



SPCB Sikkim conducts inspection of Solid Waste Processing Facilities and Sewage Treatment Plants in the State



A team of the State Pollution Control Board - Sikkim headed by the Chairman, Dr. Thomas Chandy and Member Secretary, Dr. Gopal Pradhan visited waste management sites in East Sikkim on 27-11-2020 to make on the spot assessments of the efficiency of their functioning. The solid waste management site at Martam under Gangtok Municipal Corporation was inspected. Commissioner, GMC and other officers were present to explain the functions to the SPCB team. The team inspected the segregation of wastes and also the landfill. The segregation of plastic cans of varying sizes and other synthetic material at the secondary level was found to be satisfactory. The team interacted with the group which was concerned with transporting these segregated wastes out of the State. The issues faced by GMC in properly

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Highlights



Minimal Pollution during Diwali | SPCB Sikkim initiates Domestic Hazardous Wastes collection with GMC.



SPCB Sikkim officials inspect Covid care isolation centres and Health Care Facilities in the State and interact with stakeholders



Training on Bio-Medical Waste Management in collaboration with Health Department and Regional Directorate, Shillong, CPCB



Status of Ambient Air Quality (October 2020 – March 2021) and River Water Quality (March 2021) across the State

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managing the wastes were discussed. It was brought to light that the landfill is being used to dump solid wastes originating in several townships in East Sikkim apart from the nearby municipalities such as Singtam and Rangpo. This is leading to rapid filling up of the landfill which may not last its expected lifetime. Lack of segregation from these sources was also a problem. The solutions being considered by GMC were also discussed. The composting unit was found to be dysfunctional which had to be set right.

The team visited the Sewage Treatment Plants under the Public Health Engineering Department at Singtam and the under-construction plant at Rangpo. The Singtam STP being a functional unit was inspected in detail and the gaps in its working and maintenance were pointed out to the accompanying Engineers of PHED. The shortcomings were discussed with the officials in charge of the unit. The Rangpo unit construction was found to be progressing though behind schedule due to the Covid situation. A common laboratory for Rangpo and Singtam STPs is being set up here.

The SPCB team also visited the modern abattoir being constructed by the Animal Husbandry Department at Majhitar. The construction was observed to be way behind schedule which the officers of the concerned department said was due to late receipt of funds. The effluent treatment plant was under construction and pre-fabricated tanks and other components were found stocked at site. The slow progress and the lack of treatment of waste water in the temporary slaughterhouse were pointed out. It was directed that the ETP should be completed on priority and the temporary slaughterhouse waste water connected to it. The SPCB team comprised Joint Director, Chief Scientific Officer, Senior Scientific Officer, Executive Environmental Engineer and scientists.

SPCB-Sikkim also conducted inspection of solid waste processing facilities located at Sipsu in West Sikkim to check the status of compliance as per Solid Waste Management Rules, 2016. New landfill construction site was discussed with engineers, MEO and contractors.

SPCB Board officials inspect Covid Care Centres and Health Care Facilities



The Board officials inspected Covid care isolation centres and Health Care Facilities (HCFs) in the state to check the status of compliance as per Bio Medical Waste Management Rules, 2016 especially the management of Bio Medical Waste generated due to Covid 19 pandemic. The Board also interacted with the district authorities and in charges of isolation centres and HCFs and local tourism development committees/societies for adoption of COVID-19 waste management guidelines issued by Central Pollution Control Board (CPCB). The list of inspected isolation centres and HCFs are as follows:

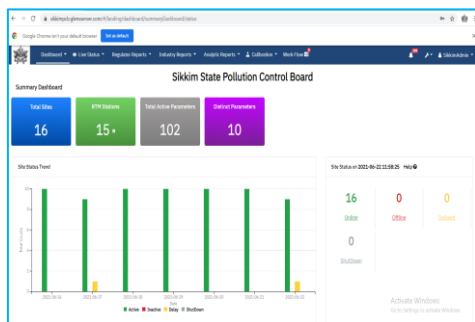
1. District Hospital Singtam-12/10/2020
2. Himalayan Pharmacy Boys Hostel, Majhitar-12/10/2020
3. SICUN, Assam Lingzey-12/10/2020
4. New STNM Hospital-13/10/2020
5. Namchi District Hospital-13/10/2020
6. SIRD-13/10/2020
7. SICB-13/10/2020
8. District Hospital, Geyzing-14/10/2020
9. Ayush Hospital, Geyzing-14/10/2020
10. Mangan District Hospital-15/10/2020.

