Email:spcbsikkim@gmail.com

आज़ादी का अमृत महोत्सव

STATE POLLUTION CONTROL BOARD-SIKKIM

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

F. No.1026/SPCB/ 5007 & 5008 Dated: 21/2/2022

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, 2022 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 December, 2021 with respect to the state of Sikkim as per the above cited subject.

Submitted for your kind information and onward process please.

Thanking you

Yours faithfully,

(Kusum Gurung, SFS)
Joint Director
State Pollution Control Board-Sikkim

Copy to:

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

State Pollution Control Board ★ Forest & Environment Deptt. ★ Govt. of Sikkim

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)
For the State of Sikkim
Month – January, 2022.

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:

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

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

9.	Gangtok Zone II, Lower Syari	1.60

b) **Capacity Utilization of existing STPs:** update awaited from the department after household connectivity of STPs located at Rangpo and Gangtok Zone II is completed.

c) **MLD of sewage being treated through Alternate technology:** Nil

d) **Gap in Treatment Capacity in MLD:** The total capacity of STPs located in urban areas is 22.02 MLD currently. There treatment capacity is currently higher than the sewage generation i.e. 18.79 MLD. In rural areas the gap in treatment capacity is 28.89 MLD. However most households do have individual septic tank connectivity to ensure untreated sewage is not discharged into the open. In implementation of Swacch Bharat Mission Gramin Phase II, installation of septic tanks for individual households in 64 villages are under process. Work order to renovate STPs in Gangtok and extension of sewer network and extension of sewer network to uncovered areas in Gangtok has been awarded to contractor. Shri B.B. Burman, Advisor, NCRD, MoJS visited Gangtok during September, 2021 to assess the current status of existing and proposed STPs in Gangtok. Minutes of the Meeting of the visit has been forwarded to the Advisor by PHED department. 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.*** Work to renovate STPs in Gangtok and extension of sewer network uncovered areas in Gangtok has commenced.

e) No. of Operational STPs: 9

f) **No. of Complying STPs:** 9

g) **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	90	1.Operational 2. Rehabilitation & extension wok proposed under NRCP has commenced 3. Work for construction of holding tanks in progress. Physical progress 29%. 4. Work mentioned at Sl. No. 2 & 3 to be completed by November,2024 Alternatively, feasibility to divert flow of STPs for Zone I at Adampool is also being explored, in case of breakdown or	Compliant.
2.	Gangtok Zone I, Adampool	4.69			

				during maintenance of STP	
3.	Gangtok Zone I, Ranipool	1.27	85	Operational	Compliant
4.	Gangtok Zone IV, Lower Sichey	3.90	85	Operational. Rehabilitation work for STP has been tendered and holding tanks has been proposed to facilitate plant maintenance. Physical progress 20%	Compliant
5.	Singtam	0.66	80	Operational	Compliant
6.	Melli	0.50	80	Operational. Renovation & rehabilitation work completed	Compliant
7.	SMIT, Majhitar (private facility)	0.48	70	Operational	Compliant
8.	Rangpo	1.40	NA	Operational. Dry & wet run completed and ready to receive	Compliant

				load. Full commission of the system under process. Physical progress 5%	
9.	Gangtok Zone II, Lower Syari	1.60	NA	Dry & wet run completed. Ready to receive load. Process for house connection has started .Physical progress 6%	Compliant

Note: Work order for OCEMS for 5 nos of STPs has been awarded by the Government. Installation of OCEMS in Gangtok Zone I – 4.69 MLD is under process.

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	66.0	Work delayed due to land acquisition formalities. Pandemic related measures and Civil suit regarding ownership of part of the land acquired	March 2023

				for STP	

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	Process for land acquisition for construction of STP underway	December 2023
2.	Jorethang	1.6	Process for Stage I Forest Clearance completed. Stage II under process	December 2023
3.	Geyzing	1.80	DPR completed	2028
4.	Rabong	1.50	DPR completed	2028
5.	Soreng	1.0	Survey & investigation	2028
6.	Mangan	0.98	PFR submitted to NRCD. DPR completed	2027
7.	Chungthang	0.72	DPR completed and submitted to NRCD and the same is under vetting process	2023

IV. Details of Industrial Pollution:

- **No. of industries in the State:** 704 which includes manufacturing, service industries, DG sets as per the Classification of Industries prepared via CPCB direction vide B29012/ESS (CPA)/2015-16 dated 07/03/2016 (OCMMS data, SPCB-Sikkim , October 2020)
- **No. of water polluting industries in the State:** 64
- **Quantity of effluent generated from the industries in MLD:** 2.66 MLD

- **Quantity of Hazardous Sludge generated from the Industries in TPD:**
    1. 5.24 MT (incinerable)
    2. 0.073 KLD (recyclable)
- **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 – 3.405 MLD
    c) Under construction/proposed – 1 (0.02 MLD)
- **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.				

<u>V. Solid Waste Management:</u>

- **Total number of Urban Local Bodies and their Population:** 7 nos.
  Population - 153,578 (Census of India, 2011)
  1.74 lakhs (UIDAI data, May, 2020)
- **Current Municipal Solid Waste Generation :** 71.9 TPD (2020-21 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), biomethanation, MRF etc:**
    a) 50 TPD capacity compost plant installed at Martam Landfill

b) Organic Waste Converter at Lal Bazar 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 7 KL installed at Gyalshing Nagar Panchayat
f) Requisition for construction of new MRF centres have been received from all of the 07 ULBs and the proposal for the same is under progress

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

  a) Selection of RDF firm under progress;

  b) Phasing out of Poly propylene bags;

  c) Proposal for waste processing facility for North District is being reviewed by SEIAA.

  d) Plan for dealing with untreated and processed solid waste is being taken up under Swacch Bharat Mission (U) 2.0. Draft expression of Interest for strengthening of waste processing facility under SBM (U) 2.0 has already been shared with Gangtok Municipal Corporation for issuance of the same.

