Report of assessment of Noise Pollution survey in Kolkata during Kali puja & Diwali Festivals- 2005

Introduction:

The use of loudspeakers is regulated in terms of the Rules under the Environment Protection Act (1986) as well as the orders of the Supreme Court and the Calcutta High Court. The Police is empowered to enforce these rules and the orders. While the legal restrictions are mostly known by and large, special vigilance becomes necessary during festivals such as the Durga Puja, Kali Puja & Diwali. To have a clear idea about the increase of ambient noise level in residential areas in the city of Calcutta and other district town during the festivals, the West Bengal Pollution Control Board (WBPCB) undertook a noise monitoring survey during those days in the year 2005 as in previous years.

Noise Pollution Survey procedure:

Firecrackers generate instantaneous impulsive noise, which when measured in free field condition in impulsive mode, gives peak sound pressure level. It is quite obvious that a number of crackers when bursting serially can easily form a band of continuous noise in the presence of reflecting surfaces. The reverberation of sound wave due to repeated reflection in the surfaces prolongs the time interval of prevailing sound intensity. The continuous band of noise, thus formed, definitely affects the ambient level in close proximity.

The monitoring was conducted at the twenty select locations in Kolkata and Howrah cities:- eleven earlier locations such as Salt Lake, Lake Town, Kankurgachi, Beliaghta, Behala, Minto Park, Burrabazar, Jadavpur, rabindra Sarani, Talapark and Howrah Maidan, and nine new locations such as Howrah-Kadamtala, Howrah-mandirtala, Baranagar, Nagerbazer, Baguihati-jangra, Kasba-Bosepukur, ballygunge place, Tollygunge-Golf Club Road and New Alipur B Block, on a normal working day, between 6.00 p.m. and 10.00 p.m. The microphone of the Sound Level Meter fitted with windscreen was placed 1.5m above the ground and at least 1m from the façade of the building at each location. Data recorded at each location were used to compute the one-hour equivalent continuous noise level L_{eq}. On the same locations, the above procedure was repeated on the Kali puja day (01.11.05) as well as Diwali day (02.11.05).

Results of noise pollution survey:

The noise survey results in 2005 (Table-I) reveal slightly increase in the ambient noise level in various residential areas in the city of Kolkata and Howrah on the Kali puja day in comparison to any normal day. The main cause of increase in ambient noise level on festival days is bursting of crackers, whereas in normal days, the main contributions to the ambient noise level of any residential area are from trade activities, the transport system and various domestic activities.

The main observations are summarised below:

i. The increase of the noise level at the select locations on the Kali puja day compared to a normal day in 2005 varies from -3% to 9%. This is much lower compared to the figure during 2004, but almost similar compared to 2003(Table-II).

ii. Compared to last year (2004), there is decrease in the noise level in most of the sample locations, which varied from -18% to 0%, except in one location where 6% rise in noise level recorded (Table-III).

iii. A reduction of noise level on Kali puja day –11% to 0% is observed during 2005 when compared to the 2003 data (Table-IV).

Analysis of Complaints:

A central Control Room was set up at the Head Office of WBPCB at Paribesh Bhawan, Salt Lake, Kolkata on four days from pre-Kali Puja day (31.10.05) to post Diwali day (02.11.05) during evening to late night to receive complaints. In addition, control rooms were set up in the Regional Offices of the Board at Haldia, Hooghly, Barrackpore, Durgapur, Siliguri and Asansol Sub-Regional Office.

The details of complaints received in the years 2004 and 2005 in the WBPCB Control Room at Paribesh Bhawan are furnished below:

Year	Kali Puja Day	Diwali Day	Total no. of complaints received in two days
2004	71	78 (till 12.45 a.m.)	149
2005	60	24(till 12.30 a.m.)	84

The nature of complaints received in 2005 are detailed below:

Festival Days in 2005	Kolkata Police area	West Bengal Police area	Complaints against bursting of crackers	Complaints against playing of loudspeakers
Kali Puja Day (01.11.05)	29 (Jorabagan, Shyampukur, Kalighat, Lake, Bhawanipur, New Alipur, Ballygung, Gariahat, Watgunge, Manicktola, Talla, Girishpark, Muchipara, Burrabazer, Beliaghata, Burtolla etc.)	31 (Jadavpur, Rajarhat, Sibpur, Kasba, Dum Dum, Sreerampur, Dasnagar, Bidhannagar, Lake Town, Chandernagar, Belghoria, Khardah, Rishra etc.)	54 (62)*	06 (09)*
Diwali Day (02.11.05)	13 (Lake, Bhawanipur, Gariahat, Narkeldanga, Tollygunge, Chitpur, Cossipur etc.)	11 (Jadavpur, Kasba, Uttarpara, Falta, Maheshtala, Tiljala, Malipanchgara etc.)	15 (68)*	09 (10)*

* Figure in the bracket for the year 2004

From the above, the following may be noted:-

1. Compared to 2004, the State Board received a lesser number of complaints on both the Kali Puja and Diwali days. These may be due to increased awareness among the public about the Board's direction and existence of Board's **toll free no 1600 345 3390, and less violation of noise pollution norms.**

2. During the Kali Puja day, the maximum numbers of complaints were received from the West Bengal Police areas, while on the Diwali day, the maximum number of complaints were received from the Kolkata Police area.

