

**REPORT
ON
NOISE MONITORING DURING GANESH
FESTIVAL-2010**



MAHARASHTRA POLLUTION CONTROL BOARD
Kalpataru Point, 3rd Floor, Sion (East), Mumbai-400022
Website: www.mpcb.gov.in

OCTOBER, 2010



FOREWORD

Ganesh Festival is one of the main festivals in Maharashtra. Large numbers of people participate in the immersion procession of the 10 days festival. Vocal music and musical instruments during the festival cause high levels of noise. In general, ambient levels of noise pollution increase considerably during this period. This report is based on the extensive noise monitoring study conducted by Maharashtra Pollution Control Board at 89 locations all over Maharashtra for the last 5 days of the festival, i.e. from 18th September to 22nd September, 2010 from 1800 hrs to 2400hrs continuously for 6 hours at each location, comprising residential, commercial and silence zones.

This report contains the methodology and observations made during the study. The noise levels were found to be exceeding the permissible limits in all cities and at almost all locations. However, there is a marginal decrease in noise level at some locations this year as compared to previous years.

This document has summarized the Ambient Noise Levels in different cities during Ganesh Festival for last 3 years. This data and the trends in variation of noise levels, can help the authorities and the Municipal bodies develop a suitable action plan and strategies for next year. The report is being placed on MPCB website for wider dissemination of information and for public awareness.

Field monitoring of this study was conducted by M/s Ashwamedh Engineers & Consultants C.S. Ltd., Nashik and was supported by all Regional Offices of the Board in the field. The entire study work including planning, coordination and report preparation was done at PAMS division of the board. The contributions of Dr. Ajay Deshpande, Shri. S.C. Kollur, Shri. Salil Save and Shri.V.V. Killedar is appreciated.

Date: 01.10.2010

(Radheshyam Mopalwaar)
Member Secretary

CONTENTS

| | Page No. |
|-----------------------------------|-----------------|
| LIST OF FIGURES | 04 |
| LIST OF TABLES | 05 |
| LIST OF CHARTS | 07 |
| ABBREVIATIONS | 08 |
| 1. INTRODUCTION | 09 |
| 1.1 Noise and its adverse effects | 09 |
| 1.2 Units of sound | 09 |
| 1.3 Noise Pollution Standards | 10 |
| 2. OBJECTIVES | 10 |
| 3. METHODOLOGY | 11 |
| 3.1 Noise level Measurement | 11 |
| 4. RESULTS | 13 |
| 5. CONCLUSION | 48 |
| 6. DEFINITIONS | 49 |
| GLIMPSES OF THE EVENT | 50 |
| ANNEXURE I | 56 |
| ANNEXURE II | 66 |
| ANNEXURE III | 69 |

LIST OF FIGURES

| Sr. No. | Figure | Page No. |
|---------|--|----------|
| 3.1 | Areas covered during Noise Monitoring in Maharashtra | 12 |

LIST OF TABLES

| Sr. No. | Table | Page No |
|----------|--|---------|
| 1.1 | Standard Noise Levels under EPA (1986) | 10 |
| 3.1 | Noise Monitoring Locations In Maharashtra During 2010. | 11 |
| 4.1 | Equivalent Continuous [L_{eq} dB(A)], Minimum (L_{min}) and Maximum (L_{max}) Noise Levels from 18 th to 22 nd Sept., 2010 during Ganapati Festival at different locations in Maharashtra | 14 |
| 4.2 (a) | Hourly Noise levels in Mumbai on 18 th Sept., 2010 | 25 |
| 4.2 (b) | Hourly Noise levels in Mumbai on 19 th Sept., 2010 | 25 |
| 4.2 (c) | Hourly Noise levels in Mumbai on 20 th Sept., 2010 | 26 |
| 4.2 (d) | Hourly Noise levels in Mumbai on 21 st Sept., 2010 | 27 |
| 4.2 (e) | Hourly Noise levels in Mumbai on 22 nd Sept., 2010 | 27 |
| 4.3 (a) | Hourly Noise levels in Navi Mumbai on 18 th Sept., 2010 | 28 |
| 4.3 (b) | Hourly Noise levels in Navi Mumbai on 19 th Sept., 2010 | 28 |
| 4.3 (c) | Hourly Noise levels in Navi Mumbai on 20 th Sept., 2010 | 29 |
| 4.3 (d) | Hourly Noise levels in Navi Mumbai on 21 st Sept., 2010 | 29 |
| 4.3 (e) | Hourly Noise levels in Navi Mumbai on 22 nd Sept., 2010 | 29 |
| 4.4 (a) | Hourly Noise levels in Thane on 18 th Sept., 2010 | 30 |
| 4.4 (b) | Hourly Noise levels in Thane on 19 th Sept., 2010 | 30 |
| 4.4 (c) | Hourly Noise levels in Thane on 20 th Sept., 2010 | 30 |
| 4.4 (d) | Hourly Noise levels in Thane on 21 st Sept., 2010 | 31 |
| 4.4 (e) | Hourly Noise levels in Thane on 22 nd Sept., 2010 | 31 |
| 4.5 (a) | Hourly Noise levels in Pune on 18 th Sept., 2010 | 32 |
| 4.5 (b) | Hourly Noise levels in Pune on 19 th Sept., 2010 | 32 |
| 4.5 (c) | Hourly Noise levels in Pune on 20 th Sept., 2010 | 33 |
| 4.5 (d) | Hourly Noise levels in Pune on 21 st Sept., 2010 | 33 |
| 4.5 (e) | Hourly Noise levels in Pune on 22 nd Sept., 2010 | 34 |
| 4.6 (a) | Hourly Noise levels in Nashik on 18 th Sept., 2010 | 35 |
| 4.6 (b) | Hourly Noise levels in Nashik on 19 th Sept., 2010 | 35 |
| 4.6 (c) | Hourly Noise levels in Nashik on 20 th Sept., 2010 | 35 |
| 4.6 (d) | Hourly Noise levels in Nashik on 21 st Sept., 2010 | 36 |
| 4.6 (e) | Hourly Noise levels in Nashik on 22 nd Sept., 2010 | 36 |
| 4.7 (a) | Hourly Noise levels in Aurangabad on 18 th Sept., 2010 | 36 |
| 4.7 (b) | Hourly Noise levels in Aurangabad on 19 th Sept., 2010 | 37 |
| 4.7 (c) | Hourly Noise levels in Aurangabad on 20 th Sept., 2010 | 37 |
| 4.7 (d) | Hourly Noise levels in Aurangabad on 21 st Sept., 2010 | 37 |
| 4.7 (e) | Hourly Noise levels in Aurangabad on 22 nd Sept., 2010 | 37 |
| 4.8 (a) | Hourly Noise levels in Nagpur on 18 th Sept., 2010 | 38 |
| 4.8 (b) | Hourly Noise levels in Nagpur on 19 th Sept., 2010 | 38 |
| 4.8 (c) | Hourly Noise levels in Nagpur on 20 th Sept., 2010 | 38 |
| 4.8 (d) | Hourly Noise levels in Nagpur on 21 st Sept., 2010 | 39 |
| 4.8 (e) | Hourly Noise levels in Nagpur on 22 nd Sept., 2010 | 39 |
| 4.9 (a) | Hourly Noise levels in Kalyan on 18 th Sept., 2010 | 39 |
| 4.9 (b) | Hourly Noise levels in Kalyan on 19 th Sept., 2010 | 40 |
| 4.9 (c) | Hourly Noise levels in Kalyan on 20 th Sept., 2010 | 40 |
| 4.9 (d) | Hourly Noise levels in Kalyan on 21 st Sept., 2010 | 40 |
| 4.9 (e) | Hourly Noise levels in Kalyan on 22 nd Sept., 2010 | 40 |
| 4.10 (a) | Hourly Noise levels in Amravati on 18 th Sept., 2010 | 41 |

| | |
|---|----|
| 4.10 (b) Hourly Noise levels in Amravati on 19 th Sept., 2010 | 41 |
| 4.10 (c) Hourly Noise levels in Amravati on 20 th Sept., 2010 | 41 |
| 4.10 (d) Hourly Noise levels in Amravati on 21 st Sept., 2010 | 41 |
| 4.10 (e) Hourly Noise levels in Amravati on 22 nd Sept., 2010 | 41 |
| 4.11 (a) Hourly Noise levels in Jalgaon on 18 th Sept., 2010 | 42 |
| 4.11 (b) Hourly Noise levels in Jalgaon on 19 th Sept., 2010 | 42 |
| 4.11 (c) Hourly Noise levels in Jalgaon on 20 th Sept., 2010 | 42 |
| 4.11 (d) Hourly Noise levels in Jalgaon on 21 st Sept., 2010 | 43 |
| 4.11 (e) Hourly Noise levels in Jalgaon on 22 nd Sept., 2010 | 43 |
| 4.12 (a) Hourly Noise levels in Kolhapur on 18 th Sept., 2010 | 43 |
| 4.12 (b) Hourly Noise levels in Kolhapur on 19 th Sept., 2010 | 44 |
| 4.12 (c) Hourly Noise levels in Kolhapur on 20 th Sept., 2010 | 44 |
| 4.12 (d) Hourly Noise levels in Kolhapur on 21 st Sept., 2010 | 44 |
| 4.12 (e) Hourly Noise levels in Kolhapur on 22 nd Sept., 2010 | 44 |
| 4.13 (a) Hourly Noise levels in Satara on 18 th Sept., 2010 | 45 |
| 4.13 (b) Hourly Noise levels in Satara on 19 th Sept., 2010 | 45 |
| 4.13 (c) Hourly Noise levels in Satara on 20 th Sept., 2010 | 45 |
| 4.13 (d) Hourly Noise levels in Satara on 21 st Sept., 2010 | 45 |
| 4.13 (e) Hourly Noise levels in Satara on 22 nd Sept., 2010 | 45 |
| 4.14 Noise Levels during Ganesh Festival for last 4 years in Different Cities of Maharashtra | 47 |

LIST OF CHARTS

| Sr. No. | Charts | Page No. |
|---------|--|----------|
| 4.1 | Noise levels from 18 th -22 nd Sept., 2010 in Mumbai | 19 |
| 4.2 | Noise levels from 18 th -22 nd Sept., 2010 in Navi Mumbai | 19 |
| 4.3 | Noise levels from 18 th -22 nd Sept., 2010 in Thane | 20 |
| 4.4 | Noise levels from 18 th -22 nd Sept., 2010 in Pune | 20 |
| 4.5 | Noise levels from 18 th -22 nd Sept., 2010 in Nashik | 21 |
| 4.6 | Noise levels from 18 th -22 nd Sept., 2010 in Aurangabad | 21 |
| 4.7 | Noise levels from 18 th -22 nd Sept., 2010 in Nagpur | 22 |
| 4.8 | Noise levels from 18 th -22 nd Sept., 2010 in Kalyan | 22 |
| 4.9 | Noise levels from 18 th -22 nd Sept., 2010 in Amravati | 23 |
| 4.10 | Noise levels from 18 th -22 nd Sept., 2010 in Jalgaon | 23 |
| 4.11 | Noise levels from 18 th -22 nd Sept., 2010 in Kolhapur | 24 |
| 4.12 | Noise levels from 18 th -22 nd Sept., 2010 in Satara | 24 |
| 4.13 | Hourly Noise levels from 18 th -22 nd Sept., in Mumbai | 28 |
| 4.14 | Hourly Noise levels from 18 th -22 nd Sept., in Navi Mumbai | 29 |
| 4.15 | Hourly Noise levels from 18 th -22 nd Sept., in Thane | 31 |
| 4.16 | Hourly Noise levels from 18 th -22 nd Sept., in Pune | 35 |
| 4.17 | Hourly Noise levels from 18 th -22 nd Sept., in Nashik | 36 |
| 4.18 | Hourly Noise levels from 18 th -22 nd Sept., in Aurangabad | 38 |
| 4.19 | Hourly Noise levels from 18 th -22 nd Sept., in Nagpur | 39 |
| 4.20 | Hourly Noise levels from 18 th -22 nd Sept., in Kalyan | 40 |
| 4.21 | Hourly Noise levels from 18 th -22 nd Sept., in Amravati | 42 |
| 4.22 | Hourly Noise levels from 18 th -22 nd Sept., in Jalgaon | 43 |
| 4.23 | Hourly Noise levels from 18 th -22 nd Sept., in Kolhapur | 44 |
| 4.24 | Hourly Noise levels from 18 th -22 nd Sept., in Satara | 45 |
| 4.25 | Noise Levels during Ganesh Festival for last 4 years in Different Cities of Maharashtra | 47 |

ABBREVIATIONS

| | |
|------------------|--|
| CPCB | Central Pollution Control Board |
| dB | Decibel |
| dB(A) | Decibels with "A" weighting |
| EPA | Environmental Protection Act, 1986 |
| Hz | Hertz |
| MPCB | Maharashtra Pollution Control Board |
| KHz | Kilo Hertz |
| L _{Aeq} | Equivalent continuous A-weighted sound pressure level (dB) |
| L _{max} | Maximum sound pressure level (dB) |
| L _{min} | Minimum sound pressure level (dB) |
| SPL | Sound Pressure Level |

1.0 INTRODUCTION

The annual Ganesh Festival celebration in honor of birthday of Lord Ganesha or Ganapati, who is known as the remover of obstacles and the god of auspiciousness, has been observed by the Hindu community for at least 250 years and perhaps at least since the twelfth century. The festival is observed in the Hindu calendar month of Bhadrapada, starting on the shukla chaturthi (fourth day of the waxing moon period). The date usually falls between 20 August and 22 September. The festival lasts for 10 days, ending on Anant Chaturdashi (fourteenth day of the waxing moon period).

Ganesh Chaturthi celebrations were initiated in Maharashtra by Chatrapati Shivaji Maharaja, the great Maratha ruler, to promote culture and nationalism. And it had continued ever since. In 1893, Indian freedom fighter and social reformer Lokmanya Tilak transformed the annual festival into a large, well-organized public event. Unfortunately, the growth of the Ganesh Chaturthi festival has not necessarily been sustainable. Over time, public celebrations have become more lavish, grander and louder. As a result, ambient noise levels increases considerably.

In order to assess the problem of rising noise levels in all over the Maharashtra state during Ganesh festival period, Maharashtra Pollution Control Board (MPCB) has taken initiative to carry out the survey for 5 days during Ganesh Festival from September 18 to 22, 2010.

1.1. Noise and its adverse effect

Noise, by definition, is unwanted sound. Noise pollution can be defined as unwanted or offensive sounds that unreasonably intrude into our daily activities (EPA, 1974). Sound, which pleases the ears, is music and that which cause pain and annoyance, is noise. The major adverse effects of noise on human beings and environment are:

- ❑ The physiological features like breathing amplitude, blood pressure, heartbeat rate, pulse rate and blood cholesterol are affected.
- ❑ It causes pain, ringing in the ears, feeling of tiredness, thereby effecting the functioning of human system.
- ❑ The working performance of workers/human will be affected as they will be losing their concentration.
- ❑ Long exposure to high sound levels cause loss of hearing. But has an adverse impact on hearing function.
- ❑ It affects the sleeping there by inducing the people to become restless, loosing concentration and presence of mind during their activities.
- ❑ Animals are also susceptible to noise pollution as well. It damages the nervous system of the animals.
- ❑ Vibrations caused by noise indirectly weaken the edifice of buildings, bridges and monuments. It creates waves, which can be very harmful and cause damage to the building.

1.2. Units of Sound

Sound is usually made up of a wide range of different frequencies. The spread of sound energy across the audible frequency "spectrum" (about 20Hz – 20kHz) is one factor that helps to make it identifiable to the human ear. The human ear is a very sensitive system with an extensive dynamic range. To accommodate this very large range, sound levels are measured using the **decibel (dB) scale**.

A sound level meter theoretically has a flat response, in other words it responds exactly the same at different frequencies. Unlike a sound level meter, the human ear responds differently at different frequencies, so a weighting, or filter, can be used so that the meter responds more like the human ear. The most commonly used weighting is referred to as the 'A' weighting and readings are usually measured in dBA. The "sound pressure level" (SPL) is twenty times the logarithm to the base 10 of the ratio of the effective pressure (p) of a sound to the reference pressure (Pr) of 20 µPa. Thus the sound pressure level in dB = 20 log₁₀ P/Pr.

1.3. Noise Pollution: Standards

The sound level limits specified by CPCB, represent the general limitation on noise produced by noise sources. Some noises, however, are annoying no matter where or in what kind of environment they exist. High level impulsive noises represent a special category and, consequently, are restricted by an absolute limitation.

The Central Pollution Control Board (CPCB) constituted a National Committee of Experts on Noise Pollution Control. The Committee recommended noise standards for ambient air and for automobiles, domestic appliances and construction equipment, which were later notified under The Environment (Protection) Act, 1986 as given below:

Table 1.1: Standards of Noise Levels under EPA (1986): Noise Pollution (Regulation & Control) Rules, 2000

| Area Code | Category of Area | Limits in dB(A) L _{eq} | |
|-----------|------------------|---------------------------------|------------|
| | | 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:

1. Day time is reckoned from 6 A.M. To 10 P.M.
2. Night time is reckoned in from 10 P.M. and 6 A.M.
3. Silence zone is referred as areas within 100 meters around premises such as hospitals, educational institutions and courts. The Silence zones are to be declared by the Competent Authority.
4. Use of vehicular horns, loudspeakers and bursting of crackers shall be banned in these zones.
5. Mixed categories of areas should be declared as one of the four above mentioned categories by the Competent Authority and the corresponding standards shall apply.
6. State GR / Notification: Implementation Authority for Noise Rules in Maharashtra is enclosed at **ANNEXURE-I**.

2.0 OBJECTIVE

- To monitor the ambient noise levels for five days from 1800 hrs to 24 hrs at various locations in different cities of Maharashtra.
- To determine the maximum and minimum noise levels at various locations.

- To find out the noisiest location, so that the mitigation measures can be taken in future.
- To involve young generation (students) who can deliver environmental awareness and explain the passerby about the noise measurements.

3.0 Methodology of the survey

The noise pollution monitoring was carried out from September 18 to 22, 2010. Noise level measurement was done from 1800 hrs upto 2400 hrs. The noise measurements were made at the fast response mode keeping in view the quickly changing nature of noise levels, using 'A' filter. All the measurements were done using recalibrated Sound Level Meters (Type II).

The monitoring was carried out at a distance from Ganesh Pandals, closer to the residential buildings. The main purpose of this exercise was to determine how the environment is disturbed and what effect it has on a normal human being residing in that area or closer to the area. Total 89 locations were covered under 12 major cities of Maharashtra for the present study (Fig 3.1). The 12 cities covered are:

Table 3.1: Noise Monitoring Locations In Maharashtra During Ganesh Festival: 2010.

| Sr. No. | City | Number of locations |
|--------------|-------------|---------------------|
| 1 | Mumbai | 25 |
| 2 | Navi Mumbai | 05 |
| 3 | Thane | 05+*4 |
| 4 | Pune | 20 |
| 5 | Nashik | 05 |
| 6 | Aurangabad | 05 |
| 7 | Nagpur | 05 |
| 8 | Kalyan | 03 |
| 9 | Amravati | 03 |
| 10 | Jalgaon | 03 |
| 11 | Kolhapur | 03 |
| 12 | Satara | 03 |
| TOTAL | | 89 |

**number of locations added this year*

The detailed list of locations is given in Annexure II.

