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STATE POLLUTION CONTROL BOARD
SIKKIM

STATE POLLUTION CONTROL BOARD- SIKKIM

FOREST & ENVIRONMENT DEPARTMENT
GOVERNMENT OF SIKKIM
DEORALI, GANGTOK – 737102

F. No. 1026/SPCB/ 8949 & 8950 Dated: 20/2/2024

To,

The Executive Director (Technical),
National Mission for Clean Ganga,
Department of Water Resources,
River Development & Ganga Rejuvenation
Ministry of Jal Shakti,
Major Dhayan Chand National Stadium,
India Gate, New Delhi-110002.

Sub: Monthly Progress Report for the Month of January, 2024 as per the direction of Hon'ble NGT in the matter of O.A No. 673/2018 dated 06/12/2019.

Sir,

I have been directed to forward herewith monthly progress report for the month of January, 2024 with respect to the state of Sikkim as per the above cited subject.

Submitted for kind information and onward process please.

Thanking you,

Yours faithfully,

(B.K. Chettri)
Principal Chief Scientific Officer
State Pollution Control Board-Sikkim

Bindey Kr. Chettri
Principal Chief Scientific Officer
State Pollution Control Board, Sikkim
Forest & Environment Deptt.
Govt. of Sikkim

Copy to:

1. Shri P.K. Mishra, DH, WQM-I Division, CPCB, MoEF&CC, Parivesh Bhawan East Arjun Nagar Delhi for kind information please.

STATE POLLUTION CONTROL BOARD ★ GOVT. OF SIKKIM GANGTOK ★

National Mission for Clean Ganga
Format for submission of Monthly Progress Report in the NGT Matter O.A. No. 673 of 2018 (in compliance to NGT order dated 24.09.2020)
State of Sikkim
Month – January, 2024.

Overall status of the State:

I. **Total Population:** a) Urban Population - 153,578 (Census of India, 2011)

1.74 lakhs (UIDAI data, May, 2020)

b) Rural Population - 456,999 (Census of India, 2011)

5.16 lakhs (UIDAI data, May, 2020)

II. Estimated Sewage Generation (MLD):

a) Urban – 18.79 MLD (assuming LPCD water supply. Information provided by PHE Dept., Govt. of Sikkim)

b) Rural – 28.89 MLD (assuming LPCD water supply. Information provided by PHE Dept., Govt. of Sikkim)

III. Details of Sewage Treatment Plant:

Existing no. of STPs and Treatment Capacity (in MLD):

Sl. No.	Town/Location	Capacity (MLD)	Operational/Functional Capacity(MLD)	Actual flow (MLD)
1.	Gangtok Zone I, Adampool	8.0	7.50	6.50
2.	Gangtok Zone I, Adampool	4.69	4.50	3.90
3.	Gangtok Zone I, Adampool	Old 5.0 MLD conventional treatment plant is utilized as secondary treatment unit		Re-circulated from MBBR units
3.	Gangtok Zone I, Ranipool	1.27	1.10	0.92
4.	Gangtok Zone IV, Lower Sichey	3.90	3.30	2.80
5.	Singtam	~~0.66~~	Entire visible treatment plant units are	

6.	Melli	~~0.50~~	washed away by the flash flood of October 2023. Temporary arrangements of diverting raw sewage into the pits are in operation.	
7.	Rangpo	~~1.40~~		
8.	SMIT, Majhitar (private facility)	0.48	0.40	0.40
9.	Gangtok Zone II, Lower Syari	1.60	1.50	0.65
Total		**19.94**	**18.3**	**15.37**

a) **Capacity Utilization of existing STPs:** An average of 14.97 MLD of raw sewage is received in the operational STPs against the functional/operational capacity utilization of 17.90 MLD. Thus, actual operation of 83.63% is maintained in the STPs run by the PHED under urban area of the state.

b) **MLD of sewage being treated through Alternate technology:** Sewage treatment through anaerobic digestion in the septic tanks of individual households in other towns (twin pits/multiple pits). Estimated treatment facilities through septic tanks are 10.00 MLD.

c) **Gap in Treatment Capacity in MLD:** The total capacity of STPs located in urban areas is 19.46 MLD and operational treatment capacity is 17.90 MLD. Total sewage received at the STPs is 14.97 MLD.

Renovation of STPs in Gangtok has been completed. Rehabilitation and upgradation of sewer network to uncovered areas in Gangtok is under progress. It is expected to receive about 16.40 MLD sewage in STPs vide serial no.1, 2, 3, 4 & 8 of the table above. Treated waste water analysis for BOD, COD, TDS, TSS and Faecal Coliform has been awarded to a third party agency having certified NABL accreditation. Counter checks are also done regularly through OCEMS installed. Monitoring of effluent parameters are also regularly done in STP laboratory of PHED at Adampool, Gangtok. It is found that the treated waste water is within the permissible limits of parameters prescribed by the Pollution Control Boards.