Awareness campaign and specific measures:

The WBPCB has given a wide publicity to the Supreme Court's direction on the fireworks through Electronic and Print Media. In addition, request made to the Cellular operators for sending an awareness message '**Say NO to CRACKERS. Celebrate Deepavali with lamps, candles and fireworks.**' to their customers. The WBPCB has arranged to display 4000 festoons in Kolkata, Howrah and Salt Lake at various crowed places as well as near schools. The posters on noise pollution were distributed to the NGOs for public awareness. The State Board also issued request letters to 9500 Clubs all over West Bengal including 3000 Clubs in Kolkata city, on different pollution control norms during festive season. Four different short films on pollution due to idol immersion, loudspeakers and firecrackers were telecast in primetime in Doordarshan, E-TV, Tara Bangla, Aakash Bangla and Tazza Khabar between 10th October and 24th November 2005 for creating awareness among general public.

The State Board had conducted inspections at the various fireworks manufacturing units well ahead to the festive seasons. The West Bengal Police had seized about 14500Kgs. & 39 bags, 9259 packets and 91439 pieces of prohibited firecrackers during the raids conducted in October 2005. Similar pre Kali puja raids were conducted by the Kolkata Police and seized about 2800Kgs. and 1,50,000 pieces of prohibited firecrackers. About 50 cases have been started so far, and 1120 persons were arrested during the operation throughout the State.

Table-I
Noise Level in Kalipuja & Diwali Festivals during 2005

Location	Noise Level in dBL_{Aeq}		
	Normal Day (before kali puja)	Kali Puja Day	Diwali Day
Salt Lake- Sector-III	60	62	61
Lake Town- B Block	63	65	64
Kankurgachi-Scheme VIIIM	68	66	65
Beliaghata CIT Building	66	67	67
Behala- Biren Roy Road	65	69	68
Minto Park- Sarat Bose Road	70	73	74
Kalakar Street- Burrabazer	69	70	70
Jadavpur 8B Bus Terminus	70	74	68
Rabindra Sarani- Ganesh Takie	65	71	68
Talapark- Belgachia	68	65	66
Howrah Maidan	71	71	69
Kadamtala	63	76	77
Mandirtala	69	79	81
Baranagar	66	71	68
Nagerbazer	69	70	65
Baguihati-Jagra	68	66	68
Kasba-Bosepukur	63	83	76
Ballygunge Place	68	74	78
Tollygunge-Golf Club Road	66	78	81
New Alipur B-Block	71	72	77

Table- II
Comparison of Noise Level in a normal day with Kalipuja Day

Location	Noise Level in dBL_{Aeq}								
	In the year 2003			In the year 2004			In the year 2005		
	Normal Day (before kali puja)	Kalipuja Day	% increase	Normal Day (before kali puja)	Kalipuja Day	% increase	Normal Day (before kali puja)	Kalipuja Day	% increase
Salt Lake- Sector-III	65	67	3	67	74	10	60	62	3
Lake Town- B Block	69	72	4	69	79	14	63	65	3
Kankurgachi-Scheme VIIIM	67	71	5	67	75	12	68	66	-3
Beliaghata CIT Building	70	75	7	73	79	8	66	67	1
Behala- Biren Roy Road	73	78	6	70	74	6	65	69	5
Minto Park- Sarat Bose Road	77	82	6	70	73	4	70	73	3
Kalakar Street- Burrabazer	74	75	1	76	79	4	69	70	1
Jadavpur 8B Bus Terminus	72	74	2	67	70	4	70	74	6
Rabindra Sarani- Ganesh Takie	74	77	4	69	75	9	65	71	9
Talapark- Belgachia	68	72	5	65	70	8	68	65	-4
Howrah Maidan	74	76	2	74	78	5	71	71	0

Table-III
Comparison of Noise Level in Kalipuja Day during 2004 & 2005

Location	Noise Level in dBL_{Aeq}		
	2004	2005	% Increase
Salt Lake- Sector-III	74	62	-11
Lake Town- B Block	79	65	-18
Kankurgachi-Scheme VIIIM	75	66	-12
Beliaghata CIT Building	79	67	-15
Behala- Biren Roy Road	74	69	-7
Minto Park- Sarat Bose Road	73	73	0
Kalakar Street- Burrabazer	79	70	-11
Jadavpur 8B Bus Terminus	70	74	6
Rabindra Sarani- Ganesh Takie	75	71	-5
Talapark- Belgachia	70	65	-7
Howrah Maidan	78	71	-9

Table-IV
Comparison of Noise Level in Kalipuja Day during 2003 & 2005

Location	Noise Level in dBL_{Aeq}		
	2003	2005	% Increase
Salt Lake- Sector-III	67	62	-7
Lake Town- B Block	72	65	-10
Kankurgachi-Scheme VIIIM	71	66	-7
Beliaghata CIT Building	75	67	-11
Behala- Biren Roy Road	78	69	-11
Minto Park- Sarat Bose Road	82	73	-11
Kalakar Street- Burrabazer	75	70	-7
Jadavpur 8B Bus Terminus	74	74	0
Rabindra Sarani- Ganesh Takie	77	71	-8
Talapark- Belgachia	72	65	-10
Howrah Maidan	76	71	-6