.
- d. Further progress on these actions would be reviewed after 06 months.

#### IV. C&D Waste Management

- a. Following parameters have been identified for monitoring - Mechanism for collection and interim storage of C&D waste, Adherence to rules for transportation of C&D waste, reuse of waste for construction activities, processing of waste, disposal of balance quantity of C&D waste, inclusion of binding clauses of C&D waste management rules in all contracts by CB / MES, monitoring mechanism for implementation of C&D waste rules, Environmental Compensation for offenders.
- b. Most of the CBs have reported that it is being collected by CB vehicle / private hired vehicle/ contractor, transported as per provisions of the rules, and is being used for filling the low lying areas. Some CBs (Matbura, Meerut, Ranikhet, Ahmedabad, Cannanore, Dehuraod, Deolali, Delhi, Ferozepur, Jalandhar, Subathu) have reported reusing the waste for construction activities. Some CBs (Lansdowne, Mhow, Cannanore, Jhansi, Khackki, Saugor, St.Thomas Mount, Delhi, Jalandhar, Jutogh) have reported issuing challans for violations. All the CBs are actively monitoring with the help of field staff for any violation.
- c. The Cantonment Boards have been advised to identify expert agency / discuss with neighbouring municipality for scientific disposal of C&D waste and submit proposals in this regard, if so required.
- d. Further progress on these actions would be reviewed after 06 months.

#### V. Plastic waste management,

- a. The parameters identified are imposition of 100% single use plastic ban and Disposal / processing of plastic waste as per PWM Rules.
- b. Regarding the ban of single use plastic almost all CBs have given 100% compliance, It is also intimated that after segregation Plastic is stored/recycled as per SWM Rules 2016 for environmental compensation and 25 CBs have issued challans and imposed fine.
- c. CBs have been advised to undertake awareness drives, place public notices on their websites& public places, organize surprise checks by the

Sanitation branch, strict enforcement of PWM Rules including time, to encourage Commercial establishments and consumers to use bio friendly items like jute bags, Cloth bags etc, installation of plastic shredder machines, training field staff, installation of Baling machine for compacting the plastic waste where ever required.

d. Further progress in this regard will be reviewed after 03 months.

#### VI. Management of Air pollution

a. The following parameters have been identified **100% ban on open burning of garbage, 100% ban on open storage of garbage, augmentation of green covers by tree plantation, paving of Road shouldering and maintenance of pot hole free roads and Environmental Compensation.**

b. All CBs have reported 100% ban on open burning of garbage and 100% ban on open storage of garbage. All CBs have undertaken tree plantation and have taken steps to curb illegal tree cutting and developed gardens and parks. E-Chhawani, Swachhta app, Samadhan are used by all the CBs for handling public complaints. 6 CBs have issued challans.

#### VII. Management of noise pollution

a. For noise pollution the parameters identified are **public notification of noise pollution norms, procurement of SLM, environmental compensation and installation of No horn boards in front of schools and hospitals.**

b. All the CBs have issued public notification of noise pollution norms. CBs are in the process of procuring SLM and installing no horn boards. For environmental compensation, no challans have been issued till now.

c. Cantonment Boards have been advised to take necessary action.

d. Progress on the same will be reviewed in 06 months.

  
(Daman Singh)  
Asstt. DG (Cants)  
For DGDE

**Dy Director (Q&C)**

No. 76/40/Court Case/OA No. 451/2019/C/DE/2020

Dated: 20 May, 2021

**Annexure R-6**

Tel: 011-2338 8668

EP/0132/NGT Act

Feb 21

**COAST GUARD HEADQUARTERS**  
(Directorate of Fisheries & Environment)**CONSTITUTION OF AN APEX MONITORING COMMITTEE ON ENVIRONMENTAL ISSUES AND CHALLENGES IN COMPLIANCE OF NGT ORDER DATED 10.11.2020 IN O.A.No. 451/2019 AIR MARSHAL ANIL CHOPRA**

