

CHAPTER 18

ENVIRONMENTAL CONCERNS CONTROL AND MONITERING OF POLLUTION

Pollution Control Committee was constituted under the provision of Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981 in the year 1992 and published in the Govt. of India Gazette Notification No. 33, dated 16-01-1992. The Committee re-constituted vide Govt. of India, Gazette Notification No. 107, dated 21-06-2004 and termed as **Andaman and Nicobar Administration Pollution Control Committee**.

The committee is setup to implement the Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981 and rules made there under is now responsible for enforcing the following Acts and Rules partly and fully:

- Water (Prevention and Control of Pollution) Act, 1974 and Rules made there under
- Air (Prevention and Control of Pollution) Act, 1981 and Rules made there under
- Environment (Protection) Act, 1986 and Rules made there under
- Municipal Solid Wastes (Management and Handling) Rules, 2000.
- Bio-Medical Wastes (Management and Handling) Rules, 1998.
- Recycled Plastics Manufacturing and Usage Rules, 1999 as amended.
- Hazardous Wastes (Management and Handling) Rules, 2000.
- Batteries (Management and Handling) Rules, 2001.
- Noise Pollution (Regulation & Control) Rules, 2000.

The Pollution Control Committee has been playing a key role in controlling pollution by generating data, providing scientific information, rendering technical inputs, through activities for promoting awareness at different levels.

AMBIENT AIR QUALITY STATUS

The Principle objective of the ambient Air Quality Monitoring is to assess the existing level of Air Pollutant. Air pollution forms an important and critical factor to study any environmental issues in the area. This helps to know extent of pollution due to various activities.

The parameters selected for analyzing the air quality are Suspended Particulate Matter (SPM), Respirable Particulate Matter (RPM), Sulphur Dioxide (SO₂) and Nitrogen Oxide (NO_x).

Statement 18.1
National Ambient Air Quality Standards

Pollutant	Time Weighted average	Concentration in ambient air		
		Industrial Area	Residential . Rural & other areas.	Sensitive Area
1	2	3	4	5
Sulphur Dioxide (SO ₂)	Annual Average*	80 µg/m ³	60µg/m ³	15 µg/m ³
	24 hours**	120 µg/m ³	80 µg/m ³	30µg/m ³
Oxides of Nitrogen as NO ₂	Annual Average*	80 µg/m ³	60µg/m ³	15 µg/m ³
	24 hours**	120 µg/m ³	80 µg/m ³	30µg/m ³
Suspended Particulate Matter (SPM)	Annual Average*	360 µg/m ³	140 µg/m ³	70 µg/m ³
	24 hours**	500 µg/m ³	200 µg/m ³	100 µg/m ³
Respirable Particulate matter (size less than 10 µm)(RPM)	Annual Average*	120 µg/m ³	60µg/m ³	50µg/m ³
	24 hours**	150µg/m ³	100µg/m ³	75µg/m ³
Lead (Pb)	Annual Average*	1.0µg/m ³	0.75µg/m ³	0.50µg/m ³
	24 hours**	1.5µg/m ³	1.00µg/m ³	0.75µg/m ³
Carbon Monoxide (CO)	8 hours	5.0µg/m ³	2.0µg/m ³	1.0µg/m ³
	1 hour	10.0µg/m ³	4.0µg/m ³	2.0µg/m ³

* Annual Arithmetic mean of minimum 104 measurements in a year taken twice a week 24 hourly at uniform interval

** 24 hourly / 8 hourly values should be met 98% of the time in a year. However, 2% of the time, it may exceed but not on two consecutive days.

[EPA Notification: GSR 176(E), April 02, 1996]

The Ambient air quality is monitored at ALHW Residential Colony, Junglighat-AE office and Haddo Wharf-Warehouse unloading area given at Table 23.1, 23.2,23.3.

