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# STATE POLLUTION CONTROL BOARD

DEPARTMENT OF FOREST & ENVIRONMENT  
GOVERNMENT OF SIKKIM  
DEORALI - 737102

F. No. 1028/SPCB/16-20

Dated: 19/01/2020

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 November, 2020 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, 2020 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.



**National Mission for Clean Ganga**  
**Format for submission of Monthly Progress Report in the NGT Matter OA**  
**No. 673 of 2018 (in compliance to NGT order dated 24.09.2020)**  
**For the State of Sikkim**  
**Month – December, 2020.**

**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):

<b>Sl. No.</b>	<b>Town/Location</b>	<b>Capacity (MLD)</b>
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

- b) **Capacity Utilization of existing STPs:** 54.375 % (information provided by PHE Dept., Govt. of Sikkim)  
c) **MLD of sewage being treated through Alternate technology:** Nil

d) **Gap in Treatment Capacity in MLD:** 28.36 (including rural areas). However most household do have individual septic tank connectivity to ensure untreated sewage is not discharged into the open.

e) **No. of Operational STPs:** 7

f) **No. of Complying STPs:** 7

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

**Details of each existing STP in the State**

<b>Sl. No.</b>	<b>Location</b>	<b>Existing STP Capacity</b>	<b>Capacity Being Utilized (%)</b>	<b>Operational Status of STP</b>	<b>Compliance Status of STP</b>
1.	Gangtok Zone I, Adampool	8.0	100	Operational	Compliant
2.	Gangtok Zone I, Adampool	4.69	85	Operational	Compliant
3.	Gangtok Zone I, Ranipool	1.27	85	Operational	Compliant
4.	Gangtok Zone IV, Lower Sichey	3.90	85	Operational	Compliant
5.	Singtam	0.66	80	Operational	Compliant
6.	Melli	0.50	0	Operational	Compliant
7.	SMIT, Majhitar (private facility)	0.48	70	Operational	Compliant

**Details of under construction STPs in the State**

<b>Sl. No.</b>	<b>Location</b>	<b>Capacity of the plant in MLD</b>	<b>Physical Progress in %</b>	<b>Status of I&amp;D or House sewer connections</b>	<b>Completion Timeline</b>
1.	Gangtok Zone III, Tathangchen	3.25	7.0	Under construction	December 2022
2.	Gangtok Zone II, Lower Syari	1.60	95.0	Under commissioning	January, 2021
3.	Rangpo	1.40	95.0	Repair and retrofitting under process.	March, 2021

**Details of proposed STPs in the State**

<b>Sl. No.</b>	<b>Location</b>	<b>Capacity of the STP proposed in MLD</b>	<b>Status of Project (at DPR Stage/ Under Tendering/ Work to be Awarded)</b>	<b>Likely Date of Completion</b>
1.	Namchi	3.63	Joint Inspection conducted.	December 2022
2.	Jorethang	1.70	Process initiated for land diversion under FCA, Forest & Environment Department	December 2022
3.	Geyzing	1.80	Preparation of DPR	2028
4.	Rabong	1.50	Survey & investigation	2028
5.	Soreng	1.0	Survey & investigation	2028
6.	Mangan	0.98	Survey & investigation	2027
7.	Chungthang	0.72	DPR submitted to Ministry for funding	2026

#### IV. Details of Industrial Pollution:

- **No. of industries in the State:** 624 which includes manufacturing & service industries 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:** 63
- **Quantity of effluent generated from the industries in MLD:** 1.926 MLD
- **Quantity of Hazardous Sludge generated from the Industries in TPD:** 4.71 (2019-20 inventory)- incinerable only.
- **Number of industrial units having ETPs:** 63
- **Number of industrial units connected to CETPs:** nil
- **Number and total capacity of ETPs (details of existing/ under construction / proposed)**
  - a) Total no. – 63
  - b) Capacity - 3.385 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.  
**Popluation -** 153,578 (Census of India, 2011)  
1.74 lakhs (UIDAI data, May, 2020)
- **Current Municipal Solid Waste Generation :** 77.0 TPD (approx. as provided by UDD)