1. Refer to MoD ID No. 0001/2020-D(Q&C) dated 09 Feb 21.
2. Indian Coast Guard is the agency for enforcement of marine environment protection regulations in Maritime Zones of India under its duties and function. It is therefore, prudent that the organisation must contribute its best for the environment protection in ashore establishments and afloat units too. Gel has issued directives time to time for protection of overall environment and optimization of renewable services.
3. ICG has initiated such mechanisms for protection of marine environment not only at sea but on ICG ships and shore establishments too. Requirements of MARPOL Annex-V were collated in tabular form and the same was disseminated to all Coast Guard Regions in May 2017 for adherence by ships. Further, programmes like plantation of trees, voluntary discard of plastic bags, rain water harvesting, use of renewable energy, garbage segregation have been professed to the Regions regularly.
4. Coast Guard has already initiated a policy to its Regions and a mechanism is underway for solid waste management in accordance with the guidelines issued by Ministry of Environment, Forest and Climate Change (MoEF&CC), Solid Waste Management Rules, 2016 and MARPOL Annex V.
5. The waste management organization and practices have been laid down in the policy letter alongwith the mandate of such organization. It includes formation of core group, waste management orders and conduct of progress review meetings.

6. The policy highlights ways to change the waste management capacity, spreading awareness by publicising in different forums and mentioning DOs and DONrrs on posters at public places. The periodic revaluation will ensure the follow up of waste management practices and changes if required to be undertaken in the system setup. The methodology for recycling garbage and waste from District Headquarters/Stations/Air Stations has been worked out by institutionalizing a mechanism and designating committed individual as the Recycling Coordinator for coordinating such programme.
7. The policy is in line with the GoI efforts as one of the component of '**Swachh Bharat Mission**'. Proper disposal of wastes from public areas can reduce risks to overall health which also decrease public's exposure to biohazards and reduce infestation of pests. The Waste Energy is an emerging concept with proper garbage disposal. The energy is produced by the waste products those are incinerated and the same energy can be then used to generate electricity. The benefits of recycling are that it reduces the size of our landfills and therefore result in reducing pollution.
8. This is for information please.

(  
)  
Dy Inspector General  
Director (FE)

Deputy Director (O&C)/ MoD

Copy to:-

US(CG)/ MoD

## Annexure R-7

Tele: 23074131

EP/0132/NGT Act

)-kJ Apr 21

### **COAST GURAD HEADQUARTERS** (Directorate of Fisheries and Environment)

#### **CONSTITUTION OF AN APEX MONITORING COMMITTEE ON ENVIRONMENTAL ISSUES AND CHALLENGES IN COMPLIANCE OF NGT ORDER O.A.No. 451/2019 AIR MARSHAL ANIL CHOPRA**

1. Refer to MoD email dated 26 Apr 21.
2. The ICG response towards the environmental protection waste management and green initiatives has been compiled w.r.t. mandate, interface with coastal communities and waste management to ICG in succeeding paragraphs.
3. **ICG mandate.** As per Coast Guard Act, 1978, the Indian Coast Guard has been mandated for taking such measures, as necessary to preserve and protect the marine environment and to prevent control marine pollution. Further, ICG has responsibility for overall coordination of marine oil spill at sea between central and state agencies/stake holders. ICG undertakes this charter in accordance with the provisions of various legislations in force in the Maritime Zones of India. The ICG mandate for enforcing the provisions in accordance with Coast Guard Act 1978 is in the Maritime Zones of India (MZI) that includes territorial contiguous and Exclusive Economic Zones as per MZI Act 1976. **The ICG does not operate in the Marshy lands.**
4. **Interface with Coastal Community.** ICG maintains an interface with states and fisheries department for ecological issues through various programmes held at regional and district level. The international coastal cleanup is organized by ICG every year that involves support from various central and state agencies, corporate firms, fisheries department, fisherfolk and Non Governmental Organisations (NGOs). Regular Community Interaction Programme (OPs) are also carried out by the ICG in all coastal states/UTs for educating/disseminating information highlighting various ecological issues including waste management for safeguarding the coastal environment.