Chart 18.1

Annual Average of Sulphur Dioxide and Oxides of Nitrogen in A&N Islands

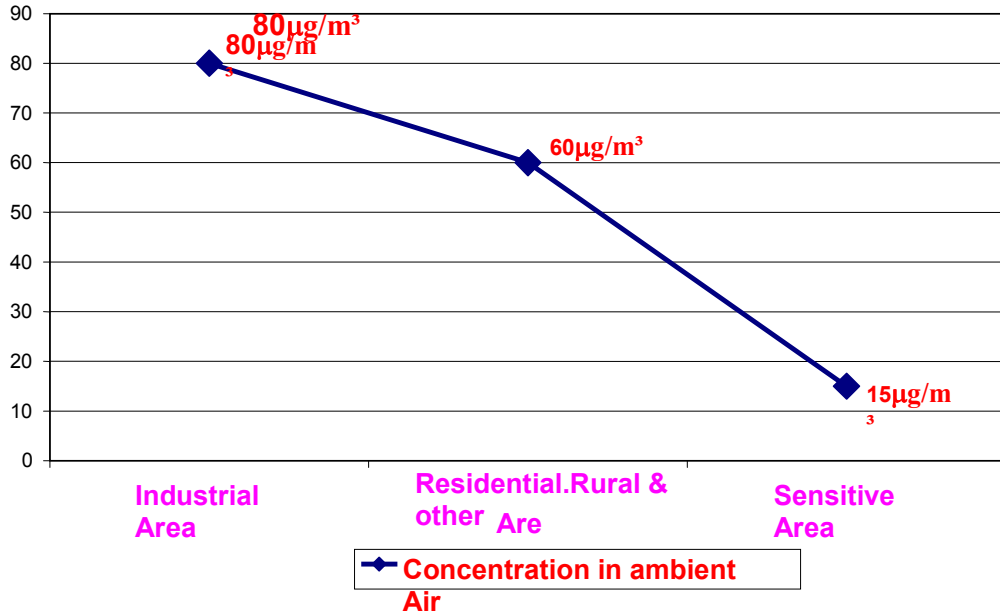


Chart 18.2

Annual Average of SPM and RPM in Ambient Air

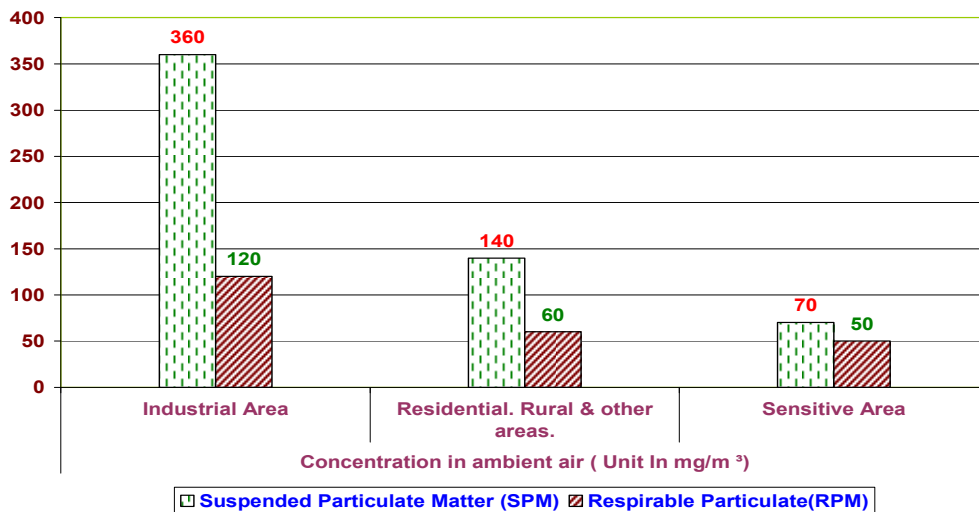
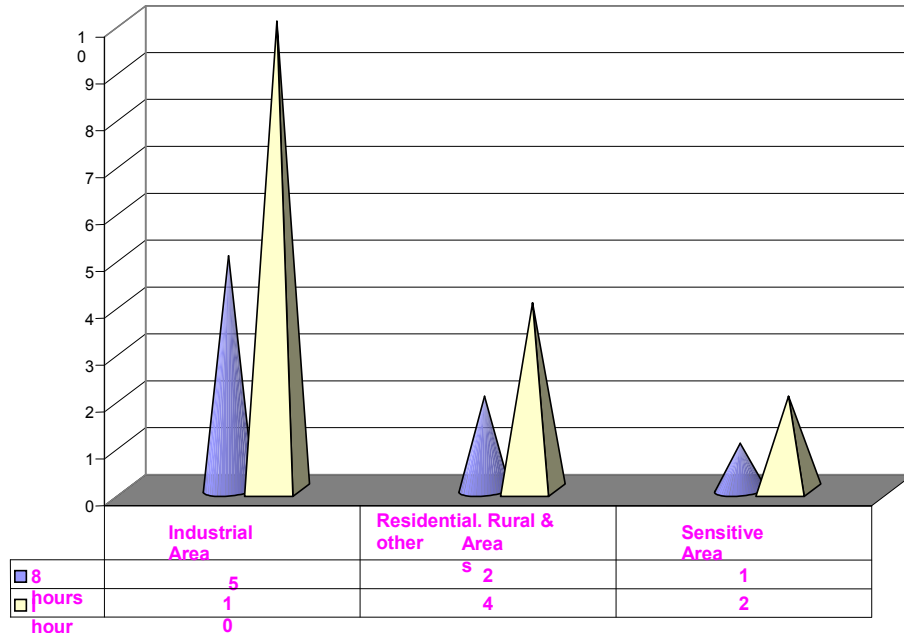