3.1. Noise Level Measurements

In most cases, the sounds and noises we hear are not steady. Apart from variation in tones, the magnitude or the sound pressure level of a sound or noise changes with time. The equivalent continuous noise level (L_{eq}) is the sound pressure level of a steady sound that has, over a given period, the same energy as a fluctuating sound in question. It was calculated using following equation:

$$L_{eq,T} = 10 \log \left(1 / n \sum_{i=1}^n 10^{\frac{L_i}{10}} \right)$$

Where, L_i = levels observed at n equally spaced times during interval T.

In the present study, hourly and day wise L_{eq} has been calculated to compare the results obtained from various locations.

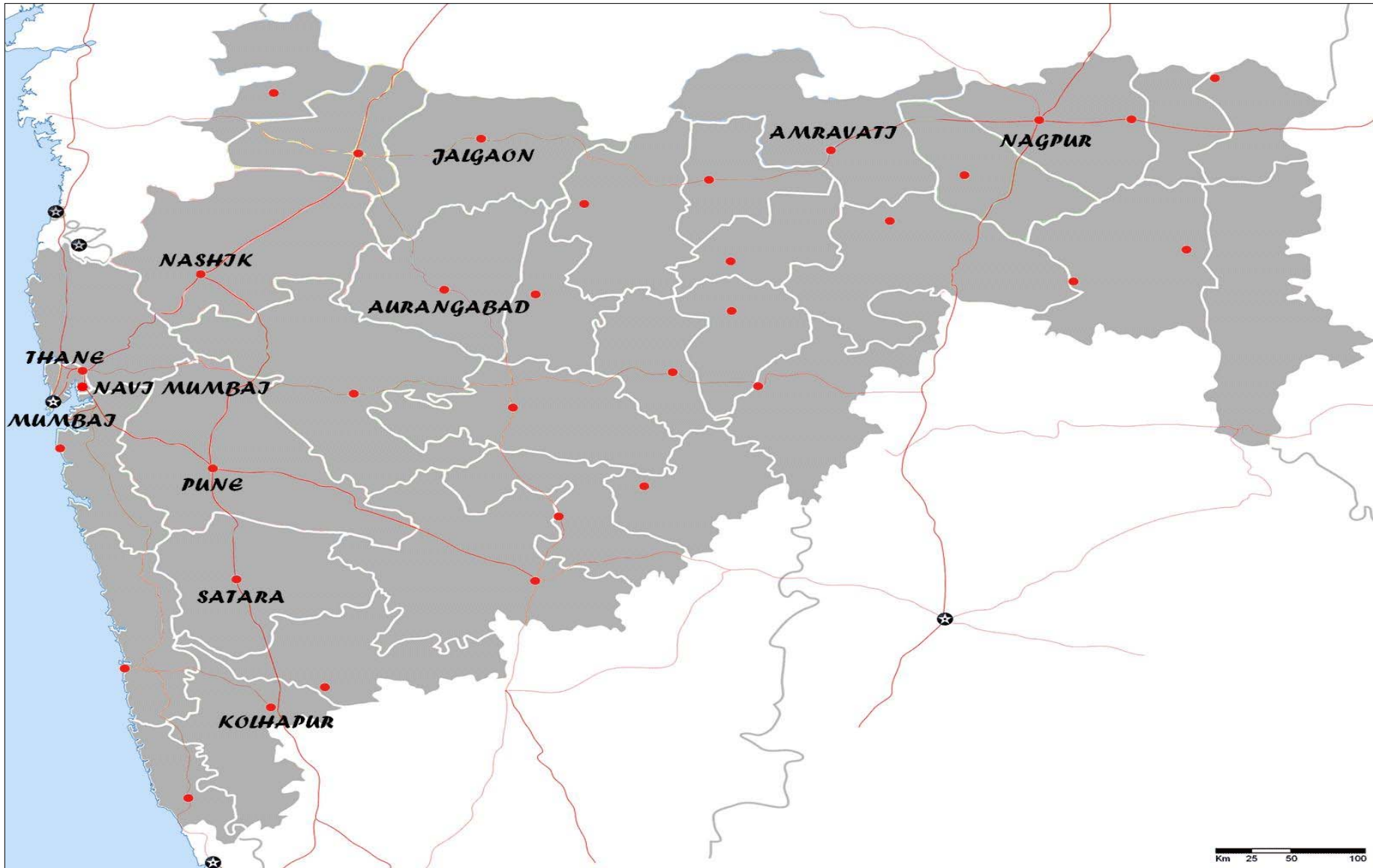


Fig.: 3.1: Areas covered during Noise Monitoring in Maharashtra

4.0 RESULTS

The study shows that the noise levels at almost all the locations crosses the threshold limits mentioned in EPA (1986) and overall noise level increased at 5th day of monitoring i.e. at 22nd September, this is because of the last day (11th day) of the festival. On this day, the statue of Lord Ganesha is taken through the streets in a procession accompanied with musical instruments, Dhols, DJs and Bands to be immersed in a river or the sea symbolizing a ritual known as *Ganesh Visarjan*.

All the results are shown in L_{eq} dB(A) values. Table 4.1 shows the average maximum and minimum noise levels on each day from September 18 to 22 at all 89 locations. The following results are interpreted at different locations:

- Among all the 25 locations in Mumbai, Bhandup was noisiest.
- In Navi Mumbai, CBD was found to be noisiest.
- In earlier years, noise levels in Thane were monitored at 5 locations, but this year 4 new locations have been added. All these 4 locations comes under silence zone. Results shows that the noise levels are exceeding the permissible limits (50dB) at these locations. Higher noise levels were observed at Gavdevi Mandir and Court Naka area, which also comes under silence zone.
- In Pune, Lakshmi road and Karve road were found to be noisier as compared to other locations.
- From results it is interpreted that in Nashik, all the 5 locations were more or less equally noisy but above the limits.
- In Aurangabad district, Gulmandi was observed as noisiest.
- However, in Nagpur all the 5 locations were found to be less noisy as compared to other locations in the state and among all these 5, Reshimbag was noisiest.
- Results show that all the three locations of Kalyan were very noisy and crossing even 90 dBA.
- Among the 3 locations of Amravati, Rajkamal square location was observed noisiest.
- In Jalgaon district, Shastri tower chowk was found to be noisiest all through the five days.
- In Kolhapur district, Mahalaxmi mandir was noisiest.
- In Satara, noise levels at all the three locations were quiet comparable.

Table 4.1: Equivalent Continuous (L_{eq})dBA, Minimum (L_{min}) and Maximum (L_{max}) Noise Levels from 18th to 22nd Sept., 2010 during Ganpati Festival at different locations in Maharashtra during 1800 hrs to 2400 hrs.

| Location | 18 th Sept. | | | 19 th Sept. | | | 20 th Sept. | | | 21 st Sept. | | | 22 nd Sept. | | |
|------------------|------------------------|-----------|-----------|------------------------|-----------|-----------|------------------------|-----------|-----------|------------------------|-----------|-----------|------------------------|-----------|-----------|
| | L_{Aeq} | L_{max} | L_{min} | L_{Aeq} | L_{max} | L_{min} | L_{Aeq} | L_{max} | L_{min} | L_{Aeq} | L_{max} | L_{min} | L_{Aeq} | L_{max} | L_{min} |
| MUMBAI | | | | | | | | | | | | | | | |
| Andheri | 77.4 | 80.5 | 70.4 | 73.9 | 76.5 | 70.2 | 74.2 | 77.0 | 70.5 | 76.0 | 78.6 | 71.3 | 78.8 | 81.2 | 77.6 |
| Bandra | 84.5 | 95.9 | 76.2 | 86.4 | 95.9 | 79.9 | 84.0 | 95.8 | 76.7 | 81.6 | 86.2 | 75.7 | 78.8 | 90.3 | 67.4 |
| Bhandup | 98.5 | 102.6 | 86.4 | 83.0 | 96.7 | 68.2 | 87.3 | 106.6 | 72.3 | 88.5 | 106.6 | 72.3 | 95.6 | 111.3 | 83.3 |
| Borivali | 75.4 | 78.6 | 70.2 | 75.3 | 78.1 | 70.1 | 75.6 | 78.3 | 70.8 | 75.7 | 78.7 | 70.7 | 89.7 | 95.6 | 82.0 |
| Byculla | 71.8 | 76.9 | 60.0 | 74.0 | 78.6 | 62.1 | 78.7 | 82.4 | 74.8 | 77.8 | 80.0 | 76.1 | 86.2 | 98.8 | 72.0 |
| Chembur (E) | 69.6 | 72.5 | 63.3 | 77.6 | 84.9 | 71.5 | 73.5 | 77.1 | 70.8 | 71.7 | 75.1 | 67.8 | 85.5 | 93.2 | 79.1 |
| Chembur (W) | 68.3 | 74.5 | 61.7 | 68.7 | 72.7 | 63.7 | 68.6 | 71.9 | 65.2 | 68.7 | 71.2 | 66.9 | 61.7 | 62.2 | 61.2 |
| Chinchpokali (E) | 78.1 | 82.8 | 74.6 | 77.4 | 81.0 | 74.7 | 84.2 | 89.8 | 78.1 | 78.2 | 82.5 | 75.0 | 78.6 | 86.1 | 74.3 |
| Chinchpokali (W) | 78.3 | 82.0 | 73.5 | 74.3 | 79.7 | 65.3 | 74.5 | 80.2 | 64.4 | 76.3 | 78.6 | 73.8 | 71.2 | 76.3 | 62.0 |
| Dadar (E) | 77.3 | 89.4 | 68.7 | 74.7 | 78.6 | 68.2 | 72.4 | 73.5 | 71.7 | 73.1 | 75.6 | 70.4 | 88.8 | 93.4 | 85.6 |
| Dadar (W) | 67.1 | 71.7 | 62.2 | 71.9 | 77.1 | 60.6 | 69.9 | 77.0 | 61.5 | 72.9 | 77.3 | 64.4 | 78.4 | 88.6 | 71.3 |
| Elphinstone | 71.8 | 78.5 | 67.1 | 69.5 | 82.3 | 58.2 | 67.4 | 71.7 | 63.8 | 69.7 | 75.5 | 64.6 | 68.8 | 74.5 | 59.7 |
| Ghatkopar | 77.8 | 84.7 | 74.3 | 75.6 | 80.3 | 71.9 | 74.5 | 77.8 | 72.3 | 70.9 | 74.2 | 67.1 | 67.5 | 71.8 | 65.1 |
| Girgaon Chowpati | 80.4 | 87.1 | 76.5 | 76.0 | 77.6 | 74.0 | 74.4 | 76.8 | 71.7 | 77.2 | 85.7 | 72.8 | 85.0 | 88.0 | 79.5 |
| Grant Road | 85.0 | 93.2 | 72.4 | 80.7 | 89.1 | 69.7 | 83.8 | 91.1 | 65.6 | 80.5 | 88.3 | 67.3 | 85.9 | 97.1 | 62.7 |
| Juhu Chowpati | 71.6 | 74.5 | 69.6 | 72.2 | 80.9 | 65.2 | 72.4 | 74.9 | 70.6 | 72.1 | 73.5 | 69.9 | 82.7 | 89.8 | 79.1 |
| Kandivali (E) | 79.3 | 85.3 | 71.8 | 77.8 | 85.6 | 69.5 | 76.5 | 89.0 | 69.7 | 78.1 | 85.3 | 71.5 | 89.1 | 98.8 | 77.0 |
| Kandivali (W) | 78.9 | 83.9 | 72.0 | 77.7 | 83.2 | 74.0 | 90.1 | 106.2 | 81.7 | 82.0 | 92.3 | 72.9 | 88.5 | 98.6 | 78.4 |
| Khar | 77.3 | 81.7 | 69.0 | 73.0 | 78.6 | 63.2 | 73.9 | 81.6 | 61.5 | 71.3 | 78.4 | 62.3 | 73.4 | 89.7 | 63.2 |

| | 18 th Sept. | | | 19 th Sept. | | | 20 th Sept. | | | 21 st Sept. | | | 22 nd Sept. | | |
|--------------------|------------------------|------------------|------------------|------------------------|------------------|------------------|------------------------|------------------|------------------|------------------------|------------------|------------------|------------------------|------------------|------------------|
| Location | L _{Aeq} | L _{max} | L _{min} | L _{Aeq} | L _{max} | L _{min} | L _{Aeq} | L _{max} | L _{min} | L _{Aeq} | L _{max} | L _{min} | L _{Aeq} | L _{max} | L _{min} |
| Mulund | 71.3 | 74.2 | 68.4 | 71.7 | 77.8 | 68.5 | 74.8 | 82.8 | 66.1 | 70.2 | 71.9 | 68.4 | 76.1 | 96.9 | 64.6 |
| Mumbai Central | 78.2 | 88.9 | 67.2 | 72.3 | 80.4 | 65.8 | 71.9 | 73.6 | 69.5 | 71.1 | 76.0 | 64.6 | 78.9 | 94.3 | 70.5 |
| Parel | 76.1 | 81.5 | 73.5 | 73.5 | 76.6 | 68.9 | 77.1 | 81.7 | 73.3 | 65.9 | 70.8 | 62.8 | 90.2 | 93.4 | 85.0 |
| Santacruz (E) | 73.5 | 82.2 | 64.3 | 75.3 | 80.7 | 64.6 | 73.9 | 79.5 | 68.6 | 73.7 | 78.7 | 63.8 | 78.4 | 81.3 | 72.8 |
| Vikhroli | 76.8 | 82.0 | 73.7 | 77.6 | 81.1 | 73.3 | 76.5 | 80.6 | 72.5 | 76.6 | 80.2 | 73.2 | 76.6 | 80.2 | 73.2 |
| Wadala | 75.3 | 78.7 | 69.0 | 72.5 | 79.3 | 69.7 | 73.3 | 76.3 | 68.9 | 72.7 | 77.8 | 67.2 | 80.2 | 96.1 | 75.0 |
| NAVI MUMBAI | | | | | | | | | | | | | | | |
| Airoli | 76.1 | 79.7 | 69.7 | 75.7 | 81.8 | 67.0 | 72.6 | 76.6 | 65.9 | 73.3 | 78.7 | 62.7 | 78.9 | 83.4 | 70.8 |
| CBD | 82.6 | 90.4 | 75.0 | 84.8 | 94.6 | 57.8 | 80.4 | 90.3 | 71.7 | 84.1 | 100.0 | 68.5 | 109.9 | 126.3 | 86.9 |
| Kopar Khairane | 76.4 | 84.7 | 66.6 | 76.8 | 82.1 | 65.9 | 74.2 | 78.5 | 69.5 | 79.8 | 82.3 | 76.7 | 78.0 | 83.6 | 69.5 |
| Uran | 68.6 | 71.3 | 62.8 | 65.9 | 71.4 | 57.4 | 68.2 | 70.5 | 61.1 | 69.0 | 71.8 | 60.9 | 71.8 | 76.6 | 68.3 |
| Vashi | 75.2 | 79.4 | 71.3 | 75.7 | 78.2 | 72.6 | 77.0 | 80.1 | 73.7 | 76.2 | 78.3 | 74.4 | 84.1 | 88.5 | 81.2 |
| THANE | | | | | | | | | | | | | | | |
| Gokhle Road | 73.4 | 75.8 | 66.0 | 72.2 | 76.0 | 69.1 | 72.1 | 76.0 | 68.7 | 79.7 | 91.3 | 69.1 | 84.2 | 101.2 | 68.3 |
| Jambli Naka | 74.3 | 80.2 | 65.9 | 74.3 | 79.0 | 65.1 | 73.3 | 78.3 | 67.4 | 73.8 | 77.5 | 69.2 | 92.2 | 100.5 | 81.4 |
| Main Road | 89.8 | 92.9 | 86.6 | 81.1 | 83.3 | 76.1 | 77.8 | 82.0 | 73.2 | 78.0 | 81.1 | 74.1 | 78.4 | 81.7 | 72.7 |
| Pokhran Road | 76.5 | 81.4 | 68.2 | 72.0 | 79.1 | 66.3 | 72.6 | 76.1 | 61.7 | 77.9 | 82.6 | 68.0 | 86.2 | 90.7 | 78.1 |
| Wagle Estate | 57.4 | 63.6 | 53.7 | 54.6 | 54.9 | 53.9 | 66.7 | 76.5 | 56.2 | 72.7 | 78.3 | 65.3 | 83.4 | 88.3 | 75.7 |
| Court Naka | 74.8 | 78.5 | 69.6 | 70.0 | 73.2 | 65.1 | 71.7 | 77.1 | 61.6 | 70.4 | 75.6 | 63.7 | 93.2 | 98.2 | 81.8 |
| Mental Hospital | 71.5 | 76.2 | 61.4 | 64.8 | 67.3 | 61.7 | 66.7 | 73.4 | 56.7 | 64.5 | 71.4 | 58.1 | 69.2 | 73.9 | 60.2 |
| Bedekar Hospital | 71.9 | 78.0 | 63.9 | 73.0 | 80.0 | 61.0 | 66.3 | 73.2 | 60.1 | 67.4 | 69.0 | 65.5 | 65.7 | 71.8 | 51.1 |
| Kalwa-CSM Hospital | 63.7 | 75.8 | 50.3 | 67.9 | 80.2 | 56.2 | 68.9 | 86.6 | 52.4 | 74.0 | 85.3 | 63.7 | 89.7 | 108.0 | 64.6 |