Sewage Management in rural and peri-urban areas:

a. RDD has submitted annual action plan 2023-2024 under SBM (Grameen) for liquid waste management and grey water treatment including other components of SBM(G) like individual household latrines-IHHL;

b. Sikkim has been declared as the 1st ODF Plus Model of India on 14th August,2023 by the Ministry of Jal Shakti(DDWS),GoI and it establishes that the State has a better Sewage and Grey Water Management mechanism;

c. The most households in rural areas manage their Grey Water through kitchen gardening. There are now 6963 and 311 HH Soak pits and Community Soak pits constructed in Phase-II of SBM(G) since 2019-2020 respectively and another 6342 and 891 HH Soak pits and Community Soak pits are targeted during the FY 2023-24;

d. Further, the Department is implementing the Community Soak pits at the Drain End Points in FY 2023-2024 wherever possible to treat the sewage water and integrate storm water management into sewage;

e. The Department has also received the sanction of 33(thirty-three) Soil Scape Filter *(technology adopted by Shrishti Eco- Research Institute-SERI, Pune)* under Swachh Bharat Kosh for the treatment of household sewage/grey water.

f. The rural houses hold now have 1402 retrofitted single pits and septic tanks in addition to 18906 Twin Pit HH toilets with another 5404 IHHL with twin pits planned for FY 2023-24.

g. Further, rural Sikkim and per-urbans have 621 Community Sanitary Complexes (CSC).

h. The Department has received sanction and fund under **Swachh Bharat Kosh** for the procurement of **33 Mobile Treatment Units(MTU).**This MTU will treat the faecal in-situ and the treated waste can be utilized as manures. This will treat 6000 litres of septage at the cost which is much

lower as compared to Cesspool charges. These MTUs shall be procured within this financial year.

Domestic Sewage management has been included in State & District Environment Plans, which has been approved by the State Government and the same is available at ***http://www.sikkimforest.gov.in/index.html.*** In addition, preparation of new district plans as per the newly formed districts mainly, Gangtok, Geyzing, Pakyong, Soreng, Mangan & Namchi have been intimated to the District Magistrates/Collectors. Annual conferences for periodic revision and updation of DEP for Gangtok District was held on 28/07/2022. DEP of Gangtok, Magan and Soreng District is under review.

In the matter of O.A. 606/2018 before the Hon'ble National Green Tribunal compliance of Municipal Solid Waste Management Rules, 2016, the hearing took place on 03/11/2022 and the state was issued directions to comply to the directions of the order dated 03/11/2022 and file verifiable compliance within period of six (6) months. Environmental Compensation was not levied on the State of Sikkim.

The Rural Development Department, GoS conducted "State Level Workshop on Faecal Sludge and Liquid Waste Management Strategy for Sikkim" for all line departments on 14/12/2022. The workshop was conducted to impart knowledge in order to ensure necessary compliance to the directions of the Hon'ble NGT.

The data sought by the SPCB in the prescribed format to prepare a river centric approach in the planning for cities /towns on the banks of rivers have been submitted by the PHED Sikkim to the SPCB for onward submission to the Ministry.

The State of Sikkim faced devastating damages due to flash flood the occurred on 04/10/2023 wherein STPs, industrial units, Hydro Electric Projects and human settlements were damaged.

DAMAGES DUE TO FLASH FLOOD:

Sl. No.	**Location**	**Current Status**
1.	Singtam (0.66 MLD)	Entire visible structures of STP have been washed away. Sewers network submersed by the debris have been cleared. Temporary pits have been constructed to receive the sewage. Treatment of sewage is done through anaerobic
2.	Rangpo (1.46 MLD)	
3.	Melli (0.5 MLD)	

		actions. Proposal to restore STP has been forwarded to the authority for approval and sanction.
4.	Chungthang	Part of the ongoing work on sewers network have been washed away. Now the work is in progress.

Since most of the low lying settlements have been damaged in the flashflood rendering them uninhabitable hence sewage generation is minimal and the PHED has identified the septic tanks to take care of sewage management temporarily by diverting the flow into the identified septic tanks. Status has been informed to Relief Commissioner cum Secretary, Land Revenue and Disaster Management Department, Government of Sikkim for further appraisal to the Ministry for allocation of fund under NDRF/Calamity.

a) **No. of Operational STPs:**6

b) **No. of Complying STPs:** 6

c) **No. of Non-complying STPs:** nil

Details of each existing STP in the State

Sl. No.	Location	Existing STP Capacity MLD	Capacity Being Utilized (%)	Operational Status of STP	Compliance Status of STP
1.	Gangtok Zone I, Adampool	8.0	81	1. Operational 2. re-commissioning of old 5.0 MLD conventional treatment plant to act as a secondary treatment unit.	Compliant.
2.	Gangtok Zone I, Adampool	4.69			
3.	Gangtok Zone I, Ranipool	1.27	71	Operational	Compliant
4.	Gangtok Zone IV, Lower	3.90	70	Operational	Compliant

	Sichey				
5.	Singtam	0.66	~~80~~	Not Operational	Damaged due to flash flood
6.	Melli	0.50	~~80~~	Not Operational.	Damaged due to flash flood
7.	SMIT, Majhitar (private facility)	0.48	70	Operational	Compliant
8.	Rangpo	1.40	~~15~~	Not Operational	Damaged due to flash flood
9.	Gangtok Zone II, Lower Syari	1.60	54	Operational	Compliant