The in-charges of above isolation centers and HCFs were directed to upload the data about waste generation in COVID-19 BMW app regularly. As per the record, 13827 kgs of COVID-19 BMW was generated during the period from October 2020 to March 2021.

The Board issued various directions to the concerned authorities for compliance based on the inspection reports.



On-boarding of G Lens App



A meeting was organized by SPCB with Plant Heads of pharmaceutical units of the state on 19th of February 2021 to discuss progress in regard to on-boarding of units on the "G Lens" real time effluent pollution monitoring platform App. The meeting took stock of the progress that was achieved till date and the obstacles to achieving participation by all the units. As an outcome of the meeting, it was decided that SPCB would conduct a training program for all the Environment, Health and Safety (EHS) officials of the pharma units to update them on the legal provisions and directions of various courts.

SPCB Meeting to Formulate Research Project



A meeting of expert members of the SPCB with the Chairman, Member Secretary and other officers of the SPCB and Environment Directorate of Forest and Environment Department was held on 4-02-2021 to chalk out the details of a research project aimed at pin pointing the sources of pollution of Maney Khola stream from the urban areas of Gangtok. The objectives of this research proposal would be to obtain a database of water pollution sources in select ULBs in East Sikkim and to provide a basis for focused water pollution abatement action to be taken up by concerned dept./agencies of the Government. The background of the research and the methodology were discussed in detail. It was decided to involve academic institutions for finalizing the project proposal.

Preparation for NABL Accreditation of SPCB labs



SPCB – Sikkim has started the process of getting its laboratories NABL accredited, especially the water laboratory. In preparation for this, the Board invited former NABL Lead Assessor Dr. S. K. Tyagi for discussions on fulfilling requirements and documentation for NABL accreditation. Dr. Tyagi visited the Board office on 24th and 25th March 2021. He held meetings with senior officials and laboratory staff and conducted awareness

sessions relating to pre-requisites for accreditation. In a meeting held under the chairmanship of Dr. Thomas Chandy, a timeline was drawn up leading to submission of proposal to NABL. The various preparatory steps include training on lab techniques, reporting, protocol development and document finalization. It was decided to conduct trainings on quality related matters through an experienced trainer.

Training on Bio-Medical Waste Management in collaboration with Health Department and Regional Directorate, CPCB, Shillong



Training of Administrative Head of New STNM Hospital, District Hospitals, CHCs, PHCs and doctors, nurses and officials/staff under Health and Family Welfare Department on Bio Medical Waste Management was conducted w.e.f. 18-03-2021 till 24-03-2021

The objective of the program was to train the senior medical officials as trainers so that they could impart training to their sub-ordinate officers and staff for effective management of the biomedical waste and securing compliance to BMW Rules, 2016.

The training program was divided into three sections viz.

- Techno-legal aspect of the BMW Management
- Session covering Hands-on Training on each stages of intramural waste handling, treatment, management and disposal.
- Interactive session.

SPCB Sikkim holds meeting with Rural Development Department



A coordination meeting was held on 10/02/2021 with a team of officials and Panchayat members from the Rural Development Department headed by Principal Secretary, Shri C.S. Rao in the Sidkeong Tulku Conference Hall of Forest and Environment Department. The meeting deliberated upon the following agendas:

- Status of Solid Waste Management in 16 model and other GPUs in terms of segregation and recycling of non-biodegradable wastes.
- Status of community compost pits in 32 blocks.
- Capacity building/ awareness generation regarding solid waste management as per SWM Rules, 2016.
- Setting up of Material Recovery Facility in the GPU areas to reduce load of Martam and Sipsu solid waste processing sites.
- Formulation of byelaws for SWM on the lines of the one for urban areas.
- Constitution of State Level Monitoring and campaign committee.
- Status of compliances made in various NGT matters.
- Submission of Annual Reports.