| | 18 th Sept. | | | 19 th Sept. | | | 20 th Sept. | | | 21 st Sept. | | | 22 nd Sept. | | |
|----------------------|------------------------|------------------|------------------|------------------------|------------------|------------------|------------------------|------------------|------------------|------------------------|------------------|------------------|------------------------|------------------|------------------|
| Location | L _{Aeq} | L _{max} | L _{min} | L _{Aeq} | L _{max} | L _{Aeq} | L _{max} | L _{min} | L _{Aeq} | L _{max} | L _{Aeq} | L _{max} | L _{min} | L _{Aeq} | L _{max} |
| PUNE | | | | | | | | | | | | | | | |
| Shivaji Nagar | 75.3 | 79.5 | 70.2 | 76.9 | 81.1 | 70.9 | 76.3 | 81.2 | 70.2 | 76.2 | 81.3 | 71.5 | 76.3 | 89.4 | 70.5 |
| Karve Road | 83.5 | 93.6 | 70.4 | 81.9 | 95.1 | 71.1 | 82.6 | 91.0 | 71.2 | 85.4 | 93.1 | 73.8 | 87.9 | 97.1 | 75.1 |
| Swar Gate | 72.8 | 82.6 | 63.4 | 90.7 | 100.2 | 81.6 | 79.9 | 87.1 | 71.8 | 82.9 | 94.3 | 73.3 | 81.2 | 92.4 | 73.4 |
| Satara Road | 68.8 | 73.6 | 62.4 | 79.5 | 82.8 | 74.2 | 82.9 | 89.6 | 76.4 | 82.9 | 85.4 | 77.3 | 86.0 | 93.2 | 82.1 |
| Shaniwar Peth | 87.8 | 93.1 | 72.5 | 84.9 | 93.0 | 71.9 | 86.4 | 90.9 | 82.7 | 79.0 | 85.3 | 70.8 | 71.3 | 76.7 | 68.1 |
| Yerawada | 73.6 | 78.5 | 68.8 | 81.0 | 86.8 | 74.5 | 79.7 | 88.1 | 73.3 | 79.6 | 92.3 | 75.5 | 78.7 | 85.1 | 75.4 |
| Laxmi Road | 70.5 | 81.5 | 60.7 | 85.3 | 92.3 | 66.7 | 85.5 | 92.0 | 73.9 | 85.6 | 92.7 | 76.5 | 92.5 | 98.2 | 80.5 |
| Kothrud | 65.7 | 70.8 | 58.2 | 89.7 | 100.1 | 70.5 | 82.3 | 88.1 | 75.2 | 78.8 | 85.4 | 71.7 | 80.5 | 90.3 | 71.6 |
| Mahatma Phule Mandai | 76.7 | 83.5 | 57.3 | 82.2 | 89.0 | 74.9 | 76.4 | 79.5 | 71.6 | 78.7 | 83.1 | 71.7 | 84.5 | 93.4 | 76.9 |
| Sarus Baug | 47.6 | 50.4 | 45.7 | 47.7 | 58.3 | 39.1 | 65.4 | 73.2 | 60.9 | 67.2 | 75.3 | 60.1 | 67.4 | 71.9 | 63.2 |
| Hadapsar | 77.5 | 88.5 | 51.7 | 81.7 | 91.7 | 60.3 | 80.3 | 85.7 | 67.9 | 82.3 | 90.9 | 71.6 | 77.8 | 82.4 | 73.0 |
| Deccan | 77.2 | 80.2 | 73.4 | 78.8 | 81.5 | 73.9 | 79.2 | 90.1 | 67.1 | 77.6 | 79.4 | 75.7 | 82.3 | 91.0 | 74.0 |
| Dagdu Sheth Mandir | 79.9 | 85.3 | 71.2 | 80.5 | 87.3 | 77.1 | 80.3 | 87.5 | 75.7 | 75.7 | 78.3 | 72.4 | 95.2 | 98.3 | 87.6 |
| Alka Chowk | 69.5 | 74.6 | 62.4 | 89.1 | 95.3 | 82.1 | 77.6 | 88.4 | 60.7 | 83.1 | 88.7 | 76.9 | 88.2 | 101.3 | 74.0 |
| Babu Genu Chowk | 78.3 | 83.7 | 70.2 | 79.4 | 81.4 | 77.4 | 77.9 | 81.8 | 73.5 | 74.3 | 77.2 | 70.5 | 83.9 | 87.0 | 74.0 |
| Khadaki | 67.0 | 71.6 | 58.8 | 82.2 | 100.4 | 68.3 | 85.9 | 98.5 | 77.0 | 76.6 | 82.5 | 70.0 | 72.0 | 80.6 | 65.7 |
| M G Road | 72.9 | 75.5 | 70.5 | 80.9 | 85.8 | 70.0 | 79.5 | 84.6 | 69.5 | 79.8 | 81.5 | 77.1 | 72.9 | 75.3 | 66.7 |
| Chapekar Chowk | 70.2 | 77.2 | 61.5 | 80.7 | 84.7 | 75.9 | 83.9 | 91.8 | 74.9 | 77.6 | 87.1 | 63.7 | 79.2 | 86.6 | 73.8 |
| Pimprigoan | 68.9 | 73.4 | 60.8 | 80.3 | 87.6 | 72.8 | 72.6 | 74.5 | 68.5 | 76.2 | 85.0 | 66.8 | 85.0 | 96.5 | 77.5 |
| Thergaon | 75.6 | 84.0 | 65.8 | 70.2 | 79.2 | 63.6 | 66.9 | 68.0 | 65.7 | 68.0 | 69.7 | 65.8 | 70.5 | 75.4 | 65.4 |

| | 18 th Sept. | | | 19 th Sept. | | | 20 th Sept. | | | 21 st Sept. | | | 22 nd Sept. | | |
|--------------------|------------------------|------------------|------------------|------------------------|------------------|------------------|------------------------|------------------|------------------|------------------------|------------------|------------------|------------------------|------------------|------------------|
| Location | L _{Aeq} | L _{max} | L _{min} | L _{Aeq} | L _{max} | L _{Aeq} | L _{max} | L _{min} | L _{Aeq} | L _{max} | L _{Aeq} | L _{max} | L _{min} | L _{Aeq} | L _{max} |
| NASHIK | | | | | | | | | | | | | | | |
| Nashik Road | 76.1 | 87.5 | 65.3 | 68.9 | 81.1 | 46.1 | 76.5 | 82.6 | 68.2 | 84.1 | 94.5 | 74.2 | 76.4 | 84.1 | 65.5 |
| Panchvati | 73.5 | 77.3 | 66.8 | 76.2 | 86.6 | 69.5 | 81.7 | 90.7 | 76.1 | 81.1 | 83.8 | 74.3 | 97.3 | 104.4 | 85.0 |
| CIDCO | 73.8 | 82.3 | 65.1 | 76.1 | 79.5 | 71.4 | 81.5 | 95.3 | 71.8 | 83.4 | 93.7 | 75.1 | 88.8 | 95.6 | 79.2 |
| CBS | 72.7 | 79.0 | 67.6 | 77.2 | 81.8 | 72.5 | 76.1 | 83.6 | 69.2 | 84.6 | 90.1 | 78.9 | 72.2 | 80.1 | 64.3 |
| Dahi Pool | 75.3 | 84.3 | 70.2 | 76.1 | 79.3 | 72.2 | 79.1 | 90.5 | 69.0 | 87.9 | 96.2 | 78.6 | 89.6 | 102.0 | 80.6 |
| AURANGABAD | | | | | | | | | | | | | | | |
| Gulmandi | 81.3 | 84.9 | 73.6 | 80.7 | 90.4 | 73.5 | 80.2 | 90.7 | 72.6 | 80.4 | 85.6 | 76.7 | 91.7 | 95.3 | 88.5 |
| City Chowk | 77.5 | 81.8 | 74.0 | 73.4 | 77.9 | 70.2 | 75.4 | 84.2 | 66.4 | 73.4 | 80.2 | 68.4 | 90.5 | 98.0 | 87.5 |
| Kranti Chowk | 72.8 | 77.2 | 67.1 | 73.7 | 77.9 | 68.0 | 78.7 | 86.2 | 67.1 | 75.0 | 79.0 | 70.1 | 72.1 | 77.2 | 68.5 |
| CIDCO Residential | 71.0 | 77.7 | 61.7 | 69.9 | 78.2 | 59.0 | 66.5 | 72.8 | 62.4 | 65.1 | 70.1 | 58.3 | 67.4 | 75.3 | 55.6 |
| Usmanpura | 73.4 | 78.8 | 66.8 | 70.9 | 78.5 | 65.1 | 70.4 | 78.5 | 66.3 | 71.7 | 78.1 | 64.4 | 66.9 | 74.7 | 58.7 |
| NAGPUR | | | | | | | | | | | | | | | |
| Ramdaspath | 62.5 | 67.6 | 51.4 | 67.5 | 79.8 | 55.8 | 65.3 | 68.7 | 62.2 | 65.8 | 77.7 | 53.4 | 60.5 | 69.1 | 56.0 |
| Cotton Market | 71.4 | 72.5 | 69.8 | 75.3 | 81.8 | 72.3 | 73.0 | 74.5 | 70.9 | 73.0 | 74.5 | 69.7 | 72.4 | 77.3 | 69.2 |
| Golibar Chowk | 70.5 | 79.8 | 64.6 | 71.9 | 73.8 | 69.5 | 73.1 | 74.9 | 69.5 | 73.8 | 75.8 | 71.8 | 85.4 | 90.6 | 79.1 |
| Reshimbag | 72.1 | 80.8 | 58.2 | 78.9 | 82.5 | 71.9 | 79.5 | 82.3 | 76.4 | 78.7 | 81.0 | 71.0 | 79.6 | 84.1 | 71.9 |
| Gandhiputala | 71.0 | 72.5 | 68.7 | 73.1 | 78.5 | 70.1 | 71.6 | 72.7 | 69.6 | 73.2 | 77.7 | 69.9 | 70.7 | 72.5 | 69.3 |
| KALYAN | | | | | | | | | | | | | | | |
| Bhiwandi | 83.6 | 84.7 | 81.7 | 86.4 | 91.0 | 82.6 | 86.4 | 92.7 | 83.8 | 86.7 | 91.9 | 81.3 | 94.8 | 96.6 | 93.1 |
| Shivaji Chowk | 90.5 | 98.3 | 80.4 | 81.8 | 86.1 | 78.0 | 87.2 | 92.1 | 84.4 | 81.1 | 85.9 | 79.0 | 92.7 | 98.4 | 84.0 |
| Ulhasnagar Station | 73.8 | 79.1 | 69.3 | 87.6 | 94.8 | 80.4 | 80.3 | 85.4 | 77.0 | 81.5 | 92.0 | 75.4 | 92.0 | 95.6 | 88.8 |

| | 18 th Sept. | | | 19 th Sept. | | | 20 th Sept. | | | 21 st Sept. | | | 22 nd Sept. | | |
|--------------------------|------------------------|------------------|------------------|------------------------|------------------|------------------|------------------------|------------------|------------------|------------------------|------------------|------------------|------------------------|------------------|------------------|
| Location | L _{Aeq} | L _{max} | L _{min} | L _{Aeq} | L _{max} | L _{Aeq} | L _{max} | L _{min} | L _{Aeq} | L _{max} | L _{Aeq} | L _{max} | L _{min} | L _{Aeq} | L _{max} |
| AMARAVATI | | | | | | | | | | | | | | | |
| Bhudhwara | 73.1 | 81.2 | 63.3 | 72.6 | 82.4 | 64.2 | 68.8 | 74.3 | 63.3 | 79.7 | 88.3 | 68.2 | 87.4 | 92.0 | 79.0 |
| Rajkamal Square | 74.8 | 77.0 | 71.5 | 74.4 | 78.7 | 66.2 | 77.5 | 81.2 | 66.1 | 78.5 | 82.5 | 72.8 | 86.0 | 92.2 | 79.4 |
| Irvin Hospital Square | 63.5 | 71.3 | 57.2 | 70.6 | 75.4 | 64.7 | 69.8 | 77.1 | 62.4 | 71.8 | 82.7 | 62.8 | 74.4 | 82.3 | 62.7 |
| JALGAON | | | | | | | | | | | | | | | |
| Subhash Chowk | 70.8 | 76.5 | 66.2 | 72.7 | 77.0 | 66.2 | 72.5 | 79.4 | 67.5 | 70.2 | 75.6 | 65.0 | 85.9 | 94.2 | 76.4 |
| Shashtri Tower Chowk | 75.5 | 80.2 | 68.1 | 75.5 | 80.1 | 70.1 | 76.5 | 82.3 | 70.1 | 73.3 | 79.7 | 66.3 | 91.6 | 98.0 | 82.2 |
| Shanipeth Police Station | 61.4 | 68.5 | 56.2 | 65.7 | 71.1 | 59.2 | 60.4 | 69.2 | 54.1 | 61.9 | 70.1 | 53.1 | 70.5 | 76.5 | 65.0 |
| KOLHAPUR | | | | | | | | | | | | | | | |
| Rajaram Puri | 69.5 | 71.9 | 66.3 | 71.7 | 73.9 | 68.5 | 71.7 | 75.8 | 66.1 | 73.0 | 75.5 | 70.5 | 64.4 | 65.7 | 62.7 |
| Mahalaxmi Mandir | 80.7 | 85.2 | 76.4 | 81.2 | 86.4 | 74.6 | 82.1 | 83.7 | 80.1 | 80.4 | 83.1 | 73.1 | 121.2 | 131.1 | 108.4 |
| Khas Baug Maidan | 73.8 | 78.6 | 68.8 | 74.0 | 78.6 | 69.3 | 74.1 | 79.4 | 72.1 | 71.7 | 78.1 | 66.6 | 93.9 | 98.9 | 82.9 |
| SATARA | | | | | | | | | | | | | | | |
| Powai Naka | 67.5 | 76.0 | 59.3 | 76.8 | 81.1 | 68.3 | 82.8 | 100.1 | 71.2 | 86.4 | 91.8 | 77.8 | 89.9 | 102.5 | 74.3 |
| Moti Chowk | 73.1 | 78.2 | 56.7 | 74.8 | 81.7 | 62.8 | 73.3 | 81.2 | 55.6 | 95.7 | 105.6 | 86.4 | 91.0 | 107.3 | 73.5 |
| Rajwada | 74.8 | 77.4 | 70.7 | 74.8 | 77.4 | 70.7 | 85.9 | 91.6 | 82.3 | 88.7 | 96.3 | 78.4 | 88.4 | 98.6 | 75.3 |

Mumbai: Five days noise monitoring study shows that among all the 25 locations, the maximum noise level (111.3 dBA) was observed at Bhandup on 22nd September, 2010 and minimum noise level (58.2 dBA) was observed at Elphinstone on 19th September, 2010.

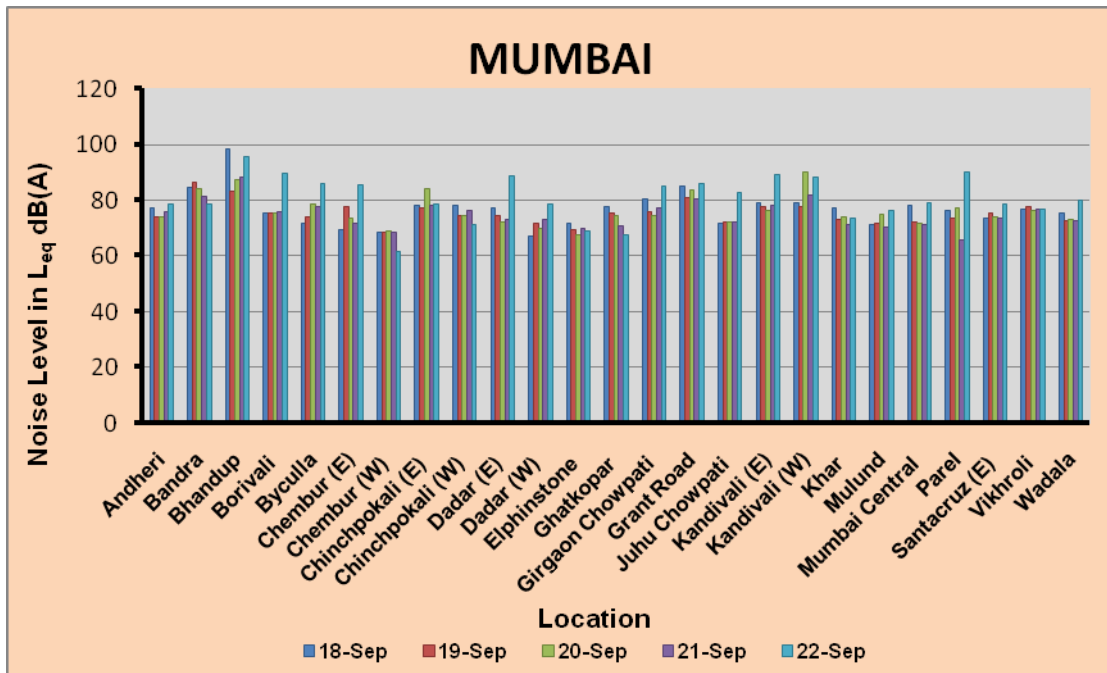


Chart 4.1: Noise levels from 18th-22nd Sept., 2010 in Mumbai during 18.00 hrs to 24.00 hrs.

Navi Mumbai: In Navi Mumbai, the maximum noise level (126.3 dBA) was observed at CBD on 22nd September, 2010 and minimum noise level (57.4 dBA) was observed at Uran on 19th September, 2010.

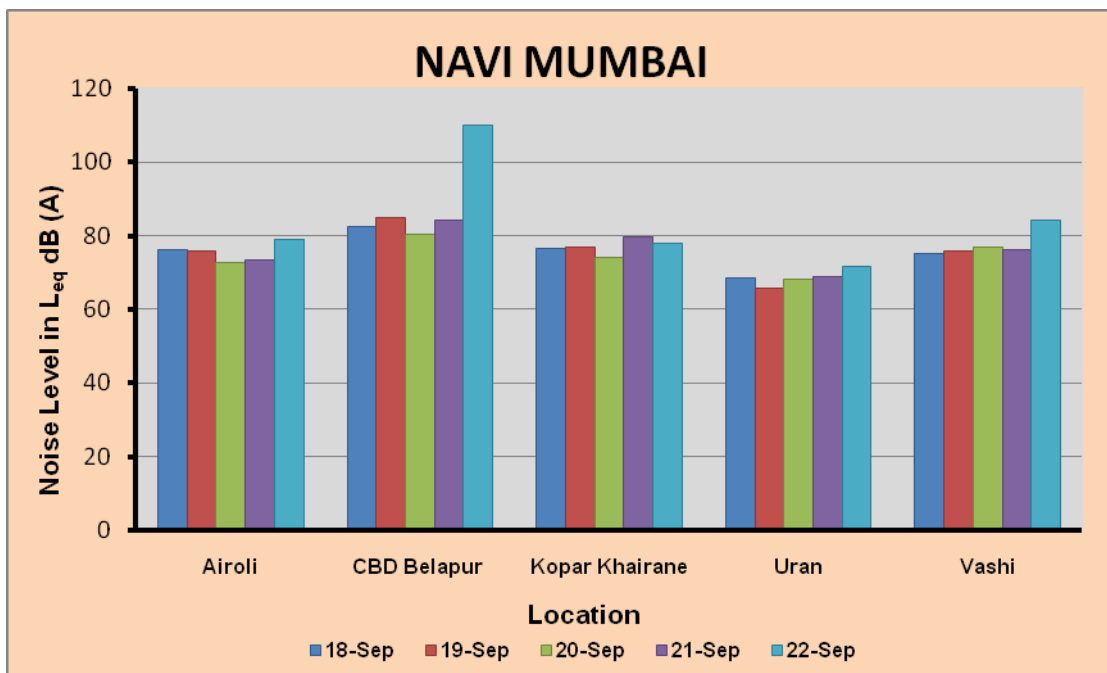


Chart 4.2: Noise levels from 18th-22nd Sept., 2010 in Navi Mumbai during 18.00 hrs to 24.00 hrs.

Thane: Five days noise monitoring study shows that the maximum noise level (108 dBA) was at Kalwa location and minimum noise level (51.1 dBA) was at Bedekar Hospital.