Status of OCEMS installation

Sl. N.	**Town/location**	**Capacity(MLD)**	**Status**
1.	Gangtok Zone I, Adampool	8.0	Installation completed
2.	Gangtok Zone I, Adampool	4.69	Installation completed
3.	Gangtok Zone I, Ranipool	1.27	Installation under process
4.	Gangtok Zone II, Lower Syari	1.6	Installation completed
5.	Gangtok Zone IV, Lower Sichey	3.9	Installation completed
6.	Singtam	~~0.66~~	STP damaged due to flash flood
7.	Melli	~~0.5~~	STP damaged due to flash flood
8.	Rangpo	~~1.4~~	

Details of under construction STPs in the State

Sl. No.	Location	Capacity of the plant in MLD	Physical Progress in %	Status of I&D or House sewer connections	Completion Timeline
1.	Gangtok Zone III, Tathangchen	3.25	85	Sewer network is in the verge of completion. Dry run of STP to be performed by March 2024.	Anticipated to be operational by April 2024.

Details of proposed STPs in the State

Sl. No.	Location	Capacity of the STP proposed in MLD	Status of Project (at DPR Stage/ Under Tendering/ Work to be Awarded)	Likely Date of Completion
1.	Namchi	3.63	Exploring to indentify plots for STPs in the forest land as there has been public resentment in the earlier identified plots.	December 2025
2.	Jorethang	1.6	Forest land diversion for STP site is in final stage. Assessment of works executed about a decade ago is in progress. It appears that the entire executed work needs to be rehabilitated.	December 2025
3.	Geyzing	1.80	Procurement of Pipes and accessories completed. Civil	December 2025

			work commenced and about 15% of sewer network has been laid.	
4.	Mangan	0.98	Procurement of Pipes and accessories completed. Civil work commenced and about 25% of sewer network has been laid	December 2025
5.	Chungthang	0.72	Procurement of Pipes and accessories completed. Civil work commenced and about 10% of sewer network has been laid.	-
6	Soreng	-	Survey completed. DPR preparation in progress	-
7	Rabong	1.50	DPR to be submitted to the funding Ministries/ Agencies.	-

IV. Details of Industrial Pollution:

- **No. of industries in the State:** 583 nos. of industrial units were granted Consent to Establish and Operate (including renewal) by SPCB-Sikkim in the financial year 2022-2023.
- **No. of water polluting industries in the State:** 64
- **Quantity of effluent generated from the industries in MLD:**2.93 MLD
- **Quantity of Hazardous waste generated from the industries in TPD:**

  1. Incinerable -5.95 (approx);

  2. Recyclable - 0.10 (approx);
- **Number of industrial units having ETPs:** 64
- **Number of industrial units connected to CETPs:** nil

- **Number and total capacity of ETPs (details of existing/ under construction / proposed)**
    a) Total no. – 64
    b) Capacity – 4.698 MLD
    c) Under construction/proposed – nil
- **Compliance status of the ETPs:** compliant
- **Number and total capacity of CETPs (details of existing/ under construction / proposed) -** nil
- **Status of compliance and operation of the CETPs**

Town	No. of industries	Industrial discharge	Status of ETPs	Status of CETPs (existing, under construction & proposed)
No CETPs has been established in the state of Sikkim.				

V. Solid Waste Management:

- **Total number of Urban Local Bodies and their Population:** 7 nos.
  Population - 147695
  1.74 lakhs (UIDAI data, May, 2020)
- **Current Municipal Solid Waste Generation :** 68.9 TPD (2022-23 Annual report)
- **Number, installed capacity and utilization of existing MSW processing facilities in TPD (bifurcated by type of processing eg- Waste to Energy (Tonnage and Power Output), Compost Plants (Windrow, Vermi, decentralized pit composting), bio-methanation, MRF etc:**
    a) 50 TPD capacity compost plant installed at Martam Landfill ;
    b) Organic Waste Converter at Lal Bazaar Vegetable Market- 1 ton per day capacity
    c) 25 kg capacity Organic Waste Converter installed at Vegetable Market, Mangan Nagar Panchayat;
    d) PET bottles shredding machine having a capacity of 800-1000 bottles storage installed and inaugurated at Mangan Nagar Panchayat on 01/09/2021;
    e) Bio-digester plant of capacity 5 MT installed at Gyalshing Nagar Panchayat;

f) Requisition for construction of new MRF centres has been received from all of the 07 ULBs and the proposal has been approved. Funds have been sanctioned and transferred to the ULBs. MRF at Namchi, Nayabazar-Jorethang & Gangtok have been completed and are in operation;

g) 350 waste collection and segregation sheds and 334 community compost pits have been constructed in rural areas. In the FY 2023-2024 another 1116 and 2870 individual and community compost pits will be constructed under SBM(G) giving special impetus and compliance to directives of the Tribunal;

h) Currently, the Gram Panchayats, Blocks have decentralized waste processing/management facilities like waste segregation sheds (350), RRC (33), PWMU (16). The Department has 28 resource recovery vehicle(RRVs) for the transportation of solid waste and additional 14 RRVs shall be procured in the present financial year under SBM(G)

i) In the FY 2023-2024 ,16 new PWMUs have been targeted for physical completion which include augmentation of the existing RRCs. 160 new segregation sheds that manage dry waste at the cluster level are in the AIP 2023-2024 to be constructed under 15th FC (2023-2024).