Chart 18.3

Concentration of Carbon Monoxide (CO) in Air between 1 hour and 8 hours-unit in



NOISE POLLUTION

Noise is unwanted sound. Ambient noise is all encompassing noise associated with any given environment and is usually a composite of sounds from many sources near and far. Any abnormal sound which irritates human's beings is called as noise pollution. Sources may be Loud speakers, Automobiles, Industries, Equipments and machines and etc.

Under Environment (Protection) Rules 1986 the schedule III inserted under GSR1063[E] dated 26-12-89 published in the Gazette No. 643 dated 26-12-89, following categories and standards for Ambient Air Quality in respect of Noise Pollution have been prescribed

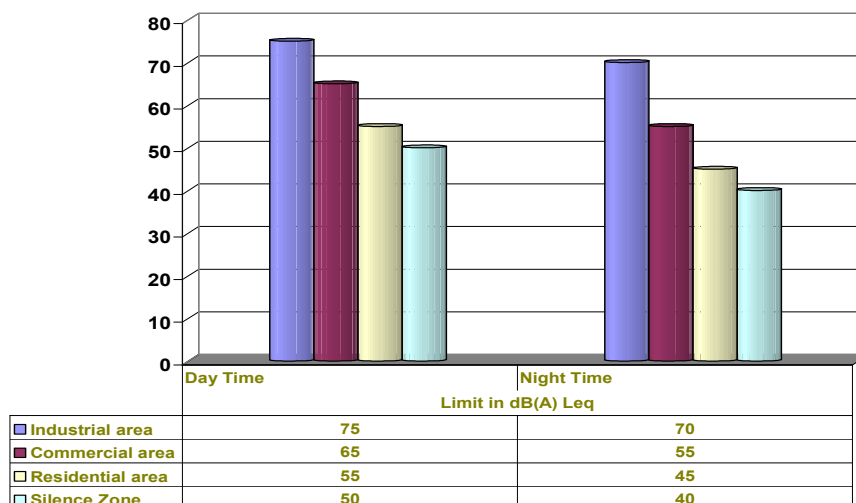
Statement 18.2
 AMBIENT AIR QUALITY STANDARDS IN RESPECT OF NOISE

Area Code	Category of Area	Limit in dB(A) Leq	
		Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

NOTE: Leq is an energy mean of the noise level over a specified period

Chart 18.4

Noise Pollution in Day and Night Time



The Ambient Noise quality is monitored at Junglighat, Haddo Wharf and Phonix Bay,

Statement 18.3

LOCATION: Junglighat

S. No	Month	Day Time Leq	CPCB Limit	Night Time Leq	CPCB Limit
1.	December'07	45.8	55	42.1	45
2.	January'08	45.7	55	41.0	45
3.	February' 08	46.1	55	41.0	45
4.	March' 08	46.4	55	40.2	45
5.	April' 08	44.7	55	40.3	45
6.	May' 08	43.7	55	39.5	45

Statement 18.4

LOCATION: Haddo Wharf area

S.No	Month	Day Time Leq	CPCB Limit	Night Time Leq	CPCB Limit
1	December'07	52.0	65	45.8	55
2	January'08	53.3	65	46.2	55
3	February' 08	52.8	65	47.0	55
4	March' 08	52.7	65	48.2	55
5	April' 08	53.2	65	47.3	55
6	May' 08	54.8	65	46.2	55

Statement 18.5
LOCATION: Phoenix Bay

S.No	Month	Day Time Leq	CPCB Limit	Night Time Leq	CPCB Limit
1	December'07	49.5	65	44.6	45
2	January'08	50.0	65	45.0	45
3	February' 08	49.7	65	45.2	45
4	March' 08	50.6	65	45.9	45
5	April' 08	51.5	65	46.2	45
6	May' 08	49.9	65	44.2	45

Statement 18.6
The noise level is monitored during Ganesh Puja -2008:

Name of the Place ↓ Time →	04-09-2008(in dB A)		05-09-2007(in dB A)		Normal Day(in dB A)	
	0900-1000	1700-1800	0900-1000	1700-1800	0900-1000	1700-1800
Near Dairy Farm Church	65	65	69	60	58	55
Near VIP Road	75	57.9	65	70	50	45
Near Anarkali Basthi (at playground)	70	70	51	55	53	50
Near Haddo Harbour	70	80	65	63	60	55
Near Haddo Children Park	55	70	50	60	54	50
Dairy Farm Sea shore	75	75	75	79	58	55
Mohanpura Market	76	75	68	60	60	60
Delanipur Ganesh Temple	65	65	53	53	50	50
Goal Ghar Ganesh Temple	65	60	54	56	50	50
Junglighat	75	75	72	73	55	55

WATER POLLUTION
Drinking Water Quality

Any adverse impact or pollution consequences of water will have serious effect particularly to the human being and in general to the environment. The portable water quality was analysed and the water quality data are given in Statement below

Statement 18.7
Period 23rd Nov.07 to 22nd May, 2008.

S.No	Parameters	Dec.2007	Jan.2008	Feb.2008	March,2008	April2008	May2008
		Date of Sampling					
		12.12.07	16.01.08	15.02.08	17.3.08	16.4.08	15.5.08
1.	pH	6.98	7.11	7.08	6.96	7.05	7.10
2	Colour Hazen Units	<5.0	<5.0	<5.0	<5.0	<5.0	<5.10
3	Turbidity	2	1.6	1.2	2.6	2	1.4
4.	Salinity,ppt	-	-	-	-	-	-*
5	Residual Chlorine(min),mg/1	-	-0.02	0.06	0.03	0.04	0.01
6	Total Suspended Solids,mg/f	0.04	<2	<2	<2	<2	<2
7	Total Dissolved Solids,mg/f	<2	225	280	176	154	140
8	Dissolved Oxygen mg/f	320	5.3	5.6	5.4	5.2	5.5
9	BOD at 27 C mf/f	5.4	<2.0	<2.0	<2.0	<2.0	<2.0
10	COD mg/f	<2.0	12	8	11	14	10
11	Total Hardness(as CaCo ₃),mg/f	1072	48	66	48	50	44

Marine Water Quality

Pollution of marine coastal areas with sewage, effluents and waste from the ship is an important problem and area of concern. These pollutions are to be prevented to preserve the marine life, thus it becomes important to assess the marine water quality.

The Marine water quality was analysed and the data are given below.

Statement 18.8

LOCATION: Junglighat

Sl. No.	Parameters	December 2007		January 2008		February 2008		March 2008		April 2008		May 2008	
		Surface	Depth	Surface	Depth	Surface	Depth	Surface	Depth	Surface	Depth	Surface	Depth
1.	pH	8.04	8.07	8.08	8.10	8.12	8.15	8.17	8.22	8.11	8.14	8.08	8.11
2.	Colour, Hazen Units	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour
3.	Odour Perceived (as)	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour
4.	Temperature	26.5	26.5	26.5	26	27	26.5	27	26.5	27.0	26.5	26.5	26
5.	Turbidity, NTU	8	6	7	6	6	5	6	5	5	4	5	3
6.	Salinity ppt	31.6	32.0	32.6	32.1	31.3	32.2	32.7	32.4	32.0	32.1	30.1	30.2
7.	Total Dissolved Solids, mg/l	37860	38050	38150	38520	36540	36720	38760	38980	37920	38250	36640	36880
8.	Total Suspended Solids, mg/l	10	8	12	10	8	7	9	7	8	7	6	5
9.	Dissolved Oxygen, mg/l	5.4	5.2	5.3	5.0	5.3	5.1	5.2	5.1	5.1	5.0	5.3	5.2
10.	BOD – 3 days, °C, mg/l	2	3	3	3	2	3	3	4	2	3	2	2
11.	COD, mg/l	80	85	85	89	94	98	92	98	95	90	82	86
12.	Total Hardness (as CaCO ₃) mg/l	6890	6970	6820	6960	6925	7050	6960	7080	6650	6780	6440	6570