5. **Independent ICG Air Station.** Indian Coast Guard operates two independent air stations at Daman and Ratnagiri. The air stations have been developed in such a manner that eco sensitivity of the surrounding area is not affected due to the construction related work and operation of the aircraft. The noise level and emissions generated from operation of aircraft is minimal since maximum flying operations are conducted over sea. Necessary precautions and safety measures are in place for monitoring of the resident birds in the area to mitigate any risk to their natural habitats. The eco sensitivity of the place around the air stations has been maintained as per the existing guidelines governed i.a.w Ministry of Civil Aviation (MoCA) and local policies in vogue.

### **Waste Management System in ICG**

6. The present strength in Indian Coast Guard Other Than Married (OTMs) and Coast Guard Residential Area (CGRA) is miniscule as compared with the other defence services. Unlike Military stations/ cantonments which are generally away from the townships and cities, ICG office space, accommodation and other allied facilities are in close interface with the civil populace. The mechanism of collection of garbage/ waste disposal from the ICG complex/ areas is undertaken by the municipal/ corporation bodies. The waste management system onboard ICG ships are also regulated systematically since ships have Sewage Treatment Plants (STPs), incinerators and garbage disposal units in accordance with MARPOL convention. The daily waste generated is collected onboard and handed over to port reception facilities for proper disposal.

7. ICG has initiated such mechanisms for protection of marine environment on ICG ships and shore establishments under the umbrella of MARPOL Annex-V. The programmes like plantation of trees, voluntary discard of plastic bags, rain water harvesting, use of renewable energy, garbage segregation have been professed to the regions regularly. A mechanism is underway for solid waste management in accordance with the guidelines issued by Ministry of Environment, Forest and Climate change (MoEF&CC), Solid Waste Management Rules, -2016. The policy for waste management organization and practices has been disseminated through a policy letter. It includes formation of core group, waste management orders and conduct of progress review meetings.

8. The policy further highlights ways to change the waste management capacity, spreading awareness by publicizing in different forums and mentioning DOs and DON'Ts on posters at public places. The periodic revaluation will ensure the follow up of waste management practices and changes if required to be undertaken in the system setup. The methodology for recycling garbage and

waste from DHQs/Stations/ Air Stations has been worked out by institutionalizing a mechanism and designating committed individual as the Recycling Coordinator for coordinating such programme.

9. The policy is in line with the Go! efforts as one of the component of '**Swachh Bharat Mission**' Proper disposal of wastes from public areas can reduce risks to overall health which also decrease public's exposure to biohazards and reduce infestation of pests. The Waste Energy is an emerging concept with proper garbage disposal where energy produced by the waste products after incineration is used to generate electricity. The benefits of recycling are that it reduces the size of our landfills and hence result in reducing pollution.

(Asheesh Sharma)  
Commandant  
Joint Director (Environment)

**D(Q&CI/MoD**

**Copy to:-**

**US(CG)/MoD**

**Annexure R-8**

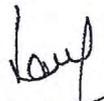
Tel: 2319233

44050/MoD/47/DGAFMS/DG-1C

05 Mar 2021

**MINISTRY OF DEFENCE**  
**OFFICE OF THE DGAFMS/ DG-1C****CONSTITUTION OF AN APEX MONITORING COMMITTEE OF ENVIRONMENTAL ISSUES AND CHALLENGES IN COMPLIANCE OF NGT ORDER DATED 10.11.2020 IN O.A NO. 451/2019 AIR MARSHAL ANIL CHOPRA - REGARDING**