j) At least one Plastic waste management unit for each Block is being planned. 16 have been completed.

k) 5MT/day bio-methanation plant has been installed and is operational at Solid Waste Management facility at Martam;

l) Vacant government lands have been identified for setting up of new MRFs;

- **Action plan to bridge gap between Installed Capacity and Current Utilization of processing facilities (if Gap > 20%) –**

1. Public hearing for proposal of waste processing facility for North District was completed. Report has been prepared by SPCB-Sikkim and forwarded to SEIAA for review.
2. 18 NGOs have been selected as outsource groups for collection Solid waste for Gangtok Municipal Corporation. Training of SHGs at Odhisha has been completed

3. Setting up of decentralized facilities viz. RRC/MRF in all ULBs is under progress.
4. 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.
5. Meeting with District Officials has been held for setting up of solid waste facility in newly formed district, Pakyong. 30 acres of land at Tunibotey has been acquired by UDD for establishing temporary waste processing facility
6. Selection & Inspection of land for construction of RRC/ MRF facility for Rangpo Nagar Panchayat (ULB) has been completed
7. Extensive outreach programme has been conducted by UDD, GoS to generate awareness of public of segregation of solid waste into bio-degradable, non bio-degradable and domestic hazardous waste;
8. Extensive outreach programme has been conducted by ULBs under UDD, GoS to generate awareness of public of segregation of solid waste;
9. Sensitization for preparation of bye-laws of rural areas has been completed.Bye-laws of 44-Legship GPU and Yuksam-Dubdi GPU under Geyzing District has been approved in their Gram Sabhas;
10. Notice regarding compulsory source segregation has been issued by the Office of Chief Secretary vid Ref. No. 133/CS/SKM/2022 dated 30/11/2022
11. District Collectors have been directed to identify vacant land in Class II and II bazaars for establishing decentralized waste processing centres
12. Steering Committee under Chief Secretary, GoS has been constituted for Legacy Waste Management in the State has been notified vide Ref. no. 135/CS/SKM/2022 dated 09/12/2022
13. State Government Departments has conducted 493 awareness programmes and 851 action events under various Themes under Mission Life Movement. The Details have been uploaded in Merilife portal created by MoEF&CC.
14. The Sikkim Non-Biodegradable Garbage (Control) (Repealing) Act, 2023 was notified vide GoS Gazette Extraordinary no.223 dated 22/06/2023.
15. Responsible Sanitation Authority (RSA) has been constituted.

16. District Level Special Task Force has been constituted to conduct awareness activities on Solid Waste Management Rules, 2016
17. For regular day to day solid waste management the Urban Development Department has started intensive IEC activities with effect from December 2022 on source segregation including miking, training to drivers and staff of garbage vehicles and door to door collection of dry waste /wet waste/ domestic hazardous waste separately. Public Notices were published for active participation of all types of waste generators duly citing duties of waste generators and segregation of waste into bio-degradable, non- biodegradable and domestic hazardous waste. Timings of waste collection during morning and evening have been made public and the waste collection schedule is being followed religiously. Awareness campaigns were organized for behavioral change including" Swachha Mashaal March" and "Safai Abhyan".Self Help Groups are being involved in awareness campaigns.
18. Waste audit of rural areas have also started by involving local NGOs like WWF. Plastic waste management units (PWMU) in rural areas being installed. Fifteen(15 nos.) blocks out of thirty-two (32 nos.) have already installed PWMU and are currently functional. Similarly, all the blocks have Resource Recovery Centres which are functional. More segregation sheds have been proposed in rural areas to manage the dry waste.
19. Rural Development Department has proposed a provision of Rs. 12.56 crore in annual action plan 2023-2024 under SBM (Grameen) for restoring gaps in solid waste management in rural areas..
20. Urban Development Department (UDD)has prepared and submitted a project titled "Upgradation, Refurbishment and Augmentation of Solid Waste Management at Martam, Shipsu and Rindang Treatment Facilities, Sikkim" amounting to Rs. 80 crores only to NESIDS/NLCPR which has been given in principle approval during March 2023 and is being pursued for sanction.
21. The formal contract agreement for the execution of Bio-Mining of legacy waste at Martam landfill at an estimated cost of Rs.22.00 crore has been concluded with

M/s Greentech Environ Management Pvt. Ltd. and GNS Builders-Gangtok (Joint venture) on 18.10.2023 and work has commenced.