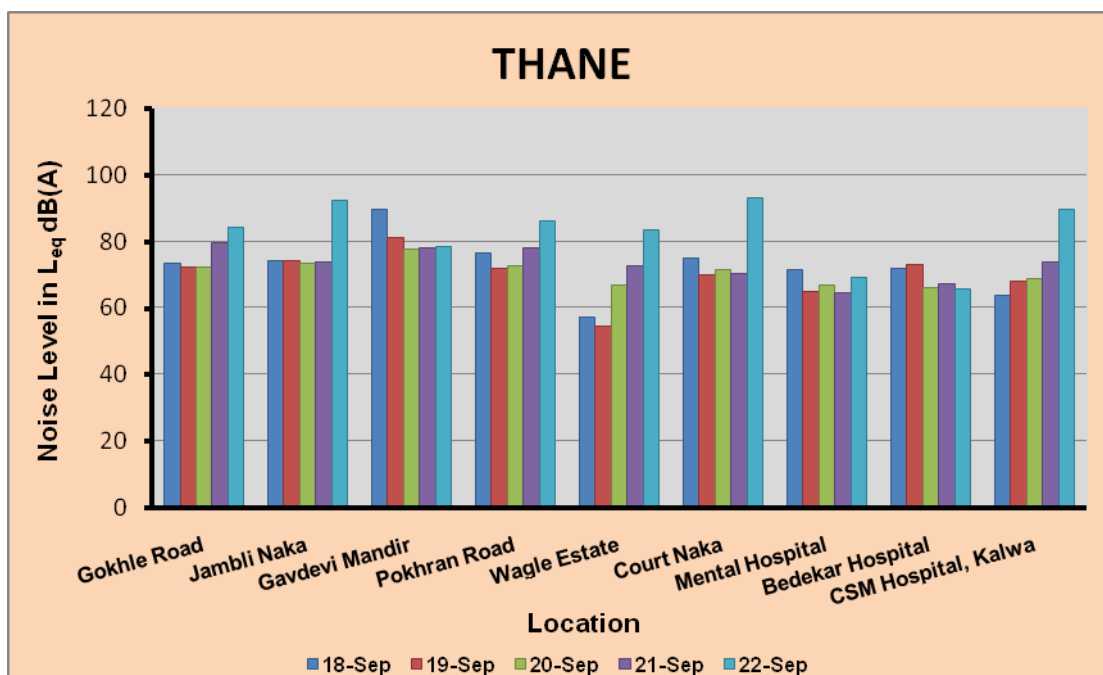


Chart 4.3: Noise levels from 18th-22nd Sept., 2010 in Thane during 18.00 hrs to 24.00 hrs.

Pune: In Pune, the maximum noise level (101.3 dBA) was observed at Alka Chowk on 22nd September, 2010 and minimum noise level (39.1 dBA) was observed at Sarus Baug on 19th September, 2010.

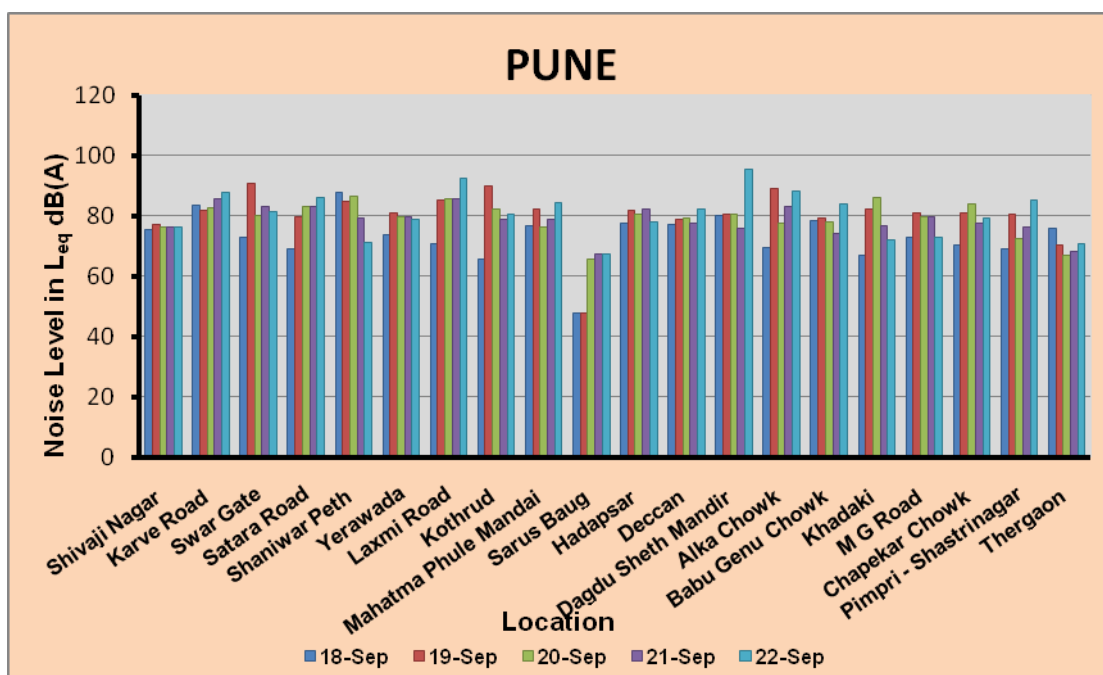


Chart 4.4: Noise levels from 18th-22nd Sept., 2010 in Pune during 18.00 hrs to 24.00 hrs.

Nashik: In Nashik, the maximum noise level (104.4 dBA) was observed at Panchvati on 22nd September, 2010 and minimum noise level (46.1 dBA) was observed at Bytcco point on 19th September, 2010.

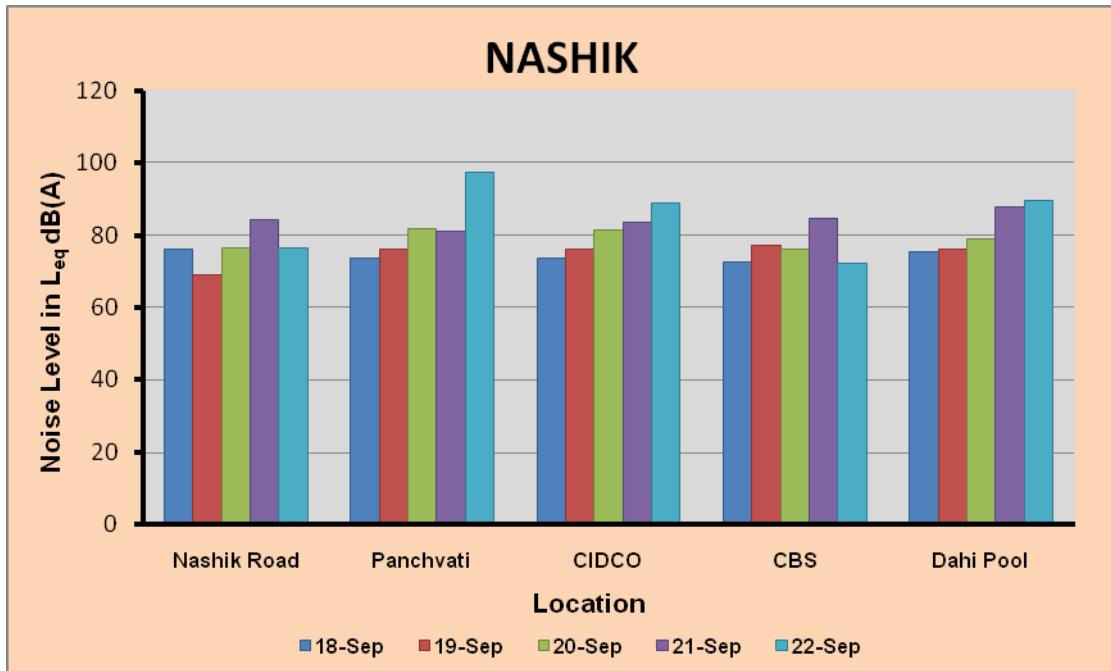


Chart 4.5: Noise levels from 18th-22nd Sept., 2010 in Nashik during 18.00 hrs to 24.00 hrs.

Aurangabad: In Aurangabad, the maximum noise level (98.0 dBA) was observed at City Chowk on 22nd September, 2010 and minimum noise level (55.6 dBA) was observed at CIDCO point on 22nd September, 2010.

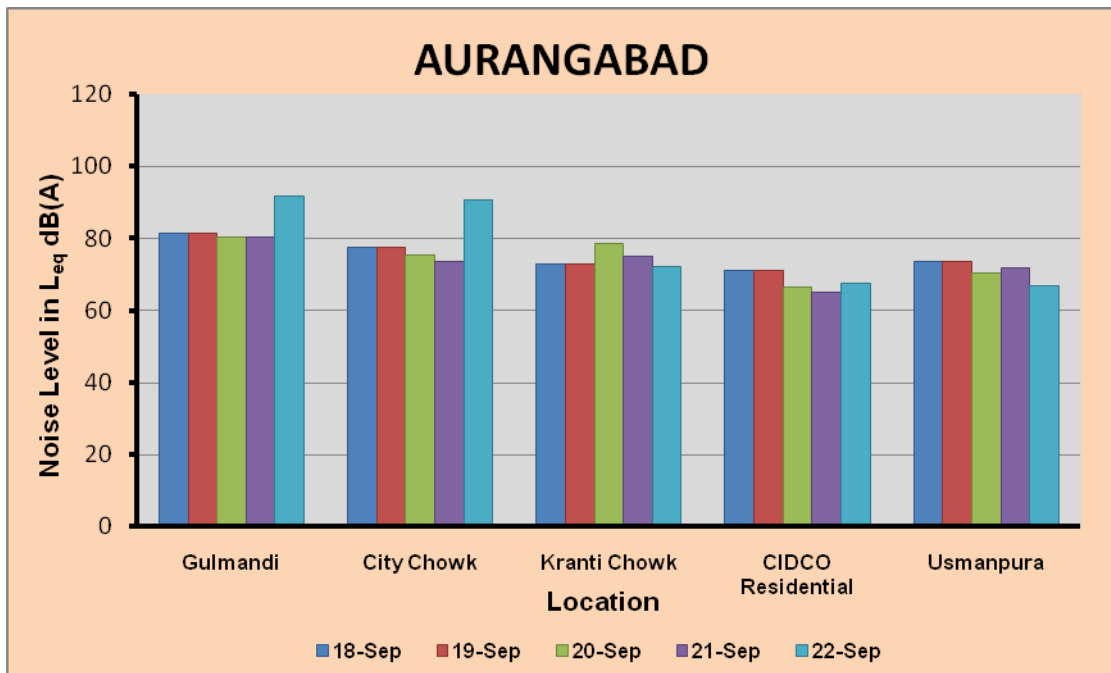


Chart 4.6: Noise levels from 18th-22nd Sept., 2010 in Aurangabad during 18.00 hrs to 24.00 hrs.

Nagpur: In Nagpur, the maximum noise level (90.6 dBA) was observed at Golibar Chowk on 22nd September, 2010 and minimum noise level (51.4 dBA) was observed at Ramdaspath point on 19th September, 2010.

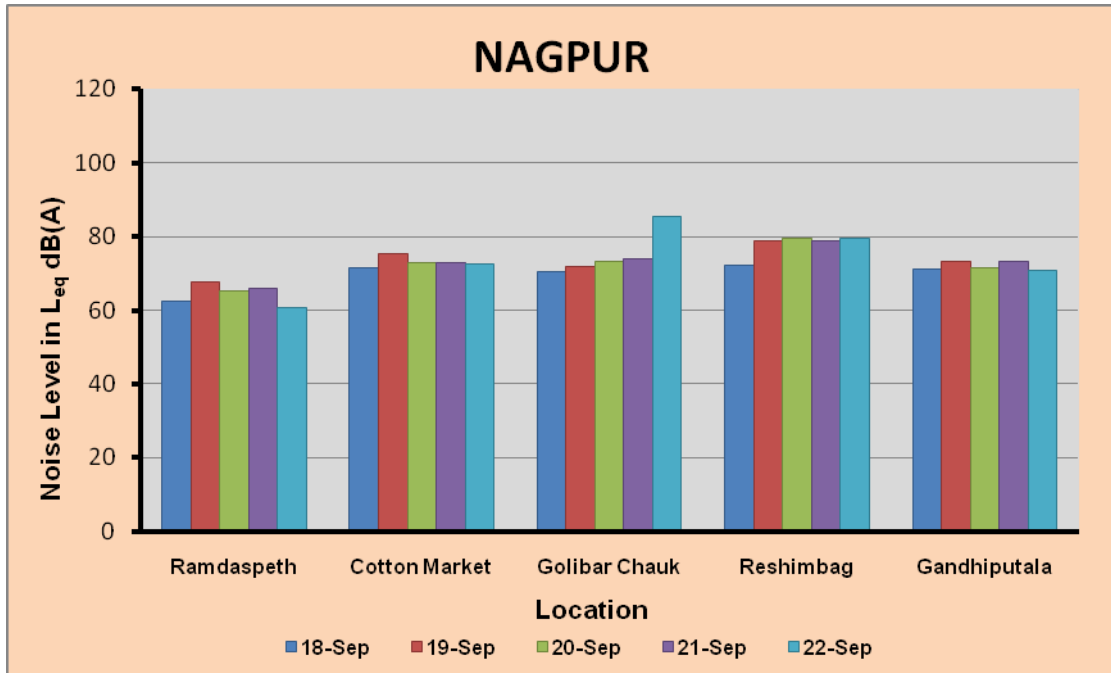


Chart 4.7: Noise levels from 18th-22nd Sept., 2010 in Nagpur during 18.00 hrs to 24.00 hrs.

Kalyan: In Kalyan, the maximum noise level (98.4 dBA) was observed at Shivaji Chowk on 22nd September, 2010 and minimum noise level (69.3 dBA) was observed at Ulhasnagar on 19th September, 2010.

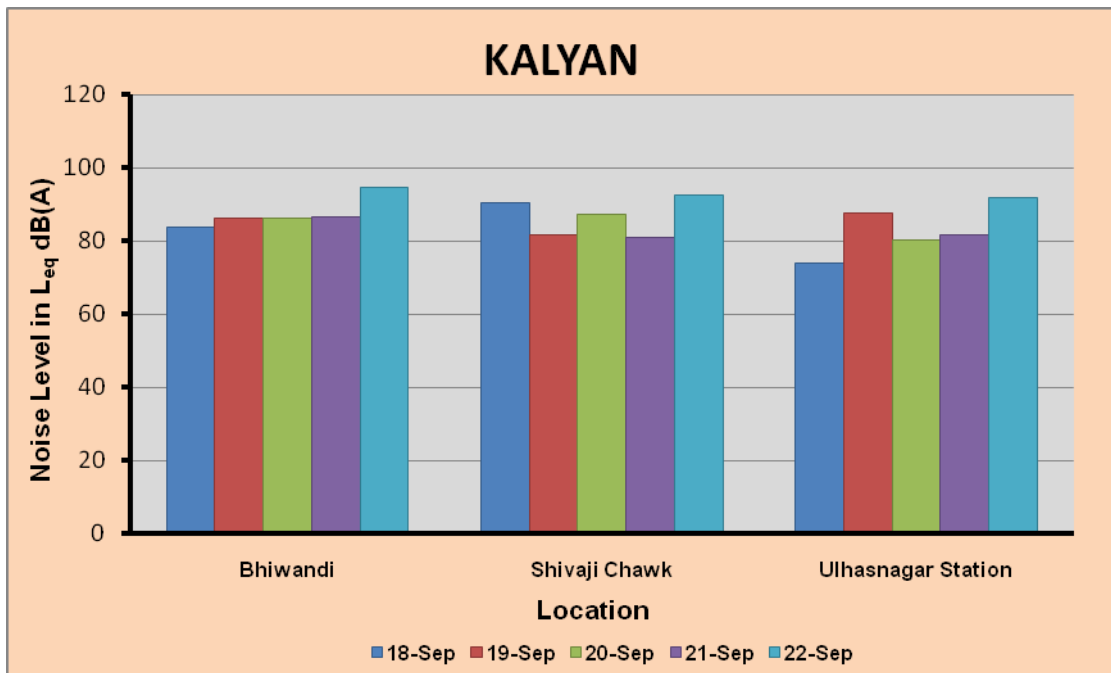


Chart 4.8: Noise levels from 18th-22nd Sept., 2010 in Kalyan during 18,00 hrs to 24.00 hrs.

Amravati: In Amravati, the maximum noise level (92.2 dBA) was observed at Rajkamal Square on 22nd September, 2010 and minimum noise level (57.2 dBA) was observed at Irvin Hospital on 19th September, 2010.

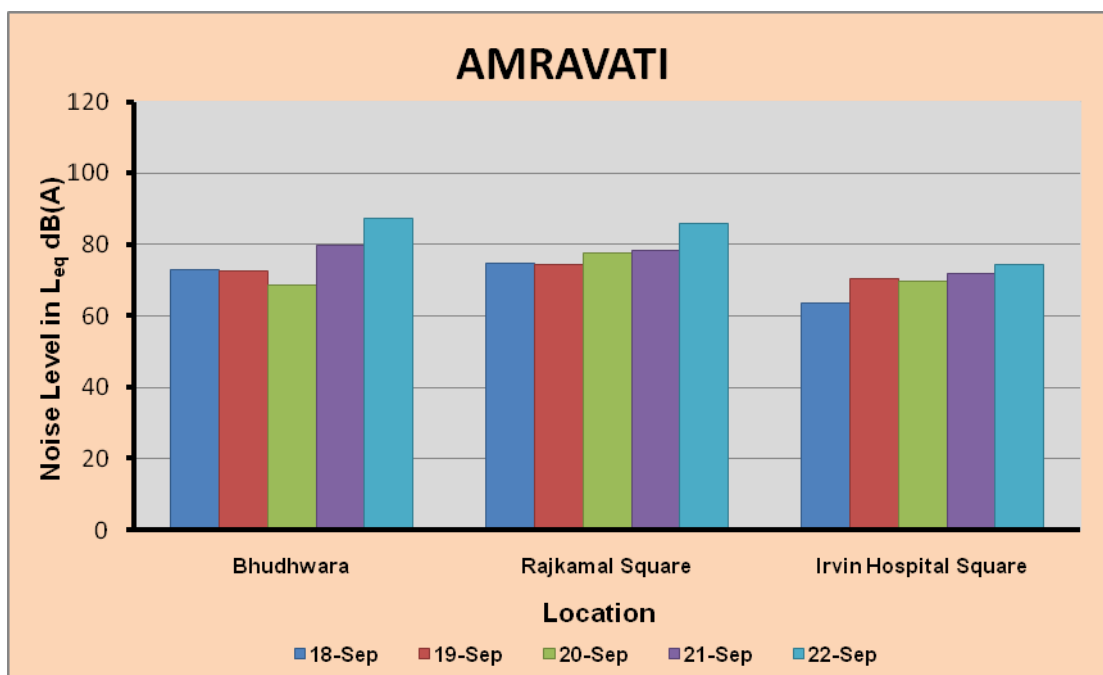


Chart 4.9: Noise levels from 18th-22nd Sept., 2010 in Amravati during 18.00 hrs to 24.00 hrs.

Jalgaon: In Jalgaon, the maximum noise level (98.0 dBA) was observed at Shastri Tower Chowk on 22nd September, 2010 and minimum noise level (53.1 dBA) was observed at Irvin Hospital on 21st September, 2010.