- **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), bimethanation, MRF etc:**
  - a) 50 TPD capacity compost plant installed at Martam Landfill
  - b) Organic Waste Converter at Lall Bazar Vegetable Market- 1 ton per day capacity
  - c) 25 kg capacity Organic Waste Converter installed at Vegetable Market, Mangan Nagar Panchayat
- **Action plan to bridge gap between Installed Capacity and Current Utilization of processing facilities (if Gap > 20%) –**
  - a) Proposal for RDF plant under process;
  - b) Phasing out of Poly propylene bags;
  - c) Proposal for installation of Paper recycling facility under process;
  - d) 30% of the waste comprising of glass bottles, PET bottles, card boards, plastic bags & iron scraps are being processed for recycling.
  - e) proposal for waste processing facility for North District is being reviewed by SEIAA.
- **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 :53 wards (100%)
  - b. Source segregation:50 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 2019-20)**

<b>ULB</b>	<b>Total MSW generation in TPD</b>	<b>Total MSW being processed in TPD*</b>	<b>Existing MSW facilities</b>	<b>Utilization Capacity of the existing MSW facilities</b>	<b>Proposed MSW Facilities &amp; Completion Timeline</b>
Gangtok Municipal Corporation	50	11	1 (common for Singtam and Rangpo as well)	Information awaited	Nil
Geyzing Municipal Council	3.5	Nil	1 (common for Namchi & Nayabazar-Jorethang)	Information awaited	Nil
Mangan Nagar Panchayat	0.6	0.06	1	Information awaited	1 – EIA under process
Namchi Municipal Council	4.60	Nil	1	Information awaited	Nil
Rangpo Nagar Panchayat	10	Nil	1	Information awaited	Nil

Singtam Nagar Panchayat	2.5	Nil	1	Information awaited	Nil
Nayabazar-Jorethang Municipal Council	3.5	1.5	1	Information awaited	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 are channelized to recyclers, E-waste collected are also channelized to appropriate facilities.

#### **VI. Bio-medical Waste Management:**

- **Total Bio-medical generation:** 482.651 kg/day (2019-20 annual report)
- **No. of Hospitals and Health Care Facilities:** 287
- **Status of Treatment Facility/ CBMWTF:** captive treatment in all facilities.

#### **VII. Hazardous Waste Management:**

- **Total Hazardous Waste generation:** 1722.42 TPA(2019-20 annual report)
- **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 of HW generated in the state from August, 2020.
- **Avg. Quantity of Hazardous waste reaching the TSDFs and Treated –** 1570.36 MT transported to Haldia for treatment & disposal in the year 2019-20. 272.515 MT of HW is denoted as storage at the end of the year.
- **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.

#### **VIII. Plastic Waste Management:**

- **Total Plastic Waste generation:** 5.87 tonnes per month
- **Treatment/ Measures adopted for reduction or management of plastic waste:**



- a) 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.
- b) In addition, no application has been received by the SPCB-Sikkim till date for establishment of manufacturer of plastic bags.
- c) NOC has been granted to NGOs to collect domestic plastic waste and channelize to appropriate recyclers.
- d) Bins have been installed in the collection vehicles for separated collection of recyclable plastic by registered scrap collectors.
- e) Utilisation of Plastic for road construction project has been initiated by NHIDCL in Rorathang area, East Sikkim

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

**X. 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, Now that the lockdown has been lifted completely, survey for remaining inventorisation has commenced.

**XI. 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)

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

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

NWMP data for December, 2020

Sl. No.	Parameters	River/Station Code			
		Chungthang-Teesta (1801)	Maneykhola (1803)	Ranichu (1806)	Rangit-Triveni (2034,2035,2036,2037,2038) - Average
1.	<b>pH</b>	7.0	6.7	6.5	6.9
2.	<b>Conductivity <math>\mu</math>mhos/cm</b>	245	195	185	214
3.	<b>NO<sub>3</sub>-N mg/l</b>	1.0	1.5	2.0	1.5
4.	<b>D.O. mg/l</b>	10.0	8.5	9.0	9.4
5.	<b>B.O.D. mg/l</b>	1.8	2.1	2.2	2.08
6.	<b>T. Coliform MPN/100ml</b>	105	140	195	129
7.	<b>F. Coliform MPN/100ml</b>	45	65	95	60

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

**XIV. 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.

**XV. 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

**XVI. 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 delayed due to COVID 19 situation.

**XVII. Demarcation of Floodplain and removal of illegal encroachments:**

There are no flood plains in the state of Sikkim.

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

**XIX. 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.

**XX. Development of biodiversity park:** information awaited from implementing department.

**XXI. 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.

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

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

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

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

Showcause notice issued to three pharmaceutical formulation industries for violation of Consent to Operate conditions. Response for the same is being awaited.