22. Windrows have been created at Solid waste management facility site for drying and screen for bio-mining has been deployed at the site.
23. Initiatives have been taken to engage Self HELP Groups (SHGs) through National Urban Livelihood Mission (NULM) for making reusable carry bags made out of old clothes.
24. To augment the solid waste processing facilities in the State, Material Recovery Facilities are being constructed in different locations of Urban Local Bodies. The status of the constructed MRF are as under:

Sl.No.	Name of ULB	Status
1.	Gangtok Municipal Corporation	completed
2.	Nayabazar-Jorethang Nagar Panchayat	completed
3.	Mangan Nagar Panchayat	80 %completed
4.	Singtam Nagar Panchayat	40 %completed
5.	Rangpo Nagar Panchayat	
6.	Namchi Municipal Council	i. Temporary MRF exists ii. Another site identified and process of diversion is going on
7.	Gyalshing Nagar Panchayat	Land identified in convergence with RDD.

- **No. and capacity of C&D waste processing plants in TPD (existing, proposed and under construction) –** Sikkim State Construction & Demolition Waste Policy has been notified vide GoS Gazette Extraordinary No. 23 dated 28/01/2023. Selection of suitable sites for disposal of C&D waste has been assigned to Forest & Environment Department & Land Revenue & Disaster Management Department.
- **Total no. of wards, no. of wards having door to door collection service, no. of wards practicing segregation at source –**
    a. Door to Door: 51 wards (100%)
    b. Source segregation: 48 wards (94.33%)

- **Details of MSW treatment facilities proposed and under construction (no., capacity, and technology) –** Nil.
- **No. and area (in acres) of uncontrolled garbage dumpsites and Sanitary Landfills -** Nil
- **No. and area (in acres) of legacy waste within 1km buffer of both side of the rivers** – Proposal for preparation of DPR for bio-mining has been granted
- **No. of drains falling into rivers and no. of drains having floating racks/screens installed to prevent solid waste from falling into the rivers –** 11 in Gangtok. Wire mesh installed in all the 11 drains. Pre Monsoon cleaning of drains has been completed in Gangtok. The wire mesh from drains was removed as collection of water due to clogging of the drain would have resulted in slope failure.

Status of ULB wise Management of Solid Waste

ULB	Total MSW generation in TPD	Total MSW being processed in TPD*	Existing MSW facilities	Utilization Capacity of the existing MSW facilities	Proposed MSW Facilities & Completion Timeline
Gangtok Municipal Corporation	48	17	1 (common for Singtam and Rangpo as well)	87927 cum	Nil
Gyalshing Municipal Council	2.0	0.5	1 (common landfill for Namchi & Nayabazar-Jorethang)	15000cum	Nil
Mangan Nagar Panchayat	1	0.5	1 (landfill)	Information not received	1 – Public hearing completed

				from ULB	for setting up of MSW facility at Ringdang, Mangan District. Report prepared by SPCB has been forwarded to SEIAA. SEIAA members have been notified on Sept., 2023
Namchi Municipal Council	4.8	1.5	1(common landfill for Geyzing & Nayabazar-Jorethang)	15000cum	Nil
Rangpo Nagar Panchayat	4.8	1.25	1	Information not received from ULB	Nil
Singtam Nagar Panchayat	2.7	0.5	1	Information not received	Nil

				from ULB	
Nayabazar-Jorethang Municipal Council	5.6	2.5	1(common landfill for Geyzing & Namchi)	15000cum	Nil

*Note: With regard to the total MSW processed, the figure denotes the waste processed in compost plants only. Recyclable waste such as plastic, glass, paper, aluminum foil is channelized to recyclers.

V. Bio-medical Waste Management:

- **Total Bio-medical generation -** 562 kg/day (2022-23 annual report)
- **No. of Hospitals and HCFs who have been granted authorisation:** 317
- **Status of Treatment Facility/ CBMWTF:** captive treatment in all facilities.

VI. Hazardous Waste Management:

- **Total Hazardous Waste generation (2022-23 Annual Report):**
    1. 1786.63 MT of incinerable Hazardous waste for the year 2022-23
    2. 30.378 MT of recyclable waste for the year 2022-23
- **No. of Industries generating Hazardous waste:** 49
- **Treatment Capacity of all TSDFs:** There are no TSDF in the state. All HW generated in the transported outside the state for treatment and disposal. The SPCB-Sikkim has also granted permission to facilities in Assam, Jharkhand and Chattisgarh for co-processing and Refineries in West Bengal for recycling.
- **Avg. Quantity of Hazardous waste reaching the TSDFs and Treated –** 391.97 MT transported to Haldia for treatment & disposal, 1000.99 MT transported to Assam and 396.6 MT to Meghalaya for co-processing in cement plants and 27.74 MT transported to West Bengal for recycling in the year 2022-23.
- **Details of on-going or proposed TSDF:** Selection of land for CHWTSDF is under process.