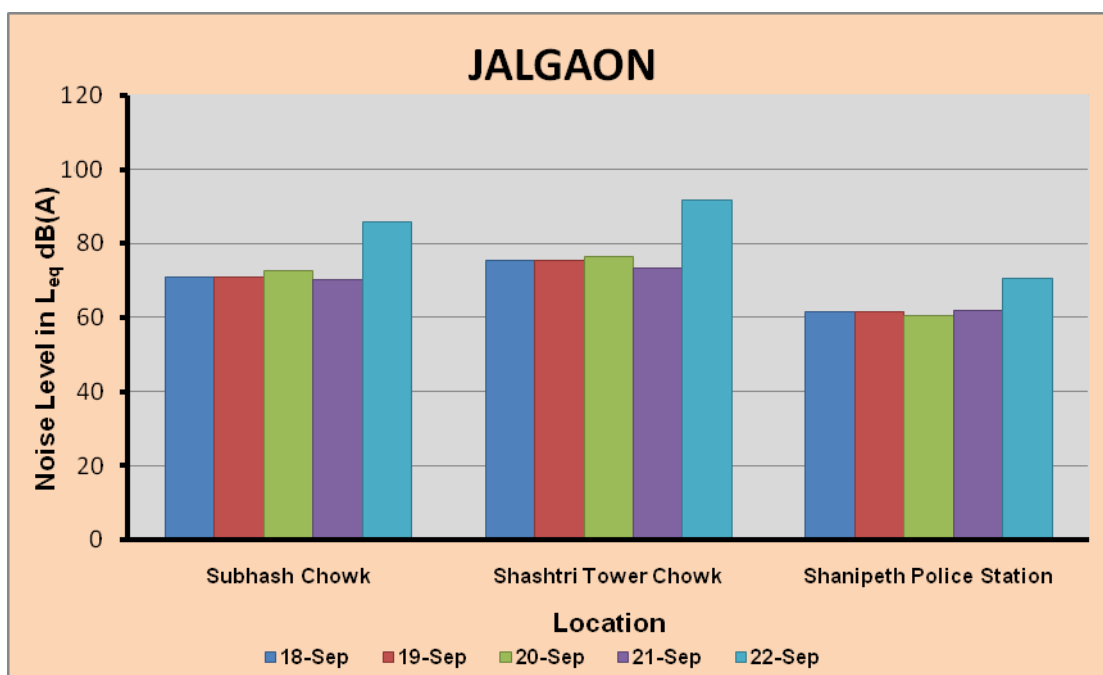


Chart 4.10: Noise levels from 18th-22nd Sept., 2010 in Jalgaon during 18.00 hrs to 24.00 hrs.

Kolhapur: In Kolhapur, the maximum noise level (131.1 dBA) was observed at Mahalaxmi Mandir on 22nd September, 2010 and minimum noise level (62.7 dBA) was observed at Rajaram Puri on 22nd September, 2010.

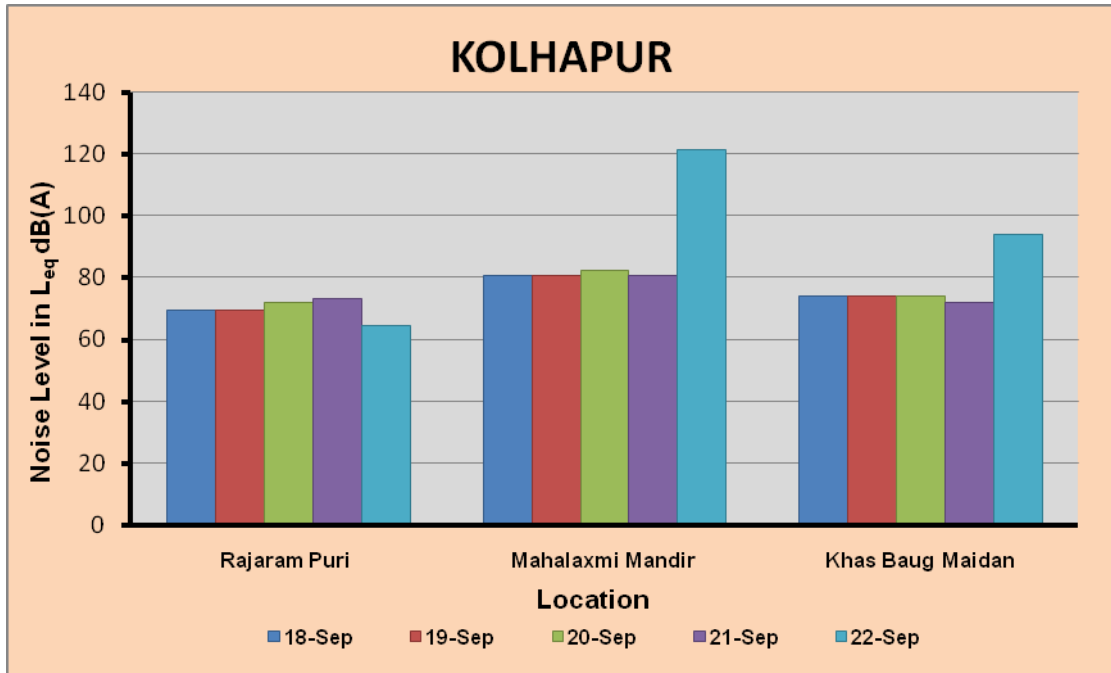


Chart 4.11: Noise levels from 18th-22nd Sept., 2010 in Kolhapur during 18.00 hrs to 24.00 hrs.

Satara: In Satara, the maximum noise level (107.3 dBA) and minimum noise level (55.6 dBA) was observed at Moti Chowk on 22nd September, 2010 and 20th September, 2010.

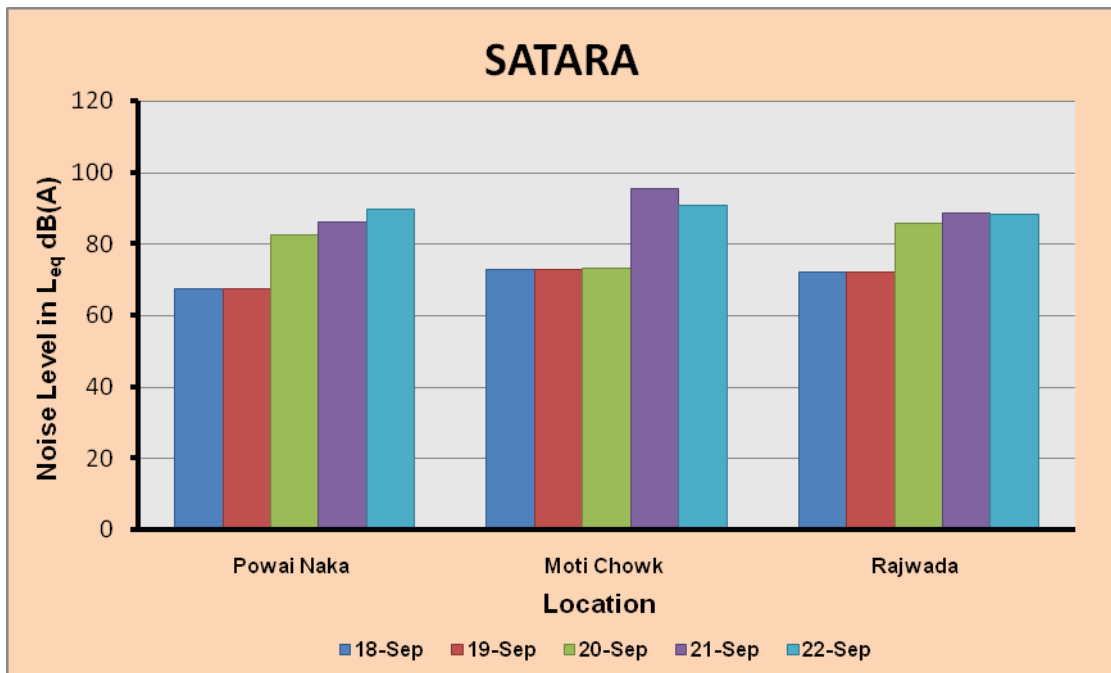


Chart 4.12: Noise levels from 18th-22nd Sept., 2010 in Satara during 18.00 hrs to 24.00 hrs.

However the detailed results of all the locations are shown below. These gives the hourly equivalent continuous noise levels at each location:

Table 4.2 (a): Hourly Noise levels at various locations in Mumbai on 18th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Andheri | 77.7 | 78.3 | 80.5 | 80.0 | 77.4 | 70.4 |
| Bandra | 82.6 | 86.5 | 86.6 | 95.9 | 79.3 | 76.2 |
| Bhandup | 102.4 | 100.1 | 101.9 | 102.6 | 97.7 | 86.4 |
| Borivali | 77.5 | 78.6 | 77.0 | 75.2 | 73.6 | 70.2 |
| Byculla | 74.9 | 76.9 | 76.6 | 72.0 | 70.5 | 60.0 |
| Chembur (E) | 71.7 | 72.5 | 69.8 | 71.1 | 69.4 | 63.3 |
| Chembur (W) | 69.7 | 71.8 | 74.5 | 66.7 | 65.5 | 61.7 |
| Chinchpokali (E) | 75.5 | 78.5 | 79.3 | 82.8 | 77.9 | 74.6 |
| Chinchpokali (W) | 75.5 | 81.6 | 80.9 | 76.4 | 82.0 | 73.5 |
| Dadar (E) | 77.8 | 78.1 | 77.1 | 89.4 | 72.5 | 68.7 |
| Dadar (W) | 63.9 | 62.2 | 70.2 | 71.5 | 71.7 | 63.3 |
| Elphinstone | 67.1 | 75.1 | 68.7 | 71.5 | 78.5 | 70.1 |
| Ghatkopar | 76.8 | 77.4 | 77.2 | 84.7 | 76.3 | 74.2 |
| Girgaon Chowpati | 79.2 | 87.1 | 81.7 | 76.5 | 80.1 | 78.1 |
| Grant Road | 88.8 | 88.7 | 82.8 | 93.2 | 84.2 | 72.4 |
| Juhu Chowpati | 70.8 | 71.2 | 71.4 | 69.6 | 74.5 | 72.3 |
| Kandivali (E) | 85.3 | 83.6 | 84.5 | 71.8 | 74.9 | 75.8 |
| Kandivali (W) | 77.2 | 83.9 | 81.0 | 80.3 | 79.2 | 72.0 |
| Khar | 73.4 | 81.5 | 81.7 | 78.9 | 79.3 | 69.0 |
| Mulund | 69.7 | 72.0 | 72.1 | 74.2 | 71.5 | 68.4 |
| Mumbai Central | 82.8 | 88.9 | 88.3 | 71.7 | 70.3 | 67.2 |
| Parel | 81.5 | 73.5 | 77.7 | 76.0 | 74.4 | 73.7 |
| Santacruz (E) | 77.1 | 76.7 | 82.2 | 73.5 | 67.2 | 64.3 |
| Vikhroli | 82.0 | 77.9 | 76.5 | 74.3 | 76.2 | 73.7 |
| Wadala | 72.4 | 78.4 | 76.5 | 76.9 | 78.7 | 69.0 |

Table 4.2 (b): Hourly Noise levels at various locations in Mumbai on 19th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Andheri | 72.2 | 74.5 | 75.8 | 76.5 | 74.2 | 70.2 |
| Bandra | 89.3 | 79.9 | 95.9 | 84.5 | 84.5 | 84.2 |
| Bhandup | 93.3 | 93.3 | 96.7 | 78.0 | 68.2 | 68.4 |
| Borivali | 77.3 | 76.5 | 78.1 | 76.1 | 73.9 | 70.1 |
| Byculla | 77.5 | 76.0 | 77.7 | 72.0 | 78.6 | 62.1 |
| Chembur (E) | 73.3 | 71.5 | 77.3 | 82.0 | 84.9 | 76.6 |
| Chembur (W) | 63.7 | 72.7 | 70.4 | 68.7 | 70.4 | 66.3 |
| Chinchpokali (E) | 74.7 | 78.3 | 78.0 | 75.5 | 81.0 | 76.7 |
| Chinchpokali (W) | 79.7 | 75.8 | 73.5 | 76.5 | 74.8 | 65.3 |
| Dadar (E) | 74.0 | 76.5 | 78.6 | 76.4 | 74.3 | 68.2 |
| Dadar (W) | 60.6 | 77.1 | 75.1 | 71.6 | 71.7 | 74.9 |
| Elphinstone | 70.0 | 66.2 | 82.3 | 69.4 | 70.8 | 58.2 |

| | | | | | | |
|------------------|------|------|------|------|------|------|
| Ghatkopar | 73.7 | 75.5 | 77.3 | 80.3 | 75.1 | 71.9 |
| Girgaon Chowpati | 75.2 | 77.6 | 75.2 | 74.0 | 76.7 | 77.4 |
| Grant Road | 89.1 | 88.0 | 81.6 | 81.9 | 73.6 | 69.7 |
| Juhu Chowpati | 78.2 | 80.9 | 71.2 | 69.9 | 67.8 | 65.2 |
| Kandivali (E) | 81.3 | 85.6 | 76.2 | 77.1 | 77.0 | 69.5 |
| Kandivali (W) | 74.0 | 83.2 | 80.8 | 75.6 | 78.3 | 74.1 |
| Khar | 78.6 | 77.4 | 74.0 | 75.9 | 68.5 | 63.2 |
| Mulund | 68.5 | 71.7 | 77.8 | 70.8 | 69.0 | 72.6 |
| Mumbai Central | 67.2 | 71.4 | 75.1 | 80.4 | 73.9 | 65.8 |
| Parel | 75.3 | 74.3 | 68.9 | 70.5 | 76.6 | 75.3 |
| Santacruz (E) | 79.4 | 80.7 | 80.7 | 76.9 | 69.8 | 64.6 |
| Vikhroli | 81.1 | 78.7 | 78.0 | 77.2 | 77.0 | 73.3 |
| Wadala | 79.3 | 73.1 | 72.8 | 69.7 | 70.2 | 70.1 |

Table 4.2 (c): Hourly Noise levels at various locations in Mumbai on 20th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Andheri | 77.0 | 74.2 | 76.3 | 74.1 | 73.2 | 70.5 |
| Bandra | 95.8 | 81.3 | 82.1 | 82.8 | 85.6 | 76.7 |
| Bhandup | 96.0 | 96.3 | 106.6 | 76.5 | 72.3 | 75.9 |
| Borivali | 76.7 | 77.4 | 78.3 | 75.5 | 74.8 | 70.8 |
| Byculla | 74.8 | 77.7 | 76.2 | 80.8 | 82.4 | 80.1 |
| Chembur (E) | 75.3 | 73.2 | 72.9 | 77.1 | 71.4 | 70.8 |
| Chembur (W) | 66.9 | 68.0 | 71.9 | 67.8 | 69.7 | 68.9 |
| Chinchpokali (E) | 78.2 | 78.1 | 89.8 | 86.6 | 85.8 | 86.4 |
| Chinchpokali (W) | 80.2 | 76.8 | 76.9 | 72.0 | 76.5 | 64.4 |
| Dadar (E) | 73.3 | 73.5 | 72.0 | 71.7 | 72.0 | 71.8 |
| Dadar (W) | 61.5 | 72.1 | 77.0 | 73.3 | 70.3 | 64.9 |
| Elphinstone | 68.2 | 71.7 | 65.3 | 70.1 | 65.3 | 63.8 |
| Ghatkopar | 72.3 | 72.5 | 73.7 | 75.5 | 75.4 | 77.8 |
| Girgaon Chowpati | 74.5 | 74.9 | 71.7 | 76.8 | 74.3 | 74.3 |
| Grant Road | 91.1 | 90.9 | 86.0 | 86.6 | 82.5 | 65.6 |
| Juhu Chowpati | 70.6 | 74.9 | 73.2 | 73.0 | 70.6 | 71.9 |
| Kandivali (E) | 84.0 | 89.0 | 75.3 | 70.1 | 71.0 | 69.7 |
| Kandivali (W) | 84.8 | 87.3 | 93.5 | 106.2 | 87.0 | 81.7 |
| Khar | 74.2 | 75.2 | 73.8 | 81.6 | 77.3 | 61.5 |
| Mulund | 72.0 | 77.5 | 82.8 | 76.6 | 73.9 | 66.1 |
| Mumbai Central | 73.3 | 73.6 | 71.4 | 73.3 | 70.5 | 69.5 |
| Parel | 75.4 | 78.3 | 79.1 | 81.7 | 74.5 | 73.3 |
| Santacruz (E) | 74.2 | 78.0 | 79.5 | 73.7 | 69.1 | 68.6 |
| Vikhroli | 80.6 | 77.6 | 77.7 | 76.5 | 74.3 | 72.5 |
| Wadala | 75.3 | 76.3 | 74.9 | 74.0 | 70.3 | 68.9 |

Table 4.2 (d): Hourly Noise levels at various locations in Mumbai on 21st Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Andheri | 75.1 | 76.1 | 77.6 | 78.6 | 76.9 | 71.3 |
| Bandra | 79.4 | 84.8 | 86.2 | 78.5 | 84.9 | 75.7 |
| Bhandup | 96.0 | 96.3 | 106.6 | 83.4 | 76.5 | 72.3 |
| Borivali | 77.2 | 77.8 | 78.7 | 76.0 | 73.7 | 70.7 |
| Byculla | 79.4 | 80.0 | 76.1 | 77.2 | 77.7 | 76.3 |
| Chembur (E) | 75.1 | 74.4 | 74.3 | 70.2 | 68.4 | 67.8 |
| Chembur (W) | 68.7 | 66.9 | 71.2 | 67.2 | 68.1 | 69.9 |
| Chinchpokali (E) | 77.5 | 77.6 | 77.7 | 82.5 | 75.0 | 78.7 |
| Chinchpokali (W) | 76.3 | 76.8 | 77.0 | 73.8 | 75.3 | 78.6 |
| Dadar (E) | 73.3 | 75.6 | 75.1 | 73.5 | 70.6 | 70.4 |
| Dadar (W) | 71.2 | 77.3 | 76.7 | 75.4 | 72.5 | 64.4 |
| Elphinstone | 71.0 | 75.5 | 75.0 | 64.6 | 67.1 | 64.7 |
| Ghatkopar | 74.2 | 70.9 | 70.9 | 71.0 | 71.4 | 67.1 |
| Girgaon Chowpati | 74.5 | 73.7 | 72.8 | 85.7 | 78.7 | 77.7 |
| Grant Road | 82.5 | 88.3 | 83.1 | 88.0 | 73.8 | 67.3 |
| Juhu Chowpati | 73.3 | 71.7 | 69.9 | 73.5 | 72.5 | 71.8 |
| Kandivali (E) | 83.9 | 75.9 | 85.3 | 78.7 | 73.1 | 71.5 |
| Kandivali (W) | 83.7 | 82.8 | 92.3 | 85.7 | 74.7 | 72.9 |
| Khar | 74.3 | 78.4 | 73.9 | 72.4 | 66.2 | 62.3 |
| Mulund | 70.2 | 70.4 | 68.4 | 69.7 | 70.6 | 71.9 |
| Mumbai Central | 70.6 | 73.5 | 74.0 | 76.0 | 68.0 | 64.6 |
| Parel | 70.8 | 66.4 | 62.8 | 67.1 | 63.7 | 64.7 |
| Santacruz (E) | 74.2 | 75.8 | 77.8 | 78.7 | 71.7 | 63.8 |
| Vikhroli | 80.2 | 78.4 | 77.7 | 75.8 | 74.2 | 73.2 |
| Wadala | 67.7 | 73.6 | 77.8 | 77.7 | 72.3 | 67.2 |