Virtual meet with Ministry of Jal Shakti in compliance to direction of Hon'ble NGT in O.A. No. 673 of 2018



SPCB Sikkim along with senior officers of the State Government headed by the Chief Secretary and Additional Chief Secretary cum PCCF, Forest & Environment Department attended the 8th Central Monitoring Committee Meeting with Ministry of Jal Shakti on 05/01/2021 to review the progress made by States on the Action Plans with regard to sewage, solid waste and industrial waste management, adoption of model river stretch by the State for pollution abatement, re-use of treated water and submission of the monthly progress report as per the prescribed format. The state of Sikkim was advised to complete the verification and finalization of DPR of proposed Sewage Treatment Plant (STP) and also suggested to explore alternative treatment technology such as Faecal Sludge Management.

Similarly, 9th meeting of Central Monitoring Committee in the NGT matter O.A. NO. 673 Of 2018 was held on 04/03/2021 under the chairmanship of Secretary, Ministry of Jal Shakti. SPCB Sikkim along with senior officers of the State Government headed by the Chief Secretary and ACS-cum- PCCF, Forest & Environment Department attended the meeting and presented the status report and progress made by the state of Sikkim on the various Action Plans.

SPCB Board Meeting held

December 10, 2020



A Board meeting of SPCB was held in Sidkeong Tulku Conference Hall of the Forest Secretariat on 10.12.2020 under the chairmanship of Dr. Thomas Chandy, Chairman SPCB Sikkim. Various agendas on administrative, accounts and technical issues were deliberated upon. The main highlights of the Board meeting are as follows:

- Putting up proposal for consideration of the Government for modification and notification of quorum to hold a Board meeting.
- Issues relating to BMW disposal.
- Approval of Annual Report 2019-2020.
- Fee for issue of authorization for Hazardous Waste (HW) Management.
- Action Plan for Environmental Compensation.
- Setting up of Treatment Storage Disposal Facility in the state for HW.
- Research relating to water pollution.
- Formation of sub- committees in the each district for SWM to be headed by respective Upadakhshayas.

Online training on data collection and reporting on hazardous and plastic wastes attended



SPCB Sikkim attended online training for standardized data collection and reporting on waste with focus on hazardous and plastic wastes in India conducted by United Nations Environment Programme (UNEP) from on January 28-30, 2021. The training was attended by Ms. Dichen Namdul, Deputy Director and Mr. Shamir R. Gurung, JSA, SPCB-Sikkim.

Online training in analysis of pesticides and other organic chemicals attended



Online training course in Analysis of Pesticides and Other Organic Chemicals in Environmental Samples was conducted by CSIR-Indian Institute of Toxicology Research, Lucknow on March 3-5, 2021. The same was attended by Mr. Shamir R. Gurung and Ms. Kalpana Sharma, JSA, SPCB-Sikkim.

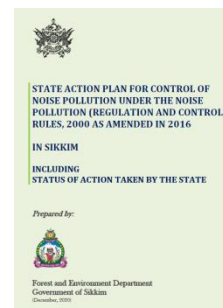
Video Conference with CPCB regarding Environmental Compensation Fund held



A video conference meeting was held with CPCB on 15/01/2021 regarding action plan to be formulated for utilization of Environmental Compensation Fund by the SPCB Sikkim in pursuance of OA No. 681 of 2018 in the Hon'ble National Green Tribunal. This was attended by JD (SPCB), Executive Environmental Engineer & Senior Scientific Officer. The SPCB has prepared an action plan and submitted to CPCB and it was approved by the Board in its meeting of 10.12.2020.

State Action Plan for control of Noise Pollution submitted

In compliance to the Hon'ble NGT, Principal Bench, New Delhi order dated 20.11.2019 in matter of Original Application No 681 of 2018 – News item published in "The Times of India" authored by Shri Vishwa Mohan titled "NCAP with multiple timelines to clean air in 102 cities to be released around August 15", wherein all States/ UTs were directed to prepare and submit State Action Plan for control of Noise Pollution to CPCB by 31.12.2020, SPCB Sikkim in collaboration with Forest and Environment Department, Government of Sikkim and in consultation with line departments of the state drafted state action plan for control of noise pollution in Sikkim and submitted to CPCB for approval.



