

1. Introduction

State Pollution Control Board (SPCB) Sikkim was set up as an autonomous body through Government of Sikkim notification in the year 2008 under the provision of Sub-Section (1) of Section 4 of the Water (Prevention & Control of Pollution) Act, 1974. The main function of SPCB-Sikkim is to act as Regulatory Body and Advisory Body.

Under the advisory function, SPCB-Sikkim advises the state government in terms of measures to be taken for prevention, control and abatement of pollution.

Under the regulatory function, the SPCB- Sikkim is bestowed with the power of implementation of different Acts and Rules pertaining to Environment Pollution Control. The State Pollution Control Board-Sikkim implements the following Acts and Rules in the State of Sikkim.

- Water (Prevention & Control of Pollution) Act,1974
- Air (Prevention & Control of Pollution) Act,1981
- Environment (Protection) Act, 1986
- The Public Liability Insurance Act, 1991
- Hazardous & Other Wastes(Management & Transboundary Movement) Rules, 2016
- Bio-Medical Waste Management Rules, 2016
- Solid Waste Management Rules, 2016
- Plastic Waste Management Rules, 2016
- E-Waste(Management) Rules, 2016
- Construction & Demolition Waste Management Rules, 2016
- The Noise Pollution (Regulation & Control) Rules, 2000
- Batteries (Management & Handling) Amendment Rules, 2000
- Environmental Impact Assessment Notification, 2006

2. List of Officers & Staff under SPCB– Sikkim, Forest & Env. Deptt.

Sl. no.	Name	Designation
1.	Dr. Thomas Chandy	Chairman
2.	Dr. Gopal Pradhan	Member Secretary
3.	Mrs. Kusum Gurung	Joint Director
4.	Mr. B.K. Chettri	Chief Scientific Officer
5.	Mr. Ranjan Rai	Exe. Environmental Engineer
6.	Mrs K. Z. Bhutia	Senior Scientific Officer
7.	Mr. Ramesh Chettri	JSA

8.	Mr. Bal Krishna Sharma	Assistant Programmer
9.	Mr. Yanu Raj Basnet	Jr. Lab. Assistant
10.	Mr. Krishna Pd. Sharma	UDC
11.	Mrs. Bal Kri Rai	LDC
12.	Mrs Gayatri Sharma	LDC
13.	Ms. Saraswati Rai	LDC
14.	Mrs. Manuka Giri	Office Assistant
15.	Mrs Meena Kumari Chettri	Field Attendant
16.	Mr. Yougest Subba	Office Attendant
17.	Ms. Benita Sharma	Office Attendant

3. List of Temporary Staff/Contractual Staff.

<u>Sl. no.</u>	<u>Name</u>	<u>Designation</u>
	<u>Water Quality</u>	
18.	Mr. Shamir R. Gurung	Junior Scientific Assistant
19.	Ms. Kalpana Sharma	Junior Scientific Assistant
20.	Mr. Yenten Bhutia	Laboratory Assistant
21.	Mr. Durga Pd. Sharma	Laboratory Assistant
22.	Ms. Padma Tamang	Laboratory Assistant
23.	Ms. Pratima Chettri	Laboratory Assistant
	<u>Air Quality</u>	
24.	Ms. Nima Doma Tamang	Project Assistant
25.	Mr. Wangchuk Norbu Bhutia	Project Assistant
26.	Mr. Durga Prasad Dahal	Project Assistant
27.	Ms Pinki Bhutia	Project Assistant
28.	Mr. Ashes Bhandari	Project Assistant
29.	Ms. Tshering Palmo Bhutia	Project Assistant
30.	Ms. Dil Kumari Chettri	Field Assistant
31.	Mr. Ramesh Bhandari	Field Assistant
32.	Ms. Phursongmit Lepcha	Field Assistant
33.	Mr. Tshering Bhutia	Field Assistant
34.	Mr. Aita Hang Limboo	Field Assistant
35.	Mr. Ganga Ram Luitel	Field Assistant
36.	Ms. Karuna Subba	Field Assistant
37.	Mr. Devi Prasad Basnet	Field Assistant
38.	Ms. Monita Pradhan	Field Assistant
39.	Ms. Manita Pradhan	Field Assistant