Table 4.2 (e): Hourly Noise levels at various locations in Mumbai on 22nd Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Andheri | 80.0 | 78.0 | 78.4 | 77.6 | 81.2 | 77.8 |
| Bandra | 90.3 | 88.3 | 69.5 | 79.1 | 78.4 | 67.4 |
| Bhandup | 111.3 | 98.3 | 104.7 | 83.3 | 83.3 | 92.7 |
| Borivali | 86.3 | 95.6 | 93.1 | 92.3 | 89.0 | 82.0 |
| Byculla | 95.3 | 90.1 | 98.8 | 86.9 | 73.9 | 72.0 |
| Chembur (E) | 79.1 | 85.8 | 87.4 | 93.2 | 86.0 | 81.3 |
| Chembur (W) | 61.8 | 62.2 | 61.9 | 62.2 | 61.2 | 61.2 |
| Chinchpokali (E) | 75.4 | 79.6 | 80.7 | 86.1 | 74.3 | 75.6 |
| Chinchpokali (W) | 75.6 | 73.2 | 74.9 | 76.3 | 65.2 | 62.0 |
| Dadar (E) | 85.6 | 86.1 | 88.4 | 91.2 | 93.4 | 88.3 |
| Dadar (W) | 75.1 | 71.3 | 75.4 | 72.9 | 87.2 | 88.6 |
| Elphinstone | 68.1 | 74.5 | 71.3 | 72.8 | 66.6 | 59.7 |
| Ghatkopar | 66.6 | 65.3 | 71.8 | 69.2 | 67.1 | 65.1 |
| Girgaon Chowpati | 88.0 | 79.5 | 87.8 | 83.1 | 86.0 | 85.6 |
| Grant Road | 96.1 | 97.1 | 95.3 | 91.7 | 72.8 | 62.7 |

| | | | | | | |
|----------------|------|------|------|------|------|------|
| Juhu Chowpati | 81.4 | 80.2 | 83.0 | 79.1 | 89.8 | 82.9 |
| Kandivali (E) | 98.8 | 83.5 | 92.6 | 95.8 | 86.8 | 77.0 |
| Kandivali (W) | 87.4 | 87.4 | 93.9 | 98.6 | 85.3 | 78.4 |
| Khar | 89.7 | 75.8 | 73.5 | 75.1 | 63.3 | 63.2 |
| Mulund | 77.5 | 96.9 | 78.7 | 69.2 | 69.5 | 64.6 |
| Mumbai Central | 94.3 | 77.5 | 84.9 | 74.6 | 70.5 | 71.6 |
| Parel | 86.9 | 93.4 | 85.0 | 91.2 | 91.9 | 93.0 |
| Santacruz (E) | 79.0 | 79.5 | 79.7 | 81.3 | 78.1 | 72.8 |
| Vikhroli | 80.2 | 78.4 | 77.7 | 75.8 | 74.2 | 73.2 |
| Wadala | 75.0 | 76.0 | 76.0 | 79.1 | 96.1 | 78.8 |

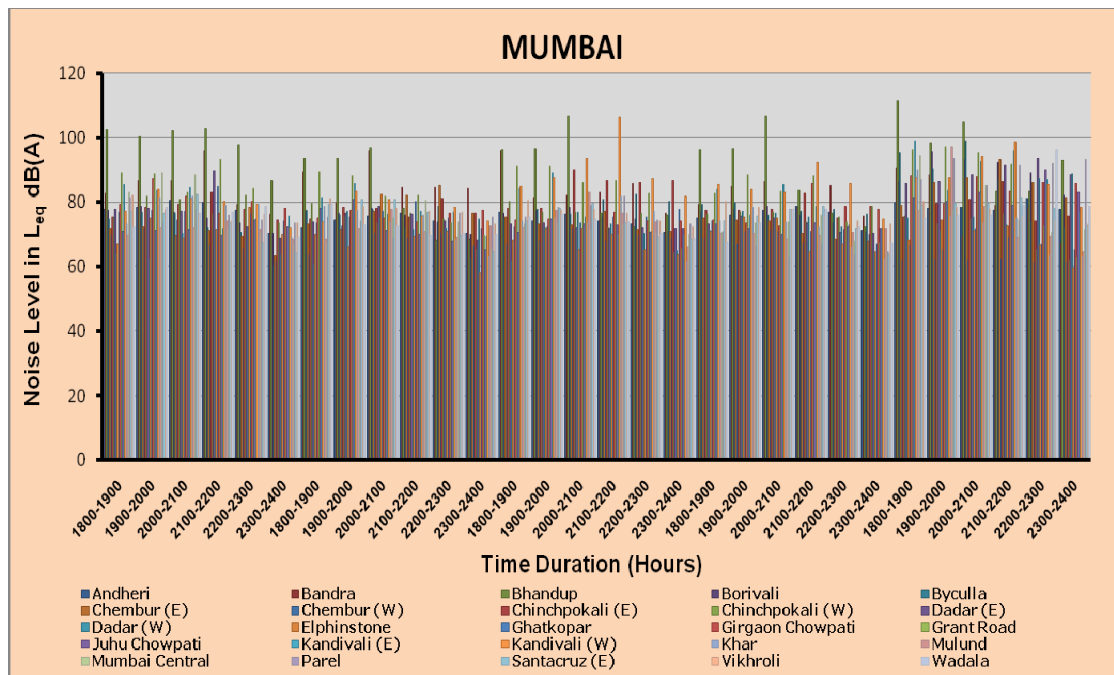


Chart 4.13: Hourly Noise levels from 18th-22nd Sept., 2010 in Mumbai

Table 4.3 (a): Hourly Noise levels at various locations in Navi Mumbai on 18th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|----------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Airoli | 77.6 | 79.7 | 78.8 | 74.4 | 76.3 | 69.7 |
| CBD | 83.1 | 83.8 | 86.1 | 90.4 | 75.0 | 77.4 |
| Kopar Khairane | 79.0 | 78.2 | 84.7 | 78.1 | 71.7 | 66.6 |
| Uran | 68.0 | 71.3 | 69.5 | 69.2 | 70.7 | 62.8 |
| Vashi | 74.7 | 73.6 | 79.4 | 71.3 | 74.8 | 77.5 |

Table 4.3 (b): Hourly Noise levels at various locations in Navi Mumbai on 19th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|----------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Airoli | 75.4 | 79.2 | 81.8 | 77.3 | 73.3 | 67.0 |
| CBD | 85.6 | 94.6 | 92.7 | 93.2 | 84.8 | 57.8 |
| Kopar Khairane | 81.0 | 81.7 | 82.1 | 78.0 | 72.2 | 65.9 |
| Uran | 65.1 | 71.4 | 71.1 | 70.5 | 59.6 | 57.4 |
| Vashi | 78.1 | 72.6 | 74.2 | 74.3 | 76.5 | 78.2 |

Table 4.3 (c): Hourly Noise levels at various locations in Navi Mumbai on 20th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|----------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Airoli | 75.4 | 76.6 | 76.3 | 75.0 | 66.3 | 65.9 |
| CBD | 71.7 | 75.0 | 84.2 | 90.3 | 86.6 | 74.5 |
| Kopar Khairane | 74.6 | 76.1 | 76.1 | 70.4 | 69.5 | 78.5 |
| Uran | 69.5 | 69.7 | 70.5 | 70.5 | 68.2 | 61.1 |
| Vashi | 76.2 | 77.1 | 73.7 | 77.2 | 80.1 | 77.6 |

Table 4.3 (d): Hourly Noise levels at various locations in Navi Mumbai on 21st Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|----------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Airoli | 72.8 | 77.0 | 78.3 | 78.7 | 70.3 | 62.7 |
| CBD | 76.7 | 88.5 | 84.9 | 100.0 | 86.3 | 68.5 |
| Kopar Khairane | 79.9 | 81.0 | 82.3 | 81.7 | 76.7 | 77.0 |
| Uran | 70.8 | 70.1 | 71.8 | 69.7 | 70.4 | 60.9 |
| Vashi | 76.2 | 74.4 | 78.1 | 75.5 | 74.8 | 78.3 |

Table 4.3 (e): Hourly Noise levels at various locations in Navi Mumbai on 22nd Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|----------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Airoli | 79.6 | 83.0 | 81.2 | 83.4 | 75.6 | 70.8 |
| CBD | 86.9 | 96.8 | 113.7 | 112.6 | 126.3 | 123.4 |
| Kopar Khairane | 80.5 | 80.6 | 83.6 | 78.5 | 75.3 | 69.5 |
| Uran | 68.5 | 71.7 | 74.8 | 76.6 | 70.7 | 68.3 |
| Vashi | 83.3 | 82.1 | 84.3 | 85.3 | 88.5 | 81.2 |

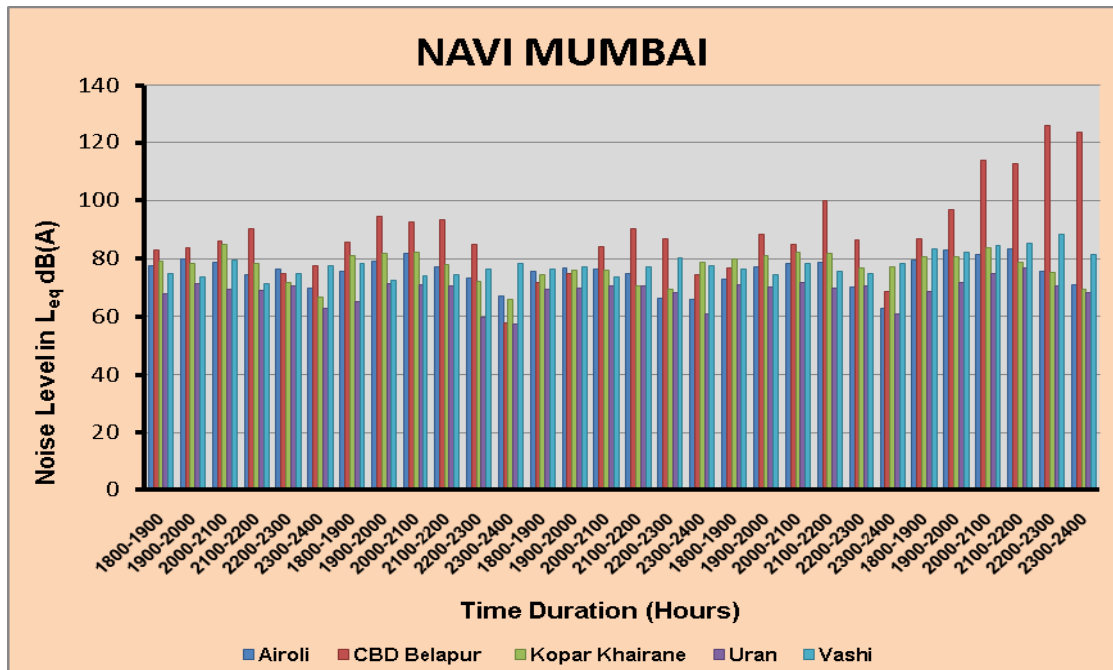


Chart 4.14: Hourly Noise levels from 18th-22nd Sept., 2010 in Navi Mumbai

Table 4.4(a): Hourly Noise levels at various locations in Thane on 18th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|---------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Gokhle Road | 75.3 | 73.6 | 73.7 | 75.8 | 75.8 | 66.0 |
| Jambli Naka | 74.3 | 78.7 | 80.2 | 75.4 | 71.2 | 65.9 |
| Gaondevi Mandir | 86.6 | 87.7 | 89.8 | 92.9 | 89.7 | 92.3 |
| Pokhran Road | 78.3 | 78.7 | 77.1 | 81.4 | 75.5 | 68.2 |
| Wagle Estate | 63.6 | 57.4 | 58.1 | 56.6 | 54.8 | 53.7 |
| Court Naka | 77.9 | 78.5 | 76.6 | 74.3 | 72.1 | 69.6 |
| Mental Hospital | 76.2 | 75.3 | 74.8 | 71.8 | 69.4 | 61.4 |
| Bedekar Hospital | 75.4 | 78.0 | 73.7 | 72.3 | 68.1 | 63.9 |
| CSM Hospital, Kalwa | 75.8 | 58.8 | 65.7 | 67.5 | 64.5 | 50.3 |

Table 4.4 (b): Hourly Noise levels at various locations in Thane on 19th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|---------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Gokhle Road | 71.4 | 71.1 | 72.2 | 76.0 | 69.1 | 73.4 |
| Jambli Naka | 74.7 | 76.9 | 79.0 | 76.6 | 73.4 | 65.1 |
| Gaondevi Mandir | 83.3 | 82.4 | 81.6 | 81.9 | 81.2 | 76.1 |
| Pokhran Road | 79.1 | 78.5 | 73.1 | 68.9 | 66.3 | 66.3 |
| Wagle Estate | 53.9 | 54.3 | 54.9 | 54.7 | 54.8 | 54.7 |
| Court Naka | 73.2 | 73.0 | 71.9 | 69.9 | 67.1 | 65.1 |
| Mental Hospital | 67.3 | 64.9 | 61.8 | 66.3 | 66.7 | 61.7 |
| Bedekar Hospital | 73.0 | 77.0 | 80.0 | 78.0 | 69.0 | 61.0 |
| CSM Hospital, Kalwa | 68.7 | 76.9 | 80.2 | 64.9 | 60.5 | 56.2 |

Table 4.4 (c): Hourly Noise levels at various locations in Thane on 20th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|---------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Gokhle Road | 71.4 | 71.1 | 72.2 | 76.0 | 68.7 | 73.4 |
| Jambli Naka | 78.3 | 74.4 | 74.8 | 73.7 | 71.1 | 67.4 |
| Gaondevi Mandir | 82.0 | 79.5 | 78.9 | 77.6 | 75.9 | 73.2 |
| Pokhran Road | 76.1 | 75.1 | 74.5 | 75.8 | 72.1 | 61.7 |
| Wagle Estate | 56.2 | 76.5 | 72.9 | 72.6 | 63.3 | 58.8 |
| Court Naka | 76.1 | 73.8 | 70.9 | 70.7 | 77.1 | 61.6 |
| Mental Hospital | 73.4 | 71.0 | 66.0 | 68.3 | 64.6 | 56.7 |
| Bedekar Hospital | 73.2 | 67.7 | 68.2 | 65.4 | 60.1 | 63.3 |
| CSM Hospital, Kalwa | 86.6 | 85.1 | 77.2 | 57.7 | 54.3 | 52.4 |

Table 4.4 (d): Hourly Noise levels at various locations in Thane on 21st Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|-------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Gokhle Road | 69.1 | 80.4 | 91.3 | 81.9 | 85.0 | 70.5 |
| Jambli Naka | 77.5 | 74.8 | 74.5 | 74.0 | 72.8 | 69.2 |

| | | | | | | |
|---------------------|------|------|------|------|------|------|
| Gaondevi Mandir | 81.1 | 78.7 | 79.8 | 78.8 | 75.9 | 74.1 |
| Pokhran Road | 76.1 | 79.1 | 82.6 | 80.9 | 80.9 | 68.0 |
| Wagle Estate | 78.3 | 76.8 | 76.9 | 67.3 | 71.7 | 65.3 |
| Court Naka | 75.1 | 75.6 | 72.0 | 68.6 | 67.6 | 63.7 |
| Mental Hospital | 71.4 | 62.7 | 69.2 | 63.4 | 62.0 | 58.1 |
| Bedekar Hospital | 69.0 | 68.2 | 68.8 | 66.3 | 66.6 | 65.5 |
| CSM Hospital, Kalwa | 74.0 | 81.7 | 85.3 | 74.4 | 64.8 | 63.7 |

Table 4.4 (e): Hourly Noise levels at various locations in Thane on 22nd Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|---------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Gokhle Road | 71.1 | 81.2 | 96.4 | 101.2 | 86.9 | 68.3 |
| Jambli Naka | 81.4 | 87.5 | 94.0 | 100.5 | 96.8 | 93.2 |
| Gaondevi Mandir | 81.5 | 81.7 | 81.3 | 79.9 | 73.2 | 72.7 |
| Pokhran Road | 85.0 | 87.9 | 90.7 | 90.3 | 85.3 | 78.1 |
| Wagle Estate | 85.3 | 87.3 | 86.2 | 88.3 | 77.7 | 75.7 |
| Court Naka | 81.8 | 91.8 | 97.6 | 98.2 | 95.8 | 93.7 |
| Mental Hospital | 73.3 | 73.5 | 73.9 | 71.3 | 63.2 | 60.2 |
| Bedekar Hospital | 71.8 | 70.4 | 71.8 | 63.3 | 65.7 | 51.1 |
| CSM Hospital, Kalwa | 84.9 | 108.0 | 102.6 | 93.8 | 84.5 | 64.6 |

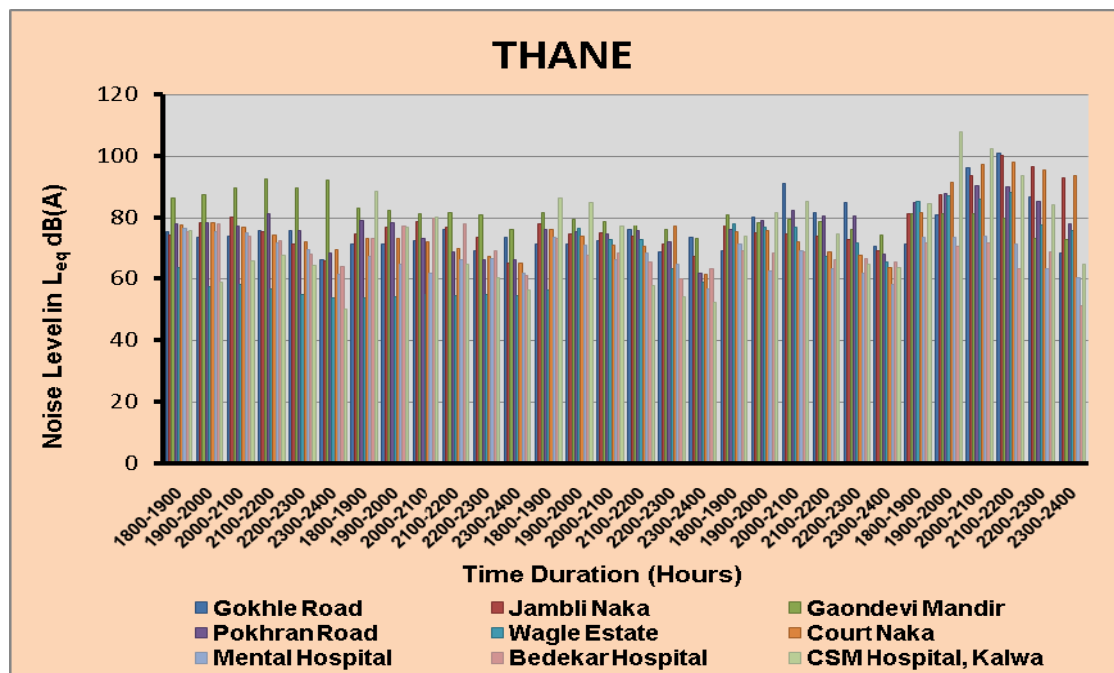


Chart 4.15: Hourly Noise levels from 18th-22nd Sept., 2010 in Thane

Table 4.5(a): Hourly Noise levels at various locations in Pune on 18th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|------------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Shivaji Nagar | 70.2 | 78.0 | 77.2 | 76.4 | 79.5 | 70.2 |
| Karve Road | 81.5 | 89.9 | 92.7 | 93.6 | 72.9 | 70.4 |
| Swargate | 74.2 | 80.4 | 82.6 | 72.4 | 64.0 | 63.4 |
| Satara Road | 70.2 | 68.4 | 71.5 | 73.6 | 66.4 | 62.4 |
| Shaniwar Peth | 90.6 | 88.1 | 93.1 | 92.9 | 89.7 | 72.5 |
| Yerawada | 78.5 | 78.2 | 73.4 | 70.4 | 72.4 | 68.8 |
| Laxmi Road | 67.5 | 73.4 | 74.7 | 81.5 | 64.9 | 60.7 |
| Kothrud | 68.4 | 66.4 | 68.6 | 70.8 | 61.5 | 58.2 |
| Mahatma Phule Mandai | 79.6 | 83.5 | 77.2 | 79.0 | 83.5 | 57.3 |
| Sarus Baug | 48.7 | 47.6 | 45.9 | 47.3 | 50.4 | 45.7 |
| Hadapsar | 87.5 | 88.5 | 86.3 | 78.6 | 72.3 | 51.7 |
| Deccan | 77.4 | 76.9 | 79.3 | 80.2 | 75.8 | 73.4 |
| Dagdu Sheth Mandir | 71.2 | 79.2 | 85.3 | 82.2 | 82.5 | 79.1 |
| Alka Chowk | 70.5 | 74.6 | 74.2 | 70.4 | 64.8 | 62.4 |
| Babu Genu Chowk | 70.2 | 83.7 | 77.8 | 79.1 | 79.9 | 79.3 |
| Khadaki | 68.5 | 68.2 | 70.5 | 71.6 | 64.4 | 58.8 |
| M G Road | 75.5 | 74.1 | 72.3 | 73.3 | 71.7 | 70.5 |
| Chapekar Chowk | 70.6 | 72.8 | 74.6 | 77.2 | 64.7 | 61.5 |
| Pimpri – Shastri Chowk | 71.4 | 72.6 | 73.4 | 70.8 | 64.2 | 60.8 |
| Thergaon | 70.9 | 78.2 | 83.2 | 84.0 | 71.6 | 65.8 |