Statement 18.9

LOCATION: Phonix Bay Jetty

Sl. No.	Parameters	December 2007		January 2008		February 2008		March 2008		April 2008		May 2008	
		Surface	Depth	Surface	Depth	Surface	Depth	Surface	Depth	Surface	Depth	Surface	Depth
1.	pH	8.21	8.25	8.20	8.24	8.18	8.23	8.22	8.27	8.22	8.26	8.17	8.19
2.	Colour, Hazen Units	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour
3.	Odour (as Perceived)	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour
4.	Temperature	26.5	26.0	26.5	26	27.0	26.5	27.0	26.5	27.5	27	26.5	26
5.	Turbidity, NTU	7	6	7	6	6	5	6	4	6	5	5	4
6.	Salinity ppt	32.9	33.4	31.6	31.9	32.5	32.9	32	32.4	33	33.2	31.9	32.3
7.	Total Dissolved Solids, mg/l	39540	39870	39760	40150	40060	40360	40180	40650	39250	39560	38740	38920
8.	Total Suspended Solids, mg/l	8	7	8	6	7	5	10	5	6	4	5	3
9.	Dissolved Oxygen, mg/l	5.6	5.4	5.4	5.3	5.5	5.2	5.1	4.9	5.2	5.1	5.4	5.3
10.	BOD - 3 days, 27 °C, mg/l	<2	2	2	3	3	4	3	3	2	3	2	2
11.	COD, mg/l	72	76	75	79	78	83	80	85	78	81	74	78
12.	Total Hardness (as CaCO ₃) mg/l	6150	6380	6270	6440	6320	6560	6350	6670	6180	6300	6040	6130

Statement 18.10

LOCATION: Haddo Wharf

Sl. No.	Parameters	December 2007		January 2008		February 2008		March 2008		April 2008		May 2008	
		Surface	Depth	Surface	Depth	Surface	Depth	Surface	Depth	Surface	Depth	Surface	Depth
1.	pH	8.30	8.36	8.33	8.39	8.35	8.40	8.38	8.42	8.32	8.36	8.28	8.33
2.	Colour, Hazen Units	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour
3.	Odour (as Perceived)	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour	No noticeable colour
4.	Temperature	26.5	26.0	27.0	26.5	27.0	26.5	27.5	27.0	27.0	26.5	26.5	26
5.	Turbidity, NTU	10	8	9	8	8	7	8	6	7	6	6	5
6.	Salinity ppt	32.2	32.5	32.6	32.8	32.4	32.9	32.8	33.1	32.3	32.7	31.8	32.2
7.	Total Dissolved Solids, mg/l	42640	43120	42960	43380	43210	43780	43450	43920	42950	43230	42410	42750
8.	Total Suspended Solids, mg/l	11	8	10	8	9	7	8	7	8	7	7	6
9.	Dissolved Oxygen, mg/l	5.3	5.2	5.2	5.1	5.2	5.1	5.1	5.0	5.2	5.0	5.4	5.2
10.	BOD - 3 days, 27 °C, mg/l	2	3	3	3	3	4	3	4	3	3	3	2
11.	COD, mg/l	86	92	95	99	97	104	98	104	98	102	90	96
12.	Total Hardness (as CaCO ₃), mg/l	6920	6980	6950	7080	6970	7140	7030	7180	6880	6960	6740	6870

VEHICLE POLLUTION

The Vehicular population has increased from 37700 in 2004-05 to 45,331 in 2006-07(Source: Basic Statistics 2006-07). The vehicles are contributing to the maximum to air pollution since there are not much more industrial activities.

The Pollution Control Committee which is the only equipped department to conduct the emission check to Pollution Under Control (PUC) Certificate. The emission are conducted on every Monday, Wednesday and Friday at the campus of Department Science and Technology.

Statement 18.11
DATA ON VEHICULAR EMISSION CHECK

Sl. No	Month of Checking	Diesel Vehicle			Petrol Vehicle		
		Fit	Unfit	Total	Fit	Unfit	Total
1	During 2007	931	180	1111	516	84	600
2	January-08	117	28	145	106	15	121
3	February-08	133	29	162	149	12	161
4	March-08	124	18	142	164	33	197
5	April-08	76	23	99	151	9	160
6	May-08	76	11	87	124	5	129
7	June-08	163	11	174	372	3	375
8	July-08				209	1	210
9	August-08				172	10	182

MUNICIPAL SOLID WASTE MANAGEMENT

The quantum of solid waste is ever increasing due to increase in population, development activities, changes in life style and socio-economic condition, plastic waste is a significance portion of the total municipal solid waste (MSW).