40.	Miss Reema Chettri	System Engineer
41.	Miss Parbati Gurung	Office Assistant
42.	Mr. Raju Rai	Office Attendant

4. Officer designated as Public Information Officer under RTI Act, 2005.

- i. SPIO – Mr. B.K. Chettri, Chief Scientific Officer,
- ii. ASPIO – Mr. Ranjan Rai, Executive Environmental Engineer

5. Activities of the Board.

5.1. NATIONAL AIR MONITORING PROGRAMME (NAMP):

With the increase in the establishment of industrial units in the state mostly the pharmaceuticals and ancillary units and bottling and breweries plants, the SPCB-Sikkim under the National Air Monitoring Programme (NAMP) has established nine (09) nos. of Air Quality Monitoring (AQM) stations in order to monitor the air quality in the state. The state of Sikkim has been declared as the Air Pollution Control Area under Gazette notification no. 506 dated 08/09/2011. The details of the monitoring stations are as under:

Sl. no	Name of monitoring station :	Latitude° N	Longitude° E
1.	RANGPO	27.1736	88.5305
2.	SINGTAM	27.5144	88.4969
3.	DEORALI	27.3183	88.6063
4.	RAVANGLA	27.3075	88.363
5.	NAMCHI	27.17	88.35
6.	PELLING	27.3028	88.2344
7.	CHUNGTHANG	27.6033	88.6469
8.	MANGAN	27.5025	88.5358

*The 9th station located at Tashi View point, Gangtok was damaged due to landslide and currently not in operation.

In order to run these AQM stations, the SPCB- Sikkim has inducted 06 Project Assistant and 10 Field Assistants (contractual basis) and the Board has also established 06 laboratories for carrying out analytical work of air quality parameters in the respective locations.. The AQM is conducted twice a week. As per the study/finding it is seen that Air Quality Index of the State is good and well within the standards prescribed both for PM 10

and other parameters. The data so generated is being forwarded to CPCB for further analysis.

5.2. NATIONAL WATER MONITORING PROGRAMME (NWMP):

SPCB-Sikkim has established 09 Water Quality Monitoring Stations in River Teesta basin and 05 Water Quality Monitoring Stations in River Rangit basin under NWMP.

The major objectives of water quality monitoring are:

- To warrant appropriate pollution control on the discharge reaching the water bodies.
- To identify any deficiency in water quality and to implement water pollution control strategies.
- To determine effect of water quality on human health.
- To determine long term trends in water quality.

The details of the monitoring stations are as under:

Sl. No.	Station Code	Name of Station	Latitude	Longitude
1.	1801	River Teesta after confluence of Rivers Lachenchu and Lchungchu 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	27.17	88.52

		with Rongpochu after meeting the industrial effluents from the town RANGPO , East Sikkim.		
9.	1809	River Teesta at Melli Downstream, MELLI , South Sikkim	27.08	88.45
10.	2034	RANGIT RIVER AT DAM SITE (NHPC), South Sikkim	27.29	88.29
11.	2035	RANGIT RIVER AT LEGSHIP , West Sikkim	27.27	88.27
12.	2036	RANGIT RIVER AT RESHI , West Sikkim	27.22	88.30
13.	2037	RANGIT RIVER AT JORETHANG , South Sikkim	27.13	88.27
14.	2038	RANGIT RIVER AT TREVENI , Melli, South Sikkim	27.08	88.41

The quality of water is regularly monitored by SPCB officials and the data so generated is being forwarded to CPCB, Delhi for further analysis. This is a 100 % central sponsored scheme. As per the analysis of data, the quality of water so far has been found to be good.