SNIPPETS

Sikkim complies with direction issued by the Hon'ble Supreme Court:

A recent order dated 8-02-2021 of Hon'ble Supreme Court in Contempt petition (C) No. 655/ 2020 in Civil Appeal No. 1359 of 2017 has found that the State of Sikkim had complied with the direction of the Apex Court for appointment of suitable professionals as Chairperson and Member Secretary of SPCB-Sikkim as per the direction issued by the Hon'ble Supreme Court in the case of *TechiTagi Tara* judgment dated 22-09-2017.

Government approves RDF for SWM sites:

The State Government has approved a proposal to set up Refuse Derived Fuel units at the major solid waste processing sites of the State. SPCB Sikkim had decided in the Board meeting of September 2020 to send an advisory to the Government to set up RDFs to reduce the volume of solid wastes being landfilled. This would extend the life of the waste processing sites

SPCB Sikkim initiates Domestic Hazardous Wastes Collection with GMC



Hazardous Waste (HW) means any waste which by reason of characteristics such as physical, chemical, biological, reactive, toxic, flammable, explosive or corrosive, causes danger or is likely to cause danger to health or environment, whether alone or in contact with other wastes or substances.

Apart from industrial hazardous wastes, numbers of day-to-day domestic used items also fall in the category of HW and need to be disposed of responsibly by the households. These items include used batteries, paint tins, CFL bulbs, thermometers, deodorant spray cans and so on. These are already notified in the bye-laws of urban local bodies for effective solid waste management as per State Policy on Solid Waste Management Strategy published in gazette notification no 183 dated 29th April, 2019.

SPCB Sikkim provided bins to Gangtok Municipal Corporation (GMC) to be carried on each of their garbage collection trucks for segregation of domestic hazardous wastes. GMC brought out a notice in the newspapers for the information of the general public regarding the same. The segregation would also

be introduced in other municipal areas and rural areas.

SPCB Sikkim has signed a tripartite agreement with West Bengal Pollution Control Board and West Bengal Waste Management Limited for collection, transportation and disposal of incinerable hazardous wastes. The SPCB-Sikkim has also initiated co-processing of HW in cement plants located in Assam & Meghalaya. M/s Calcom Cement India Ltd., Dima Hasao District, Assam was issued an NOC by SPCB Sikkim to utilize HW generated by pharmaceutical units based in Sikkim for co-processing purposes for 2020-2021. Some recyclable waste such as spent oil generated in state of Sikkim is transported to Kundu Refinery, West Bengal.

The SPCB Sikkim has granted a total of 51 authorizations for generation collection storage and transportation of Hazardous waste.

Online authorization procedure through Online Consent Management and Monitoring System has been finalized and launch of same is scheduled in 2021-22.

As per the Annual report for the year 2019-20 the total quantum of HW generated in the state is 1722.42 MT.



GANGTOK MUNICIPAL CORPORATION DEORALI, EAST SIKKIM

NOTICE

This is for general information of all the residents of the Gangtok Municipal Corporation areas that the Gangtok Municipal Corporation in coordination with the State Pollution Control Board (Sikkim) has made arrangement for separate collection of household hazardous waste. All the Garbage Collection trucks under GMC are being provided with separate bin for collection of household hazardous waste.

Hence, the GMS request all the residents to kindly segregate such waste and hand it over separately to sanitation workers of the Corporation for separate transportation and treatment.

Sd/-
Municipal Commissioner
Gangtok Municipal Corporation

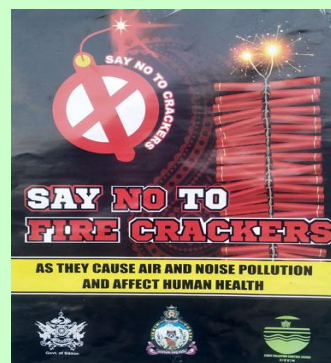
Minimal Pollution during Deepawali 2020

SPCB Sikkim carried out a special monitoring of ambient air quality including noise pollution during Deepawali festival at two locations in the state capital viz. Deorali, Forest Secretariat and M.G. Marg (Titanic Park) in Gangtok, East Sikkim for a period of 15 days between 7th of November, 2020 to 21st of November, 2020 to assess the level of pollution in three phases i.e pre-Deepawali, Deepawali and post-Deepawali.