Table 4.5 (b): Hourly Noise levels at various locations in Pune on 19th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|----------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Shivaji Nagar | 80.5 | 81.1 | 78.5 | 77.9 | 72.6 | 70.9 |
| Karve Road | 79.6 | 95.1 | 83.5 | 90.8 | 71.3 | 71.1 |
| Swargate | 86.5 | 94.1 | 95.8 | 86.0 | 100.2 | 81.6 |
| Satara Road | 80.8 | 79.6 | 81.4 | 82.8 | 78.2 | 74.2 |
| Shaniwar Peth | 93.0 | 87.9 | 86.2 | 87.6 | 83.0 | 71.9 |
| Yerawada | 86.8 | 85.9 | 83.2 | 80.7 | 74.5 | 75.0 |
| Laxmi Road | 92.0 | 91.8 | 92.3 | 91.7 | 77.2 | 66.7 |
| Kothrud | 93.9 | 98.1 | 99.7 | 100.1 | 76.0 | 70.5 |
| Mahatma Phule Mandai | 80.3 | 82.3 | 86.5 | 89.0 | 80.0 | 74.9 |
| Sarus Baug | 58.3 | 47.4 | 51.4 | 49.8 | 39.1 | 39.9 |
| Hadapsar | 88.4 | 91.7 | 88.5 | 88.6 | 72.6 | 60.3 |
| Deccan | 77.4 | 80.5 | 81.5 | 81.4 | 78.3 | 73.9 |
| Dagdu Sheth Mandir | 78.8 | 81.9 | 87.3 | 80.6 | 77.4 | 77.1 |
| Alka Chowk | 86.7 | 87.4 | 95.3 | 89.5 | 93.8 | 82.1 |
| Babu Genu Chowk | 78.8 | 79.6 | 81.4 | 79.5 | 79.7 | 77.4 |
| Khadaki | 100.4 | 90.0 | 92.7 | 71.7 | 70.3 | 68.3 |

| | | | | | | |
|------------------------|------|------|------|------|------|------|
| M G Road | 84.8 | 85.8 | 85.5 | 84.5 | 74.9 | 70.0 |
| Chapekar Chowk | 78.0 | 75.9 | 84.7 | 83.5 | 82.1 | 79.9 |
| Pimpri – Shastri Chowk | 80.4 | 80.8 | 87.6 | 83.9 | 76.1 | 72.8 |
| Thergaon | 73.2 | 79.2 | 71.4 | 63.6 | 69.6 | 64.1 |

Table 4.5 (c): Hourly Noise levels at various locations in Pune on 20th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|------------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Shivaji Nagar | 79.2 | 81.2 | 79.1 | 74.3 | 73.9 | 70.2 |
| Karve Road | 79.3 | 90.3 | 91.0 | 89.4 | 74.5 | 71.2 |
| Swargate | 87.1 | 80.9 | 72.3 | 83.8 | 83.3 | 71.8 |
| Satara Road | 89.6 | 84.8 | 80.5 | 84.9 | 76.4 | 81.3 |
| Shaniwar Peth | 84.3 | 90.9 | 88.3 | 89.1 | 82.7 | 82.9 |
| Yerawada | 88.1 | 84.5 | 75.7 | 79.0 | 77.4 | 73.3 |
| Laxmi Road | 88.5 | 91.3 | 92.0 | 90.9 | 76.2 | 73.9 |
| Kothrud | 84.3 | 81.0 | 88.1 | 82.5 | 75.2 | 82.5 |
| Mahatma Phule Mandai | 78.3 | 74.7 | 76.0 | 79.5 | 78.3 | 71.6 |
| Sarus Baug | 73.2 | 67.4 | 66.5 | 60.9 | 61.0 | 63.1 |
| Hadapsar | 85.4 | 84.9 | 84.9 | 85.7 | 73.2 | 67.9 |
| Deccan | 85.0 | 90.1 | 79.6 | 83.7 | 67.1 | 69.7 |
| Dagdu Sheth Mandir | 76.0 | 80.2 | 87.5 | 83.2 | 79.3 | 75.7 |
| Alka Chowk | 74.1 | 81.7 | 88.4 | 76.5 | 84.0 | 60.7 |
| Babu Genu Chowk | 78.9 | 79.0 | 78.8 | 81.8 | 75.1 | 73.5 |
| Khadaki | 90.9 | 85.2 | 98.5 | 79.0 | 77.0 | 84.6 |
| M G Road | 82.7 | 82.4 | 83.1 | 84.6 | 74.6 | 69.5 |
| Chapekar Chowk | 85.4 | 79.0 | 90.7 | 91.8 | 74.9 | 81.3 |
| Pimpri – Shastri Chowk | 74.0 | 74.1 | 72.6 | 71.7 | 74.5 | 68.5 |
| Thergaon | 67.9 | 66.4 | 65.7 | 66.8 | 68.0 | 66.6 |

Table 4.5 (d): Hourly Noise levels at various locations in Pune on 21st Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|----------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Shivaji Nagar | 81.3 | 79.8 | 76.2 | 75.4 | 72.7 | 71.5 |
| Karve Road | 81.2 | 90.8 | 91.7 | 93.1 | 81.6 | 73.8 |
| Swargate | 76.4 | 94.3 | 91.8 | 86.4 | 75.0 | 73.3 |
| Satara Road | 81.2 | 84.7 | 85.4 | 84.7 | 77.3 | 84.2 |
| Shaniwar Peth | 78.8 | 80.4 | 84.1 | 85.3 | 74.3 | 70.8 |
| Yerawada | 92.3 | 76.8 | 75.5 | 79.0 | 77.5 | 76.3 |
| Laxmi Road | 78.8 | 89.7 | 90.5 | 92.7 | 85.6 | 76.5 |
| Kothrud | 75.9 | 80.6 | 85.4 | 82.4 | 76.7 | 71.7 |
| Mahatma Phule Mandai | 75.9 | 82.7 | 80.4 | 78.3 | 83.1 | 71.7 |
| Sarus Baug | 74.9 | 75.3 | 67.5 | 63.4 | 61.8 | 60.1 |
| Hadapsar | 82.0 | 90.9 | 86.2 | 82.4 | 80.7 | 71.6 |

| | | | | | | |
|------------------------|------|------|------|------|------|------|
| Deccan | 78.0 | 79.4 | 78.8 | 77.2 | 76.5 | 75.7 |
| Dagdu Sheth Mandir | 77.9 | 75.2 | 78.3 | 72.4 | 77.0 | 73.3 |
| Alka Chowk | 78.7 | 82.9 | 88.7 | 87.7 | 83.7 | 76.9 |
| Babu Genu Chowk | 75.3 | 77.2 | 75.1 | 76.3 | 70.5 | 71.4 |
| Khadaki | 77.3 | 82.5 | 76.1 | 72.7 | 81.1 | 70.0 |
| M G Road | 80.6 | 81.5 | 81.2 | 81.0 | 77.1 | 77.5 |
| Chapekar Chowk | 73.7 | 86.3 | 87.1 | 81.8 | 72.9 | 63.7 |
| Pimpri – Shastri Chowk | 85.0 | 84.4 | 66.8 | 74.5 | 79.4 | 67.1 |
| Thergaon | 69.7 | 67.7 | 68.8 | 67.7 | 68.1 | 65.8 |

Table 4.5 (e): Hourly Noise levels at various locations in Pune on 22nd Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|------------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Shivaji Nagar | 72.2 | 81.0 | 89.4 | 73.0 | 71.7 | 70.5 |
| Karve Road | 75.1 | 84.3 | 83.8 | 92.2 | 97.1 | 95.0 |
| Swargate | 76.7 | 92.4 | 91.6 | 77.4 | 73.4 | 75.4 |
| Satara Road | 84.6 | 82.9 | 83.4 | 93.2 | 89.6 | 82.1 |
| Shaniwar Peth | 69.4 | 68.1 | 72.8 | 76.7 | 72.1 | 68.9 |
| Yerawada | 75.7 | 75.4 | 75.7 | 79.1 | 85.1 | 80.9 |
| Laxmi Road | 93.7 | 97.2 | 80.5 | 91.4 | 93.9 | 98.2 |
| Kothrud | 90.3 | 85.0 | 84.5 | 77.4 | 73.9 | 71.6 |
| Mahatma Phule Mandai | 87.6 | 82.5 | 85.7 | 80.7 | 93.4 | 76.9 |
| Sarus Baug | 67.7 | 71.9 | 66.2 | 68.8 | 66.3 | 63.2 |
| Hadapsar | 74.2 | 82.4 | 82.1 | 73.0 | 77.0 | 78.2 |
| Deccan | 74.0 | 82.3 | 81.0 | 80.1 | 91.0 | 85.5 |
| Dagdu Sheth Mandir | 87.6 | 94.2 | 98.0 | 97.4 | 95.4 | 98.3 |
| Alka Chowk | 74.0 | 101.3 | 78.7 | 91.4 | 87.0 | 96.7 |
| Babu Genu Chowk | 74.0 | 85.7 | 86.0 | 84.1 | 86.7 | 87.0 |
| Khadaki | 71.2 | 70.0 | 80.6 | 73.1 | 71.1 | 65.7 |
| M G Road | 73.8 | 66.7 | 74.8 | 72.5 | 74.4 | 75.3 |
| Chapekar Chowk | 73.8 | 75.0 | 86.6 | 74.5 | 82.1 | 83.4 |
| Pimpri – Shastri Chowk | 86.6 | 77.5 | 77.8 | 79.0 | 92.8 | 96.5 |
| Thergaon | 69.6 | 71.7 | 75.4 | 73.7 | 67.0 | 65.4 |

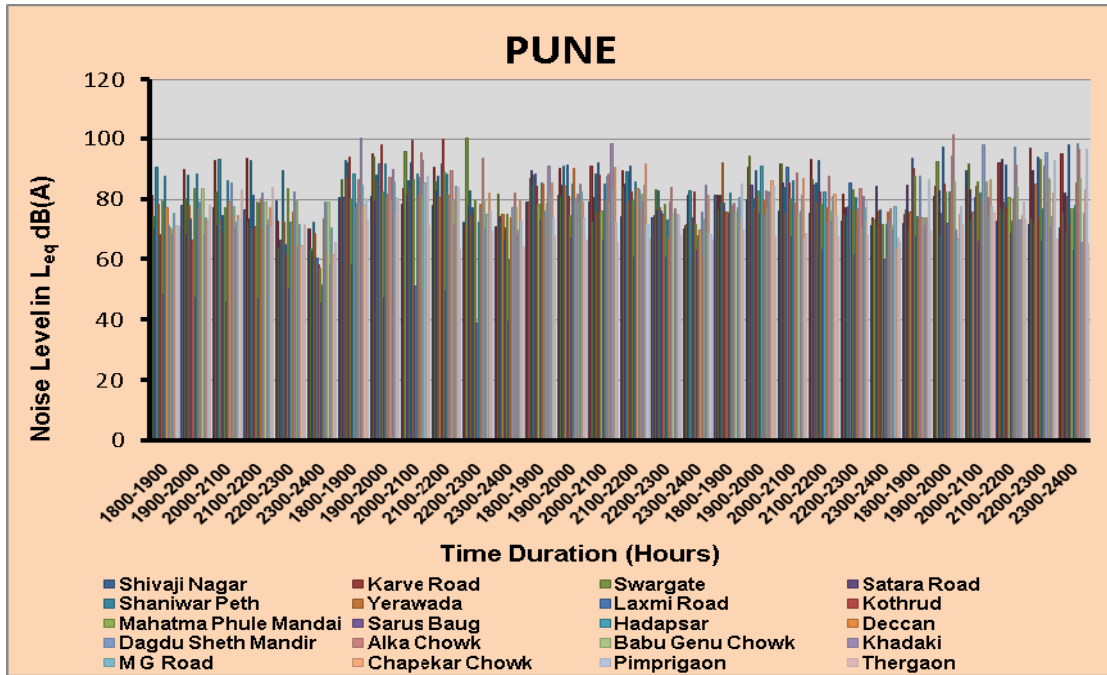


Chart 4.16: Hourly Noise levels from 18th-22nd Sept., 2010 in Pune

Table 4.6 (a): Hourly Noise levels at various locations in Nashik on 18th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|-------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Nashik Road | 70.7 | 65.3 | 83.0 | 75.1 | 75.1 | 87.5 |
| Panchvati | 76.2 | 77.3 | 75.8 | 74.1 | 71.0 | 66.8 |
| CIDCO | 72.4 | 77.4 | 82.3 | 79.2 | 65.1 | 66.8 |
| CBS | 73.3 | 76.5 | 69.6 | 70.2 | 79.0 | 67.6 |
| Dahi Pool | 74.9 | 74.2 | 75.8 | 84.3 | 72.2 | 70.2 |

Table 4.6 (b): Hourly Noise levels at various locations in Nashik on 19th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|-------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Nashik Road | 74.0 | 76.5 | 81.1 | 67.7 | 68.2 | 46.1 |
| Panchvati | 76.0 | 72.6 | 74.3 | 78.0 | 86.6 | 69.5 |
| CIDCO | 75.0 | 77.8 | 79.5 | 79.4 | 71.4 | 73.4 |
| CBS | 72.5 | 81.8 | 80.2 | 77.5 | 78.5 | 72.7 |
| Dahi Pool | 77.9 | 74.9 | 79.3 | 77.7 | 74.3 | 72.2 |

Table 4.6 (c): Hourly Noise levels at various locations in Nashik on 20th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|-------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Nashik Road | 68.2 | 78.7 | 78.5 | 80.8 | 82.6 | 70.2 |
| Panchvati | 78.7 | 83.2 | 90.7 | 84.7 | 77.0 | 76.1 |
| CIDCO | 77.2 | 78.2 | 95.3 | 88.4 | 78.1 | 71.8 |
| CBS | 69.2 | 74.4 | 72.8 | 83.6 | 81.9 | 74.9 |
| Dahi Pool | 76.1 | 76.5 | 80.8 | 90.5 | 81.8 | 69.0 |

Table 4.6 (d): Hourly Noise levels at various locations in Nashik on 21st Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|-------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Nashik Road | 78.3 | 84.3 | 94.5 | 83.9 | 89.1 | 74.2 |
| Panchvati | 83.8 | 80.0 | 82.9 | 83.5 | 82.0 | 74.3 |
| CIDCO | 78.1 | 81.3 | 87.6 | 93.7 | 84.9 | 75.1 |
| CBS | 82.0 | 87.5 | 78.9 | 90.1 | 89.2 | 79.7 |
| Dahi Pool | 96.2 | 82.5 | 95.2 | 87.4 | 87.6 | 78.6 |

Table 4.6 (e): Hourly Noise levels at various locations in Nashik on 22nd Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|-------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Nashik Road | 84.1 | 83.6 | 76.1 | 73.7 | 65.5 | 75.5 |
| Panchvati | 99.7 | 98.0 | 85.0 | 97.2 | 104.4 | 99.3 |
| CIDCO | 89.0 | 95.6 | 94.2 | 79.2 | 82.9 | 92.1 |
| CBS | 69.3 | 74.2 | 77.6 | 67.8 | 64.3 | 80.1 |
| Dahi Pool | 102.0 | 87.2 | 83.7 | 86.6 | 97.3 | 80.6 |

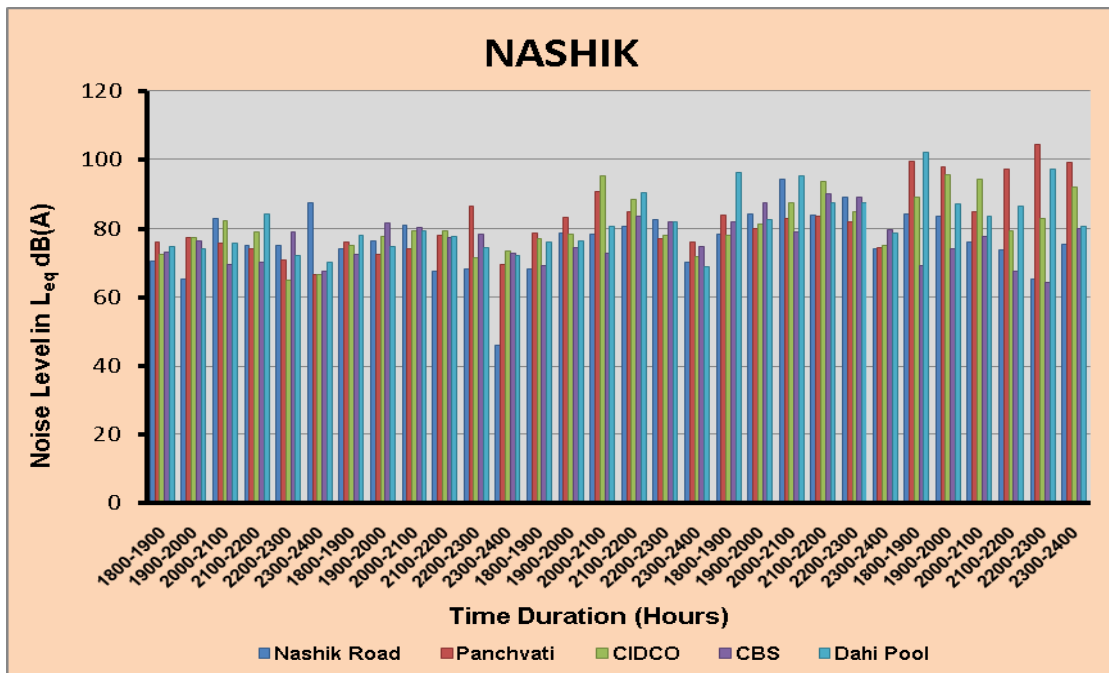


Chart 4.17: Hourly Noise levels from 18th-22nd Sept., 2010 in Nashik

Table 4.7 (a): Hourly Noise levels at various locations in Aurangabad on 18th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|-------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Gulmandi | 80.0 | 84.9 | 84.8 | 80.9 | 83.8 | 73.6 |
| City Chowk | 74.5 | 74.1 | 81.8 | 81.5 | 78.9 | 74.0 |
| Kranti Chowk | 74.1 | 74.4 | 67.1 | 77.2 | 75.4 | 68.4 |
| CIDCO Residential | 69.9 | 73.4 | 77.7 | 69.6 | 73.8 | 61.7 |
| Usmanpura | 77.6 | 78.8 | 78.4 | 70.8 | 66.8 | 67.9 |