In order to maintain the quality of water the SPCB-Sikkim has been continuously monitoring the industrial activities and has been ensuring the running of Effluent Treatment Plant (ETP) 24 hours a day. SPCB-Sikkim has made Zero Liquid Discharge (ZLD) mandatory so that the treated water meeting the prescribed standard is recycled and reused for gardening, flushing, cleaning and cooling purposes. Further, continuous online effluent monitoring systems are set up in all the pharmaceutical units also.

5.3. WATER AND AIR LABORATORY:

The Pollution Control Laboratory, Forest Secretariat Annex, the Forest Department has been specified as the State Water and Air Laboratory vide Gazette no.127 dated 09/09/1996 to carry out the functions entrusted to the State Water Laboratory and the State Air Laboratory under sub-section (1) of section 52 of the Water (Prevention and Control of Pollution) Act 1974 and sub-section (1) of section 28 of the Air (Prevention and Control of Pollution) Act 1981 respectively. It deals with day to day analytical work related to both water and air pollution. Samples of air are collected twice in a week and that of water are collected once a month for analysis. The reports are then compiled and submitted to CPCB through online portals respectively.

In conformity with the Hon'ble High Court of Sikkim's order in the matter of Discharge of industrial effluent at Singtam by the Pharma Unit dated 06/08/2018 and 29/11/ 2018, the Board's Laboratory has been upgraded.

Further, as per the direction of Hon'ble High Court of Sikkim, the treated water samples from outlet of Effluent Treatment Plant (ETP) of Pharmaceutical industrial units were collected fortnightly and analysed in the SPCB Lab. The analysis reports were compiled and submitted to the court.

5.4. NOISE MONITORING:

Due to increase in developmental activities there has been a rise in noise pollution in the whole country. In order to measure the noise level in the state, SPCB has been carrying out regular noise quality monitoring.

One of the key works is the measuring of noise pollution during the festival of Deepawali. As per the study conducted by SPCB-Sikkim it has been observed that recently, the noise level has gone down extremely due to ban imposed by the State Government on use of firecrackers and other illuminating items in the state.

Noise monitoring is conducted on a regular basis by the Board and the status report is being forwarded to CPCB, New Delhi. SPCB-Sikkim took the initiative of imposing prohibition on manufacture, sale and use of all types of Firecrackers including sound emitting and illuminating type through Sikkim Gazette Extraordinary Notification no. 544 dated 19/12/2014. While executing the ban imposed by the State Government awareness among the public has been generated through print and electronic media, Street plays, Rallies through School students and appeal from the Hon'ble Chief Minister and other Celebrities. Further, the Board conducts regular noise pollution monitoring during the festival of Deepawali. Till date, the noise level readings generated are well within the stipulated standards.

5.5. ESTABLISHMENT OF INDUSTRIAL UNITS:

Under the provision of Section 25 of Water (Prevention & Control of Pollution) Act, 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 no units can be established without the prior consent of the SPCB. Consent to Establish (CTE)/ Consent to Operate (CTO) should be obtained by industrial unit prior to establishment and operation of industrial units.

Industrial units which are of large and medium scale have been granted with Consent to Operate (CTO) under manufacturing sector. Under the service sector consents are being issued to Hotels, Resorts, Health Care Facilities, Garage, Hot mix plant, Wet mix plant, Stone crushers, Sewage Treatment Plant (STP), etc. Establishment and operation of Diesel Generators (DG set) also require CTE/CTO. For the issuance of Consent to Establish (CTE)/ Consent to Operate (CTO) inspection of units are carried out by following standard operating procedure. Renewal of CTO/CTE is done only after inspection of the unit. As per the recent

data on Online Consent Management and Monitoring System units have been granted CTE/ CTO so far.

SPCB-Sikkim has categorized various industries operating within the state into 04 categories viz., Red, Orange, Green and White as per their pollution potential. CTE and CTO are issued accordingly. This categorization was notified vide no. 112 dated 01/04/2017. The consent fee for each industry is calculated as per the categorization of industries.