As per the data recorded during the monitoring programme, it was found that the level of ambient air pollution was minimal and largely remained unaffected during the Deepawali festival. The figures of noise pollution monitored during the period were also within the National Standards as notified by the Central Government.

Ambient Noise monitoring at MG Marg: The noise level were monitored from 6pm till midnight at the site.

SN	Date	Noise level in dB(A) Leq	National Standard - dB(A)Leq
1.	9.11.2020 (Pre-Deepawali Day)	60.96	65 (Day) 55 (Night)
2.	14.11.2020 (Deepawali Day)	57.39	



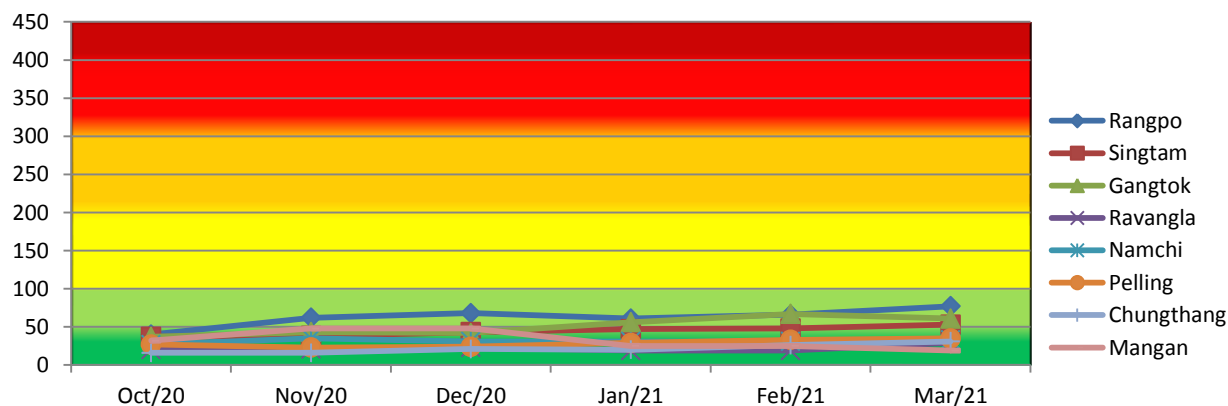
In keeping with the Covid protocol, SPCB Sikkim carried out awareness through print and electronic media regarding the harmful effects of firecrackers bursting. Posters regarding this were also displayed across the State.

Monthly AQI of Sikkim Recorded from Eight Air Quality Monitoring Stations of Sikkim: October 2020– March 2021

State Pollution Control Board Sikkim has been conducting ambient air quality monitoring under the National Air Monitoring Programme in eight stations in the state. As per the comparative analysis of the data generated for the average air quality index from October 2020 to March 2021, Sikkim State is well within the permissible limits and have been mostly under 'Good' category of AQI health index.

SN	Name of Station	Monthly AQI for the Year 2020-21					
		October	November	December	January	February	March
1	Rangpo, East Sikkim	40	62	68	61	66	77
2	Singtam, East Sikkim	37	38	43	47	48	53
3	Deorali, East Sikkim	37	43	42	56	67	61
4	Ravangla, South Sikkim	20	21	23	19	19	29
5	Namchi, South Sikkim	27	35	31	31	31	33
6	Pelling, West Sikkim	27	23	24	29	33	35
7	Mangan, North Sikkim	32	48	48	25	25	19
8	Chungthang, North Sikkim	16	16	21	20	26	31

Monthly AQI (October 2020 - March 2021) - Sikkim



AQI Category	Associated Health Impact
Good (0 to 50)	Minimal impact
Satisfactory (51 to 100)	May cause minor breathing discomfort to sensitive people
Moderately Polluted (101 to 200)	May cause breathing discomfort to the people with lung disease such as asthma and discomfort to people with heart disease, children and older adults
Poor (201 to 300)	May cause breathing discomfort to people on prolonged exposure and discomfort to people with heart disease
Very Poor (301 to 400)	May cause respiratory illness to the people on prolonged exposure. Effect may be more pronounced in people with lung and heart diseases
Severe (401 to 500)	May cause respiratory effects even on healthy people and serious health impacts on people with lung/heart diseases. The health impacts may be experienced even during light physical activity