There is one local body namely Port Blair Municipal Council (PBMC) in the Union Territory of Andaman and Nicobar Islands. The estimated solid waste generated in Port Blair town is 50 tons per day. At present PBMC covers approximately 21000 houses in 70 locations in the Port Blair Municipal area for

house to house collection of waste. 265 RCC bins, 42 containers, 2 trolleys, four dumper placers and 16 cargo autos are engaged for collection of solid waste.

The Annual Report for implementation the Municipal Solid Wastes (Management and Handling) Rules, 2000 is collected from the PBMC and being sent to Central Pollution Control Board (CPCB), New Delhi

PLASTIC WASTE

The environment hazard due to mismanagement of plastics waste includes the following aspects.

- Littered plastic spoils beauty of the city and choke drains and make important public places filthy;
- Garbage containing plastics, when burnt may cause air pollution by emitting polluting gases;
- Garbage mixed with plastics interferes in waste processing facilities and may also cause problems in landfill operations;

For implementation of the Recycled Plastics Manufacture and Usage Rules, 1999 and Recycled Plastics Manufacture and Usage (Amendment) Rules, 2003, the following steps were taken by the Pollution Control Committee, A&N Administration: -

- (i) Vide A&N Gazette No. 147, dated 11-08-2005, Directions were issued to various officers of A&N Administration to cognizance in their area of jurisdiction to ban sale and use of virgin or recycled polythene carry bags (upto 20 microns thickness and 20X30 cms. [8X12 inches] in size, the weight of 50 polythene carry bags being equal to or less than 105 gms.) including littering of non-biodegradable PET bottles.
- (ii) Awareness material on ill-effects of plastics were published in the Daily Telegrams for the information of the general public and also distributed to the general public by involving educational institution, departments and PRIs.

BIO MEDICAL WASTE

The Pollution Control Committee interacts with the authority of GB Pant Hospital and INHS Dhanvantri (Command Hospital) for effective implementation of the Bio-Medical Wastes (Management and Handling) Rules, 1998. The annual reports are being obtained from GB Pant Hospital and INHS Dhanvantri (Command Hospital) which are sent to CPCB, New Delhi.

Statement 18.12
Date on Bio-Medical Waste Generation:

Sl. No	Details	As on March 2005	As on March 2006	As on March 2007
1	Total number of HCF's in the State/UT(including blood banks, labs etc)	28	27	28
2	Total number of beds	1147	1274	1274
3	Total number of HCF's out of (9) above brought under the ambit of this BMW Rules	28	27	28
4	Total number of beds out of (10) above brought under the ambit of this BMW Rules	1147	1274	1274
5	Bio-Medical Waste Generated (Kg/day)	236 Kg/Day	321 Kg/Day	372.8 Kg/Day
6	Bio-Medical Waste Treated(Kg/day)	236 Kg/Day	321 Kg/Day	372.8 Kg/Day
7	Out of (14) above, Bio-Medical Waste Treated at Common Facilities (including sharing of facilities installed at HCF's)	All Waste treated at HCF's	All Waste treated at HCF's	All Waste treated at HCF's
8	Total No. of incinerator (inclusive of common facilities)	03	03	03
9	Total No. of Autoclave for waste treatment (inclusive of common facilities)	41	93	93
10	Total No. of Microwaves (inclusive of common facilities)	Nil	Nil	Nil
11	Total No. of Shredders for waste treatment (inclusive of common facilities)	53	114	114
12	Total No. of Hydroclaves (inclusive of common facilities)	Nil	Nil	Nil

PUBLIC AWARENESS

Department of Science and Technology, Pollution Control Committee and Andaman Nicobar Science and Technology Council is organizing various activities like National Science Day, World Environment Day, Earth Day, International Ozone Layer Day, etc to create the awareness among the public in general and students in particulars. Seminars, workshops, quiz, debates, essay, drawing & painting competition are organized. In service training on environmental issues for teachers and trainee teacher are organized in collaboration with institutions, NGOs and autonomous organization like CPR Environmental Centre, Chennai, Salim Ali Centre for Ornithology and Natural History(SACON), Coimbatore, an autonomous centers of MoEF, Gol.

Scientific talks by the eminent visit scientist from various intuitions of mainland are organized time to time.

Awareness materials like articles, brochure, leaflet, poster etc are brought by the Department on various occasion distribution among the students and public. Scientific talks also given time to time through AIR Port Blair. Film Show on environment and pollution are organized on regular basis, beside this scientific tours are also conducted specially for the rural and tribal students.

To make aware about the various pollution standards and guidelines prescribed under the pollution acts and rules to be followed by the industries while establishing and operating industry, the information/guidance are provided.