- **No. and capacity of C&D waste processing plants in TPD (existing, proposed and under construction) –** nil. State Action plan for C&D waste under process for approval.

- **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** – selection of firm for bio-mining is under way

- **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.

Status of ULB wise Management of Solid Waste (as per SPCB-Sikkim annual report 2020-21)

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	50	15	1 (common for Singtam and Rangpo as well)	87927 cum	Nil
Geyzing Municipal Council	3.5	0.5	1 (common for Namchi & Nayabazar-Jorethang)	15000cum	Nil
Mangan Nagar Panchayat	0.70	0.25	1	Information not provided by the ULB	1 – EIA under process
Namchi Municipal Council	4.0	0.6	1	Information not provided by the ULB	Nil
Rangpo Nagar Panchayat	6.0	1.0	1	Information not provided by the ULB	Nil

Singtam Nagar Panchayat	2.7	Nil	1	Information not provided by the ULB	Nil
Nayabazar-Jorethang Municipal Council	5.0	3.0	1	33597 cum	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. <u>Bio-medical Waste Management:</u>

- **Total Bio-medical generation:** 477.564 kg/day (2020-21 annual report)
- **No. of Hospitals and HCFs who have been granted authorisation:** 273
- **Status of Treatment Facility/ CBMWTF:** captive treatment in all facilities.

VI. <u>Hazardous Waste Management:</u>

- **Total Hazardous Waste generation (2020-21 Annual Report):**
    1. 1915.19 Tonnes of incinerable Hazardous waste for the year 2020-21
    2. 26.98 KL of recyclable waste for the year 2020-21
- **No. of Industries generating Hazardous waste:** 49
- **Treatment Capacity of all TSDFs:** There are no TSDF in the state. All HW generated in the state is transported to Haldia, West Bengal for disposal. The SPCB-Sikkim has also granted permission to cement plants in Assam and Meghalaya for co-processing and Refinery, West Bengal for recycling.
- **Avg. Quantity of Hazardous waste reaching the TSDFs and Treated –** 1394.494 MT transported to Haldia for treatment & disposal, 645.721 MT transported to cement plant in Assam for co-processing and 26.98 KL transported to West Bengal for recycling in the year 2020-21.

- **Details of on-going or proposed TSDF:** The Department of Commerce & Industry, Government of Sikkim has released 90% of the cost for acquisition of land selected for CHWTSDF.

VII. Plastic Waste Management:

- **Total Plastic Waste generation:** 82.75 tonnes per annum (2020-21 annual report)
- **Treatment/ Measures adopted for reduction or management of plastic waste:**
    a) 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.
    b) 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.
    c) 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.
    d) 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.
    e) In addition, no application has been received by the SPCB-Sikkim till date for establishment of manufacturer of plastic bags.
    f) NOC has been granted to NGOs to collect domestic plastic waste and channelize to appropriate recyclers.
    g) Bins have been installed in the collection vehicles for separated collection of recyclable plastic by registered scrap collectors.
    h) 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)

i) SPCB-Sikkim is in receipt of application from seven brand owners for setting up collection facility in coordination with ULBs.

j) SPCB-Sikkim has initiated registration of local plastic packaging brand owners for which market survey has started.

k) Directions have been issued to industries for registration of producers, importers and brand-owners under the Plastic waste Management Rules, 2016.

l) Compilation of registration of brand owners of single use plastic (SUP) is under process.

m) Committee has been constituted for steering the modalities of carrying out field and market surveys for phasing out SUPs.

n) State Level Task Force for elimination of SUPs and preparation of comprehensive action plan in mission mode has been constituted.

o) 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.

p) Awareness Programme for PIBO, Distributor, Whole seller & Waste Management Agency on EPR of Plastics was conducted by SPCB-Sikkim on 30/11/2021

q) Comprehensive byelaws and action plan of all the 7 ULBs for plastic waste management has been prepared and is under process of approval

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 insitu 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, 2022

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	6.9	7.1	6.96
2.	**Conductivity µmhos/cm**	250	249	21	232.8
3.	**NO_3-N mg/l**	1.5	12.1	2.5	2.3
4.	**D.O. mg/l**	9.1	9.1	9.1	9
5.	**B.O.D. mg/l**	1.9	2.4	2.6	2.34
6.	**T. Coliform MPN/100ml**	120	155	200	157
7.	**F. Coliform MPN/100ml**	55	90	80	74

Currently no bore well or ground water abstraction is practiced in any of the catchment area on the polluted river stretches.

XIII. Ground water regulation:

Utilization of ground water for domestic purposes is not practiced in the state. 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.

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.

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, South Sikkim & 97MW Tashiding HEP, West Sikkim

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

d) Teesta (Melli to Chungthang): 99MW Chujachen HEP (2 nos), East Sikkim, 1200 MW Teesta Stage II HEP, 96MW Dikchu, HEP North Sikkim

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.

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, irrigation of green belt, 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.

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

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

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, 2022 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, 2022