Checkout River Water Quality Data March 2021 | See Page 8

Designated Best Use Water Quality Criteria:

Designated Best Use	Class of water	Criteria
Outdoor bathing (Organized)	B	Total Coliforms: MPN/100ml shall be 500 or less. pH: between 6.5 and 8.5 Dissolved Oxygen: 5mg/l or more. Biochemical Oxygen Demand: 5 days 20C 3mg/l or less

Source: Central Pollution Control Board (CPCB)

River Water Quality Data for the Month of March, 2021

Station Code	Sampling Date	pH	Cond. μ mhos/cm	NO ₃ -N mg/l	D.O mg/l	B.O.D mg/l	T. Coliform MPN/100ml	Faecal Coliform 100/ml
1801	02/03/2021	7.0	265	1.0	10.2	1.1	150	60
1802	04/03/2021	7.0	260	1.2	10.0	1.2	195	80
1803	06/03/2021	6.5	200	1.5	9.5	1.2	120	50
1804	11/03/2021	6.5	185	1.8	8.0	2.4	210	85
1805	11/03/2021	6.5	190	1.7	8.1	2.2	200	80
1806	13/03/2021	6.5	180	1.4	7.9	2.0	180	75
1807	13/03/2021	7.0	190	1.6	8.0	2.0	160	65
1808	16/03/2021	7.0	190	1.7	7.3	1.6	170	70
1809	16/03/2021	6.5	195	1.5	7.5	1.8	190	75
2034	18/03/2021	7.0	210	1.0	9.0	1.9	120	55
2035	18/03/2021	7.0	170	1.2	8.5	2.1	90	40
2036	18/03/2021	6.5	185	1.3	8.0	2.0	75	30
2037	20/03/2021	6.5	175	1.3	7.9	2.0	90	35
2038	20/03/2021	6.5	190	1.5	7.5	2.2	150	65

The details of the monitoring stations are as under:

SN	Station Code	Name of Station	Latitude ° N	Longitude ° E
1.	1801	River Teesta after confluence of Rivers Lachenchu and Lachungchu, CHUNGTHANG, North Sikkim.	27.602	88.649
2.	1802	River Dikchu before confluence with River Teesta near NHPC hydro-electric power project, DIKCHU, East Sikkim.	27.40	88.52
3.	1803	River MANEY KHOLA AT BURTUK near Army Base Camp 4 km U/s of Gangtok, East Sikkim	27.35	88.61
4.	1804	River Maney Khola after confluence with Ray khola at ADAMPOOL AFTER MEETING TREATED WASTE WATER of STP, Gangtok, East Sikkim	27.30	88.58
5.	1805	After confluence of Rani Chu and Rorachu at RANIPOOL, East Sikkim	27.29	88.59
6.	1806	Ranichu before confluence with River Teesta at SINGTAM, East Sikkim	27.22	88.49
7.	1807	River Teesta after confluence with River Ranichu at SINGTAM, East Sikkim	27.11	88.45
8.	1808	River Teesta after confluence with Rongpochu after meeting the industrial effluents from the town RANGPO, East Sikkim.	27.17	88.52
9.	1809	River Teesta at Melli Downstream, MELLI, South Sikkim	27.08	88.45
10.	2034	River Rangit at dam site (NHPC), South Sikkim	27.29	88.29
11.	2035	River Rangit at Legship, West Sikkim	27.27	88.27
12.	2036	River Rangit at Reshi, West Sikkim	27.22	88.30
13.	2037	River Rangit at Jorethang, South Sikkim	27.13	88.27
14.	2038	River Rangit at Treveni, Melli, South Sikkim	27.08	88.41

Disclaimer

Efforts have been made to make the data and information provided in this newsletter as accurate as possible. The use of data and information published by SPCB Sikkim should be duly cited.

Organizational Change

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