5.6. PUBLIC HEARING:

Under the provision of Environment Impact Assessment notification, certain development projects are required to obtain Environment Clearance (EC) from the Central Government for category A Projects and from State Environment Impact Assessment Authority for category B projects. Before grant of EC, the projects are subjected to Public Hearings and SPCB-Sikkim has so far conducted the following public hearings for different types of developmental projects:

A. HYDRO-ELECTRIC PROJECTS					
Sl. No.	Name of HEP	Name of Developer	Public Hearing Conducted	Environmental Clearance Granted By MoEF	Remarks
1.	510 MW Teesta Stage-V Hydro-Electric Project, East	M/s NHPC Ltd.	02/12/1997	No. J-12011/1/98-IA.I dated:19/05/1999	Under Operation
2.	36 MW Rolep Hydro-Electric project, East	M/s Amalgamated Trans Power India Ltd. (ATPIL)	22/07/2003	No. J-12011/31/2003-IA.I dated: 25/02/2004	-
3.	99 MW Chujachen Hydro-Electric project, East	M/s Gati Infrastructure Ltd.	30/09/2004	No. J-12011/18/2005-IA.I Dated: 09/09/2005	Under Operation
4.	71 MW Sada-Mangder Hydro-Electric project, South	M/s Gati Infrastructure Ltd.	16/10/2004	No. J-12011/26/2007-IA.I dated: 25/02/2005	-
5.	96 MW Jorethang Loop Hydro-Electric project, South	M/s DANS Energy Pvt. Ltd.	09/04/2006	No. J-12011/19/2006-IA.I Dated: 26/07/2006	Under Operation
6.	1200 MW Teesta Stage-III Hydro-Electric project, North	M/s Teesta Urja Pvt. Ltd.	08/06/2006	No. J-12011/26/2006-IA.I dated: 04/08/2006	Under Operation

7.	500 MW Teesta Stage-VI Hydro-Electric project, East	M/s Lanco Energy Pvt. Ltd.	21/06/2006	No. J-12011/55/2006 - IA.I dated: 21/09/2006	Under Establishment
8.	300 MW Pannan Hydro-Electric project, North	M/s Himagiri Hydro Energy Pvt. Ltd.	18/09/2006	No. J-12011/56/2006-IA.I dated: 02/01/2007	-
9.	96 MW Rongnichu Hydro-Electric project, East	M/s Madhya Bharat Power Corporation Ltd.	28/10/2006	No. J-12011/56/2006-IA.I dated: 04/04/2007	Under Establishment
10.	120 MW Rangit Stage-IV Hydro-Electric project, West	M/s Jal Power Corporation Ltd.	15/12/2006	No. J-12011/11/2007-IA.I Dated: 16/05/2007	Under Establishment
11.	51 MW Bhasmey Hydro-Electric project, East	M/s Gati Infrastructure Ltd.	15/03/2007	No. J-12011/04/2006-IA.I dated: 15/05/2007	Under Establishment
12.	120 MW Rammam Stage-III Hydro-Electric project, West	M/s NTPC Ltd.	04/05/2007	No. J-12011/42/2007-IA.I dated: 17/08/2007	Under Establishment
13.	96 MW Dikchu Hydro-Electric project, North-East	M/s Sneha Kinetic Power Projects Ltd.	16/11/2007 & 19/11/2007	No. J-12011/91/2007-IA.I dated: 01/04/2008	Under Operation
14.	66 MW Rangit Stage-II Hydro-Electric project, West	M/s Sikkim Hydro Power Venture Ltd.	21/09/2008	No. J-12011/6/2009-IA.I dated: 10/06/2009	Under Establishment
15.	97 MW Tashiding Hydro-Electric project, West	M/s Shiga Energy Pvt. Ltd.	18/06/2009	No. J-12011/66/2006-IA.I dated: 29/07/2010	Under Operation
16.	99 MW Ting Ting Hydro-Electric project, West	M/s T.T. Energy Pvt. Ltd.	15/09/2010	No. J-12011/65/2006-IA.I dated: 04/07/2011	-
17.	60 MW Lethang Hydro-Electric project, West	M/s KHC Lethang Hydro Projects Pvt. Ltd.	16/09/2010	Environmental Clearance Awaited	-
18.	520 MW Teesta Stage-IV Hydro-	M/s NHPC Ltd.	29/03/2012	No. J-12011/67/2008-	Under Establishment