VII. Plastic Waste Management:

- **Total Plastic Waste generation:** 84.6 tonnes per annum (2022-23 annual report)

- **Treatment/ Measures adopted for reduction or management of plastic waste:**
    1. 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.
    2. Fine mechanism is notified under state bye-laws and The Sikkim Non-Biodegradable Garbage (Control) Act, 1991. Also notification no. 344 dated 13/08/2019 has been notified for ban on sale and use of plastic having less than 50 micron thickness and single use plastic.
    3. 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.
    4. 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.
    5. In addition, no application has been received by the SPCB-Sikkim till date for establishment of manufacturer of plastic bags.
    6. NOC has been granted to NGOs to collect domestic plastic waste and channelize to appropriate recyclers.
    7. Bins have been installed in the collection vehicles for separated collection of recyclable plastic by registered scrap collectors.
    8. Utilization of Plastic for road construction project has been initiated by NHIDCL in Rorathang area, Pakyong District. (Gangtok Municipal Corporation – 1101 kg, Namchi Municipal Council – 300 kg, Nayabazar-Jorethang Nagar Panchayat – 500 kg, Gyalshing Nagar Panchayat -312 kg)
    9. SPCB-Sikkim is in receipt of application from seven brand owners for setting up collection facility in coordination with ULBs.
    10. SPCB-Sikkim has initiated registration of local plastic packaging brand owners for which market survey has started.

11. Directions have been issued to industries for registration of producers, importers and brand-owners under the Plastic waste Management Rules, 2016.
12. Compilation of registration of brand owners of single use plastic (SUP) is under process.
13. Committee has been constituted for steering the modalities of carrying out field and market surveys for phasing out SUPs.
14. State Level Task Force for elimination of SUPs and preparation of comprehensive action plan in mission mode has been constituted.
15. As per the directions of the CPCB vide F. No. B-17011/UPC-II-PWM(SUP)/2021/4212 dated 29/07/2021 the SPCB has conducted sensitization and capacity building programme for phasing out of SUPs to various stakeholders and councilors of ULBs.
16. Awareness Programme for PIBO, Distributor, Whole seller & Waste Management Agency on Extended Producers Responsibilty of Plastics was conducted by SPCB-Sikkim on 30/11/2021
17. State-wide Plastic Waste Awareness Week from 6th to 12th March, 2022 was launched at Samman Bhawan on 5th March, 2022 by the Hon'ble Chief Minister of Sikkim Shri Prem Singh Tamang.
18. Notice for prohibiting manufacture, import, stocking, distribution sale and use of SUP was brought out by SPCB on 10/03/2022 in local newspapers.
19. Notice brought out by SPCB on 10/03/2022 to inform all concerned that CPCB has setup an exclusive centralized portal for registration PIBOs and PWP in local newspapers.
20. SPCB-Sikkim, has distributed awareness material for phasing out Single Use Plastics in English Poster for all Govt. schools, Nepali Poster from all Govt. Offices, Stickers for all Govt. and Private Vehicle, Pamphlets for each household in the State, Banner for all district forest check post, and radio jingles and awareness video for Social media platform.
21. The SPCB-Sikkim in association with Inner Wheel Club of Gangtok organized Women's Marathon on 27th March 2022 with a motto "I am Running to Say No To Single Use Plastic"
22. Meeting held by SPCB-Sikkim and Department of Commerce and Industries, GoS for promotion of eco-friendly bags
23. Meeting of the sub-committee for phasing out of SUP conducted.

24. Meeting with newly elected councilors for implementation of Action Plan for phasing out of SUP conducted.
25. Various Waste Management agencies have been approached By UDD, GoS for recycling of plastic waste under the EPR provisions.
26. Byelaws on Plastic waste Management for ULBs have been notified vide GoS Gazette No. 226 dated 07/06/2022
27. Action Plan on Plastic Waste Management for ULBs have been notified vide GoS Gazette No. 227 dated 07/06/2022
28. Public notice for prohibiting, production stocking, distribution, sale & used of SUPs have been issued by ULBS.
29. Market inspection & confiscation of banned SUPs is being carried out by ULBs and state level.
30. Self Help groups, NGOs, club/association etc are being involved in IEC regarding plastic waste management & SUP alternatives.
31. The SPCB-Sikkim conducted co-ordination meeting with UDD and ULBs regarding the prohibited SUPs on 06/06//2022.
32. Gangtok Municipal Corporation in coordination with SPCB-Sikkim and Urban Development Department conducted awareness campaign with the business community regarding the impending ban on SUP items on 16/06/2022.
33. Meeting conducted with all enforcement authorities on 11/07/2022 viz DCs, SPs, SDMs, BDOs, MEOs of ULBs, UDD officials and RDD officials regarding SUP Compliance monitoring Portal and SUP Grievance App.
34. SPCB-Sikkim established control room, helpline no for banned SUP items monitoring.
35. Daily report on SUP is being updated in the CPCB Monitoring Module for Compliance of SUP;
36. As per the directions of the CPCB, weekly joint inspection of various ULBs is being conducted for enforcement of SUP ban.
37. Meeting with Brand owners, PIBOs, Manufacturers, WMA regarding implementation w.r.t. EPR on Plastic Waste Management conducted on 03/12/2022;
38. Inspection on effectiveness of implementation of ban on SUP was conducted in various ULBs such as Namchi, Geyzing, Singtam, Rangpo and Mangan. Challans and fines were levied on non compliant proprietors;
39. Consent to establish has been granted to proprietor for setting up manufacturing units for non woven bags in the state.
40. Application for consent for manufacturing unit of compostable bags has been received by SPCB-Sikkim