1. Refer to MoD/D(Q&C) letter No 0001/2020-D(Q&C) dated 09 Feb 2021.
2. The requisite inputs/ feedback in r/o the O/o DGAFMS is as under :-
  - (a) The actions as brought out vide the MoD letter under reference in the fields of environmental protection, waste management and ecological well-being including sustainability and green initiatives pertains to administrative authorities in various stations and the office of DGAFMS has no role in the same.
  - (b) However, Bio Medical Waste (BMW) management in the Armed Forces is laid down under guidelines issued vide DGAFMS letter No 3548/1/(d)/BMW/DGAFMS/DG-3A dated 10 Dec 2016 and as amended from time to time. DGAFMS is the prescribed authority for enforcement of provisions of BMW rules in Armed Forces under MoD.
  - (c) The BMW management is controlled by an Advisory Committee. Composition of Advisory Committee is as under :-
    - (i) DGHS (AF) - Chairman
    - (ii) Rep of MoD/ D(Med)
    - (iii) Rep of MoE & F
    - (iv) Rep of MoH & FW
    - (v) Director AFMS (H) - Member Secretary
  - (d) Similarly, there are nodal officers detailed at Service HQs and Command HQs. Further, there is a BMW Management Committee formulated at all Health care echelons to oversee and monitor implementation of BMW rules and regulations.
3. This has the approval of the DGAFMS.

  
(K Rahul Ray)  
Col  
Col AFMS (Coord)

**MoD/ D(Medical)**Copy to :-

MoD/ D(Q&amp;C)

**MINISTRY OF DEFENCE**  
**OFFICE OF THE DGAFMS/DG-3A**

**ACTION TAKEN ON : MEETING OF APEX COMMITTEE**  
**ON NGT ORDER HELD ON 06 MAY 2021**

1. Refer directions of the chairperson during meeting of Apex Committee on NGT order, held on 06 May 2021.

2. In this regards, the feedback/input on the two points on which the AFMS was asked to take action is as follows:-

(a) **Point No 1. Promulgation of "time-frame" for action by hospitals.**

(i) The Armed Forces HCEs (Health Care Establishments) currently implement the provisions of BMW Rules 2016 under the DGAFMS, who is the prescribed Authority as per the said Rules.

(ii) The checks and balance mechanism involves inspection of HCEs by Armed Forces Public Health Specialists annually (& as often as deemed necessary by local AFMS auth in case of any deficiency indentified) and random checks by Regional offices of CPCB. An Annual Bio-medical Waste Management Report of the Armed Forces is generated, which is submitted to the CPCB. Any directions in the context by CPCB are further clarified/implemented for compliance.

(iii) As per directions of AS(NSV), the following timelines for rectification of observations have been decided:-

(aa) For procedurals/documentary/anomalies: 04 weeks.

(ab) For issues pertaining to segregation of BMW at source: 04 weeks.

(ac) For minor engineering/eqpt repair or procurement related observations - 24 weeks.

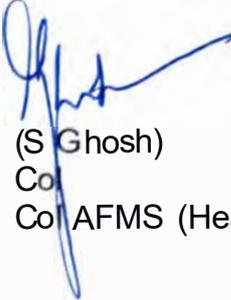
(ad) For major engineering/Capital procurement/outsourcing related observations - 8 to 10 months.

(b) **Point No. 2 Check list for inspecting officers while examining HCEs for BMW Management.**

(i) As discussed in the ibid meeting, the CPCB has shared a " Checklist for verification of Compliance to BMW Rules by AFMS - HCFs" via e-mail.

(ii) The same is in the process of minor modification & vetting by concerned service HQs. Once finalized, the same will be promulgated as a guideline for all Service public health specialists, who are primarily responsible for inspection of the AFMS HCEs - expected time duration for completion of this action is 01 month.

3. The above may please be informed to the concerned authority in the Apex Committee.



(S Ghosh)  
Col  
Col AFMS (Health)

**MoD/D {Q&C}**

**Copy to:-**

MoD/D (Med) - for information please.

**Internal**

SO to DGAFMS - for info please