	Electric project, North			IA.I dated: 09/01/2014	
19.	25 MW Rahi Kyoung Hydro-Electric project, North	M/s Sikkim Engineering Pvt. Ltd.	20/04/2017	Environmental Clearance Awaited	-
B.	OTHER DEVELOPMENTAL PROJECTS				
1.	Martam Compost Plant, 32nd No. East	UD&HD, Govt. of Sikkim	29/07/2003	-	Under Operation
2.	Esveegee Breweries Pvt. Ltd., Manpur, South Sikkim	M/s Esveegee	24/08/2013	No. J-11011/32/2012-1A.11(I) dated: 04/02/2015	Under Operation
3	Dhapper to Bhaleydhunga Ropeway, Yangyang, South	Tourism Deptt. Govt. of Sikkim	28/05/2015	No. 10-51/2013-1A.III dated: 16/03/2016	Under Construction
4.	Tsongmo Passenger Ropeway, Changu, East Sikkim	Tourism Deptt. Govt. of Sikkim	24/03/2016	No. 10-12/2014-1A.III dated: 17/12/2014	Under Operation

5.7. AWARENESS PROGRAMMES/SENSITISATION/WORKSHOP:

Generation of awareness is one of the key factors for prevention of environment pollution. SPCB-Sikkim has been deeply engaged in creating awareness through different types of programs to educate students, general public on conservation and preservation of environment.

Various programs viz., lectures, essay and painting competition, slogan competition are held among the student community. The celebration of World Environment Day, Paryavaran Mahotsav and Ten Minutes to Earth are the regular features of SPCB-Sikkim. SPCB-Sikkim has produced environment film, environment songs, documentaries and also different environment related advertisement, films and material to educate the general masses.

The Urban Local Bodies (ULB) and Upadhakshyas are also taken on board to create awareness on the subject. The SPCB-Sikkim also organized Sensitization seminars and workshops to the head of Departments and the heads of all industrial units including Hydroelectric project on the different Acts and Rules related to environment protection. SPCB has been assisting different social groups, NGOs and other registered organizations by providing financial support and related tools and kits for keeping their locality neat and clean.

SPCB has taken steps to provide dustbins to ULBs, religious institutions, tourism destinations, schools and colleges etc. for keeping the locality clean.

SPCB has also taken initiative to organize exposure visits for the students to different types of industrial units to encourage them to opt for career in the industrial sector. The Board is also bringing out appeals to generate awareness through advertisement in print and electronic media. Special visit to the nearby industrial units are being arranged for school students and local public through the management of the industry and insisting the industries to maintain transparency in control of pollution and in operating their Corporate Social Responsibility (CSR) to gain the goodwill of the public and maintain the environment.

During 2018-19 sensitization program with respect to Solid Waste Management Rules 2016 and other Rules was carried out involving the Additional District Collector (Development), Sub-Divisional Magistrates and Block Development Officers. Similar sensitization program on Bio-medical Waste Management Rules 2016 was organized involving Health Care Facilities. The Industries, Public Sector Undertakings as well as Banks were given sensitization on E-Waste (Management) Rules 2016 by SPCB Sikkim in co-ordination with NIELIT.

For strict compliance of standards prescribed in the CTO, the board is engaged in regular monitoring of industrial activities. Third Party Monitoring by an accredited consultant has been made mandatory to all the industrial units.