41. Notice has been issued by SPCB regarding procurement of plastic packaging materials/products by commercial establishments;
42. Notice has been issued by SPCB to all industrial units regarding compliance to Centralized Extended Producers Responsibility;
43. Directions has been issued to ULBs by UDD, GoS regarding inspection mechanism on implementation of banned SUP items;
44. Swachh Bharat Mission(U) meeting conducted on 24/05/2023;
45. Circular for Government Departments to avoid using flex/hoardings/banners of thickness less than 100 microns has been decided under PW Management & handling (amendment) Byelaws, 2022;
46. Inspection of flex and flex material printing establishments in ULBs has been initiated.
47. World Environment Day on the Theme Beat Plastic Pollution was celebrated by F&ED, GoS and the programme was attended by Hon'ble Chief Minister of Sikkim.
48. District Monitoring Committee has been constituted.
49. Establishment of border check post point to ensure there is no cross boundary movement of banned SUP across state.
50. Alternatives like drinking water vending machines have been installed by the ULBs for public convenience.

VIII. **Details of Alternate Treatment Technology being adopted by the State/UT:** none

IX. Identification of polluting sources including drains contributing to river pollution and action as per NGT order on in-situ treatment:

Inventorisation of non point sources such as Hotels & Commercial establishments under the directions of the Hon'ble NGT in the matter of O.A. 400/2017 Westland Green Farms Vs. Union of India & Ors which was taken up by SPCB has been completed. The inventory has been submitted to CPCB. The data submitted was for establishments that were open and operating during lockdown. The monitoring for remaining enterprises has been stalled due to resurgence of COVID-19 cases although the matter has been disposed off by the Tribunal. Respective licensing authorities have also been informed.

X. Details of Nodal Officer appointed by Chief Secretary in the State/UT:

Ms. Kusum Gurung, SFS, Joint Director cum Nodal Officer

SPCB-Sikkim & Environmental Monitoring Cell (Office of the Chief Secretary)

XI. **Details of meetings carried under the Chairmanship of Chief Secretary in the State/UT:** none

XII. Latest water quality of polluted river, its tributaries, drains with flow details and ground water quality in the catchment of polluted river:

National Water Monitoring Programme data for January, 2024

Sl. No.	Parameters	River/Station Code			
		Chungthang-Teesta (1801)	Maneykhola (1803)	Ranichu (1806)	Rangit-Triveni (2034,2035,2036,2037,2038) - Average
1.	**pH**	7.1	7.2	7.1	7.1 (approx.)
2.	**Conductivity µmhos/cm**	94	111	118	127(approx.)
3.	**NO_3-N mg/l**	1.3	1.6	1.4	2.1(approx.)
4.	**D.O. mg/l**	8.1	8.2	8.1	8.7(approx.)
5.	**B.O.D. mg/l**	2.0	1.8	2.1	2.0(approx.)
6.	**T. Coliform MPN/100ml**	54	41	51	41(approx.)
7.	**F. Coliform MPN/100ml**	23	25	31	30(approx.)
8.	**TSS mg/l**	24	21	26	24(approx.)
9.	**TDS mg/l**	22	19	23	22(approx.)

XIII. Ground water regulation:

All industries that are abstracting ground water have been granted permission by Central Ground Water Authority. No new application for borewell has been received

from any industrial unit. Guidelines for preparation of GIS based water conservation plans and inventory of water bodies in the districts under the Jal Shakti Abhiyan: Catch the Rain Campaign. (JSA:CTR) campaign has been forwarded to the concerned authorities for information & onward action.

SPCB-Sikkim has directed all industries abstracting ground water to conduct water quality analysis by NABL accredited laboratories on quarterly basis and submit the same to the Board.

Co-ordination meeting was held by RDD, GoS regarding survey of area where ground water abstraction is being practiced.

State Level Committee has been formed under Water Resources Department, GoS to monitor & regulate Ground water abstraction

Nodal Department – Water Resources Department, GoS

XIV. Good irrigation practices being adopted by the State:

Utilization of ground water for agricultural purposes is not practiced in the state. Dhara Vikas or spring shed development under the Rural Development Department programme has been focusing on the dry areas for effective use of rain water. Water Resource Department is executing 156 Nos. of Surface Minor Irrigation (SMI) Schemes under PMKSY (AIBP) in the State of Sikkim, sanctioned under the Ministry of Water Resources, Ganga Rejuvenation and River Development Government of India as per the information provided by Water Resources Department, Government of Sikkim.

The Rural Development Department has identified 203 sites for Mission Amrit Sarovar and 199 sarovars have been completed till date.

XV. Rain Water Harvesting:

The NOC issued by CGWA for abstraction of ground water includes condition for installation of rain water harvesting system by the industrial units. The land survey have been conducted by CGWA officials but the installation of said system is underway for all industries. In the matter of O.A. No. 325/2015 Lt. Col. Sarvadaman Singh Oberoi Vs. UOI, the Rural Development Department has carried out the following activities:

1. Construction of 1489 water harvesting tanks of capacity 40 KL in 13 drought prone areas under National Adaptation Fund for Climate Change (NAFCC).
2. Construction of 72,900 water harvesting structures for rainwater recharge of 4374 ponds
3. Work for revival of 7 hilltop lakes have been under taken out of which 4 have been completed and 3 are under process

XVI. Demarcation of Floodplain and removal of illegal encroachments:

There are no flood plains in the state of Sikkim.

XVII. Maintaining minimum e-flow of river:

E-Flow meters have been installed in the following Hydro Electric Projects (HEPs) of the four river stretches:

a)Maney Khola (Adampool to Burtuk Stretch) – NO HEPS in this stretch

b) Rangit River (NHPC dam site to Triveni) :96 MW Jorethang Loop HEP, Namchi District & 97MW Tashiding HEP, Geyzing District

c)Rani Chu (Namli to Singtam): 510 MW Teesta Stage V, Balutar, Gangtok District & 115MW Madhya Bharat Power Corp. Ltd., Nimtar, Gangtok District

d) Teesta (Melli to Chungthang): 99MW Chujachen HEP (2 nos), Pakyong District, 1200 MW Teesta Stage II HEP Chungthang, Mangan District, 96MW Dikchu, HEP Mangan District

The SPCB-Sikkim has issued directions under Section 5 of the EPA, 1986 to all HEPs vide F. No. 3007/SPCB/925 dated 01/10/2022. The directions ensures installation of e-flow meter along with stipulated minimum discharge rate of each HEP separately.

The HEPS 510 MW Teesta Stage V, Balutar and 1200 MW Teesta Stage II HEP Chungthang has been severely damaged due to flash flood.

XVIII. Plantation activities along the rivers:

The Environment & Soil Conservation Division, Forest & Environment Department has submitted action plan for further conservation activities that shall take place under the guidance of River Rejuvenation Committee. Plantation along with engineering works has been proposed for rejuvenation of the four polluted river stretches.

Action Plan regarding the same has been included in delisting report submitted to MoJS.

XIX. **Development of Biodiversity Park:** Matter has been apprised and information awaited from implementing department.

XX. **Reuse of Treated Water:**

All industries requiring ETP are directed to maintain Zero Liquid Discharge in their premises. Treated effluent is to be utilized in cooling towers, evaporation or flushing purposes. To ensure that no effluent is discharge all pharmaceutical units in particular have installed CCTV in drain outlets of their premises as per the directions of the SPCB-Sikkim and footage is submitted to SPCB on weekly basis.

The SPCB is also in process of ensuring that all industries have installed RO system with Multi Effect Evaporator within six months.

Training programme conducted for all water based industries on 01/06/2022 by SPCB in coordination with Knowledge Lens Innovative Labs, Chennai on O&M of Online Continuous Effluent Monitoring System.

On-site training programme on effluent management & treatment was conducted by SPCB for various departments, GoS such as Health & Family Welfare, PHE, Animal Husbandry, Sikkim Milk Unions and Food preservation factory on 03/06/2022.

XXI. **Model River being adopted by the State & Action Proposed for achieving the bathing quality standards:** Maney Khola, East Sikkim

The River Rejuvenation Committee has been notified as Nodal Agency for protection of all water bodies in the State by Govt. of Sikkim vide Ref No. 205/GOS/F&ED/SECY dated 21/01/2021. First meeting for the same was held on 28/01/2021. Status Report on Implementation of Action plan has been sought from line departments for further submission to the CPCB.

Action Taken Report on Status of Implementation of action plans submitted in compliance to the Hon'ble NGT orders in O.A. 673/2018 in the matter of 'News item published in the Hindu authored by Shri Jacob Koshy titled ' More River stretches are now critically polluted: CPCB', with Dr. Tudi Indrasena Reddy & Ors. Vs. UoI & Ors. for delisting of the four polluted river stretches in the state of Sikkim has been submitted on 02/08/2021. In the recent Central Monitoring Committee meeting held on 12.09.2023 it is reported that at present no river stretches have been identified as polluted river stretches.

As per the directions of the MoEF&CC, Public notice has been issued in local newspapers on Idol Immersion guidelines before festival/puja season.

Pre, During and Post festival monitoring of rivers could not be carried out due to GLOF.

XXII. **Status of Preparation of Action Plan by the 13 Coastal States:** Not applicable.

XXIII. **Regulation of Mining Activities in the State/UT:** overseen by Department of Mines & Geology. Collection of loose boulders and loose sand are being undertaken under the supervision of the Department of Forest & Environment, Government of Sikkim.

XXIV. **Action against identified polluters, law violators and officers responsible for failure for vigorous monitoring:**

1. Grievances have not been received in the month of January, 2024 in the NMCG portal.
2. Grievances related to water pollution have not been received in public grievance portal of SPCB-Sikkim for the month of January, 2024.