Table 4.7 (b): Hourly Noise levels at various locations in Aurangabad on 19th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|-------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Gulmandi | 78.3 | 80.8 | 84.0 | 90.4 | 77.2 | 73.5 |
| City Chowk | 70.8 | 73.1 | 73.2 | 77.9 | 75.3 | 70.2 |
| Kranti Chowk | 69.1 | 77.9 | 77.4 | 77.5 | 72.2 | 68.0 |
| CIDCO Residential | 69.0 | 78.2 | 67.3 | 73.7 | 72.1 | 59.0 |
| Usmanpura | 78.5 | 70.0 | 73.5 | 69.7 | 68.5 | 65.1 |

Table 4.7 (c): Hourly Noise levels at various locations in Aurangabad on 20th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|-------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Gulmandi | 78.3 | 86.1 | 76.9 | 90.7 | 76.7 | 72.6 |
| City Chowk | 78.3 | 84.2 | 74.3 | 79.8 | 69.6 | 66.4 |
| Kranti Chowk | 79.6 | 78.8 | 86.2 | 84.3 | 76.2 | 67.1 |
| CIDCO Residential | 64.0 | 62.4 | 69.7 | 72.8 | 67.5 | 62.4 |
| Usmanpura | 70.4 | 66.9 | 78.5 | 69.8 | 70.8 | 66.3 |

Table 4.7 (d): Hourly Noise levels at various locations in Aurangabad on 21st Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|-------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Gulmandi | 79.6 | 85.6 | 84.1 | 77.8 | 78.6 | 76.7 |
| City Chowk | 69.6 | 80.2 | 72.6 | 74.8 | 74.5 | 68.4 |
| Kranti Chowk | 78.2 | 75.6 | 79.0 | 75.7 | 71.8 | 70.1 |
| CIDCO Residential | 66.6 | 67.1 | 70.1 | 68.6 | 60.2 | 58.3 |
| Usmanpura | 74.2 | 78.0 | 78.1 | 69.1 | 66.6 | 64.4 |

Table 4.7 (e): Hourly Noise levels at various locations in Aurangabad on 22nd Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|-------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Gulmandi | 95.3 | 93.0 | 88.7 | 88.5 | 93.7 | 90.9 |
| City Chowk | 98.0 | 88.1 | 87.5 | 91.4 | 90.1 | 87.7 |
| Kranti Chowk | 77.2 | 73.8 | 69.5 | 72.9 | 71.0 | 68.5 |
| CIDCO Residential | 75.3 | 72.0 | 73.0 | 68.7 | 60.1 | 55.6 |
| Usmanpura | 74.7 | 71.8 | 69.8 | 64.6 | 61.7 | 58.7 |

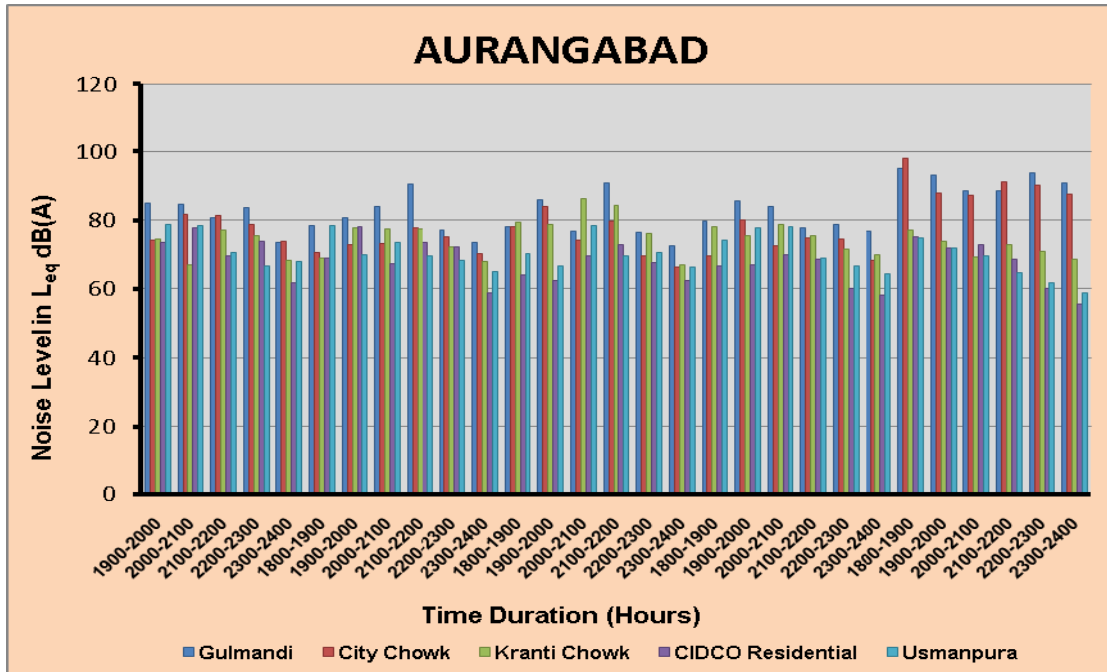


Chart 4.18: Hourly Noise levels from 18th-22nd Sept., 2010 in Aurangabad

Table 4.8 (a): Hourly Noise levels at various locations in Nagpur on 18th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|---------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Ramdaspath | 67.5 | 67.6 | 63.7 | 64.9 | 59.8 | 51.4 |
| Cotton Market | 72.5 | 71.9 | 72.2 | 72.1 | 70.0 | 69.8 |
| Golibar Chowk | 79.8 | 70.1 | 72.6 | 69.8 | 65.8 | 64.6 |
| Reshimbag | 80.8 | 79.7 | 72.2 | 75.4 | 66.5 | 58.2 |
| Gandhiputala | 72.5 | 72.4 | 71.5 | 71.8 | 69.3 | 68.7 |

Table 4.8 (b): Hourly Noise levels at various locations in Nagpur on 19th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|---------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Ramdaspath | 66.6 | 71.2 | 71.1 | 79.8 | 60.6 | 55.8 |
| Cotton Market | 81.8 | 76.7 | 74.8 | 73.9 | 72.4 | 72.3 |
| Golibar Chowk | 72.9 | 73.8 | 73.2 | 71.8 | 69.5 | 70.0 |
| Reshimbag | 79.2 | 81.0 | 81.5 | 82.5 | 77.0 | 71.9 |
| Gandhiputala | 71.0 | 73.3 | 78.5 | 73.1 | 72.3 | 70.1 |

Table 4.8 (c): Hourly Noise levels at various locations in Nagpur on 20th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|---------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Ramdaspath | 65.3 | 67.5 | 68.7 | 65.0 | 62.2 | 63.1 |
| Cotton Market | 73.0 | 74.5 | 73.8 | 73.0 | 72.8 | 70.9 |
| Golibar Chowk | 73.2 | 74.0 | 73.8 | 74.9 | 73.1 | 69.5 |
| Reshimbag | 78.6 | 80.5 | 82.2 | 76.4 | 82.3 | 76.9 |
| Gandhiputala | 72.7 | 72.3 | 71.3 | 71.7 | 72.1 | 69.6 |

Table 4.8 (d): Hourly Noise levels at various locations in Nagpur on 21st Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|---------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Ramdaspath | 77.7 | 68.4 | 65.4 | 68.4 | 61.2 | 53.4 |
| Cotton Market | 74.1 | 74.5 | 74.2 | 73.3 | 72.2 | 69.7 |
| Golibar Chowk | 72.1 | 74.1 | 75.3 | 75.8 | 73.8 | 71.8 |
| Reshimbag | 80.4 | 80.0 | 81.0 | 80.3 | 79.7 | 71.0 |
| Gandhiputala | 77.7 | 72.5 | 75.5 | 73.5 | 70.1 | 69.9 |

Table 4.8 (e): Hourly Noise levels at various locations in Nagpur on 22nd Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|---------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Ramdaspath | 69.1 | 56.0 | 56.7 | 62.5 | 58.2 | 60.7 |
| Cotton Market | 69.2 | 70.1 | 73.6 | 77.3 | 73.9 | 70.2 |
| Golibar Chowk | 79.1 | 85.4 | 85.2 | 84.4 | 90.6 | 87.7 |
| Reshimbag | 71.9 | 78.2 | 80.0 | 83.1 | 84.1 | 80.4 |
| Gandhiputala | 70.1 | 69.3 | 72.5 | 72.3 | 70.1 | 69.7 |

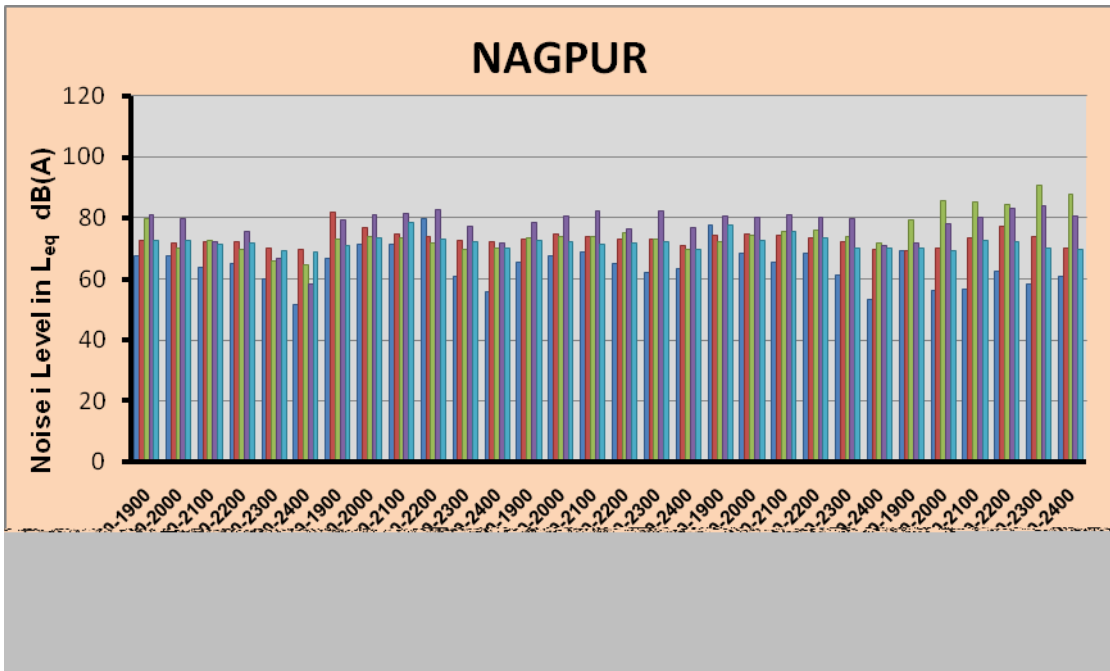


Chart 4.19: Hourly Noise levels from 18th-22nd Sept., 2010 in Nagpur

Table 4.9 (a): Hourly Noise levels at various locations in Kalyan on 18th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|---------------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Bhiwandi – Dhamankar Naka | 81.7 | 82.9 | 84.4 | 84.7 | 84.2 | 84.0 |
| Shivaji Chowk | 86.7 | 89.7 | 80.4 | 98.3 | 91.4 | 96.2 |
| Ulhasnagar Station | 79.1 | 71.7 | 76.2 | 74.8 | 71.4 | 69.3 |

Table 4.9 (b): Hourly Noise levels at various locations in Kalyan on 19th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|---------------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Bhiwandi – Dhamankar Naka | 91.0 | 89.1 | 84.4 | 86.4 | 84.5 | 82.6 |
| Shivaji Chowk | 84.3 | 86.1 | 82.2 | 80.0 | 80.3 | 78.0 |
| Ulhasnagar Station | 80.4 | 85.0 | 94.8 | 92.2 | 90.5 | 82.7 |

Table 4.9 (c): Hourly Noise levels at various locations in Kalyan on 20th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|---------------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Bhiwandi – Dhamankar Naka | 92.7 | 86.7 | 84.5 | 84.8 | 86.1 | 83.8 |
| Shivaji Chowk | 84.6 | 84.4 | 89.5 | 87.5 | 85.0 | 92.1 |
| Ulhasnagar Station | 78.0 | 80.2 | 85.4 | 83.8 | 77.3 | 77.0 |

Table 4.9 (d): Hourly Noise levels at various locations in Kalyan on 21st Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|---------------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Bhiwandi – Dhamankar Naka | 91.2 | 91.9 | 81.3 | 81.3 | 86.0 | 88.7 |
| Shivaji Chowk | 83.3 | 79.3 | 85.9 | 79.6 | 79.7 | 79.0 |
| Ulhasnagar Station | 75.4 | 86.9 | 92.0 | 76.5 | 78.4 | 79.9 |

Table 4.9 (e): Hourly Noise levels at various locations in Kalyan on 22nd Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|---------------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Bhiwandi – Dhamankar Naka | 96.6 | 96.6 | 94.9 | 93.1 | 94.2 | 93.2 |
| Shivaji Chowk | 91.8 | 84.0 | 94.2 | 98.4 | 94.2 | 93.5 |
| Ulhasnagar Station | 91.5 | 90.4 | 93.2 | 92.4 | 88.8 | 95.6 |

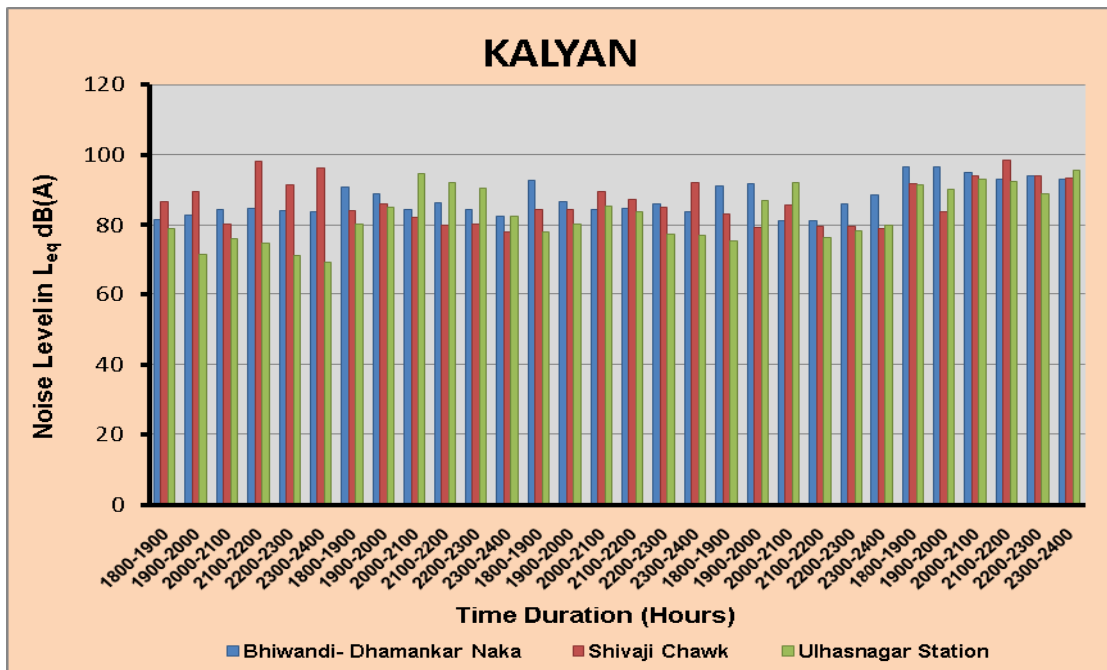


Chart 4.20: Hourly Noise levels from 18th-22nd Sept., 2010 in Kalyan

Table 4.10 (a): Hourly Noise levels at various locations in Amravati on 18th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|-----------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Bhudhwara | 76.8 | 69.0 | 78.5 | 81.2 | 69.9 | 63.3 |
| Rajkamal Square | 74.9 | 77.0 | 76.1 | 74.0 | 71.5 | 75.4 |
| Irvin Hospital Square | 58.6 | 60.2 | 57.2 | 71.2 | 71.3 | 62.5 |

Table 4.10 (b): Hourly Noise levels at various locations in Amravati on 19th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|-----------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Bhudhwara | 67.3 | 70.6 | 81.1 | 82.4 | 70.2 | 64.2 |
| Rajkamal Square | 77.1 | 78.1 | 78.7 | 72.2 | 74.2 | 66.2 |
| Irvin Hospital Square | 69.5 | 74.3 | 72.9 | 75.4 | 64.7 | 66.6 |

Table 4.10 (c): Hourly Noise levels at various locations in Amravati on 20th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|-----------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Bhudhwara | 63.3 | 74.3 | 71.4 | 65.7 | 70.5 | 67.5 |
| Rajkamal Square | 80.2 | 81.2 | 81.0 | 79.4 | 77.2 | 66.1 |
| Irvin Hospital Square | 63.9 | 69.5 | 77.1 | 75.6 | 70.0 | 62.4 |

Table 4.10 (d): Hourly Noise levels at various locations in Amravati on 21st Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|-----------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Bhudhwara | 86.0 | 78.6 | 79.8 | 88.3 | 77.0 | 68.2 |
| Rajkamal Square | 82.1 | 82.5 | 81.5 | 76.9 | 75.4 | 72.8 |
| Irvin Hospital Square | 66.4 | 75.4 | 82.7 | 77.0 | 66.4 | 62.8 |

Table 4.10 (e): Hourly Noise levels at various locations in Amravati on 22nd Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|-----------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Bhudhwara | 79.0 | 84.9 | 90.4 | 92.0 | 92.0 | 86.0 |
| Rajkamal Square | 84.4 | 89.9 | 92.2 | 85.9 | 84.0 | 79.4 |
| Irvin Hospital Square | 69.1 | 81.3 | 82.3 | 80.9 | 70.1 | 62.7 |

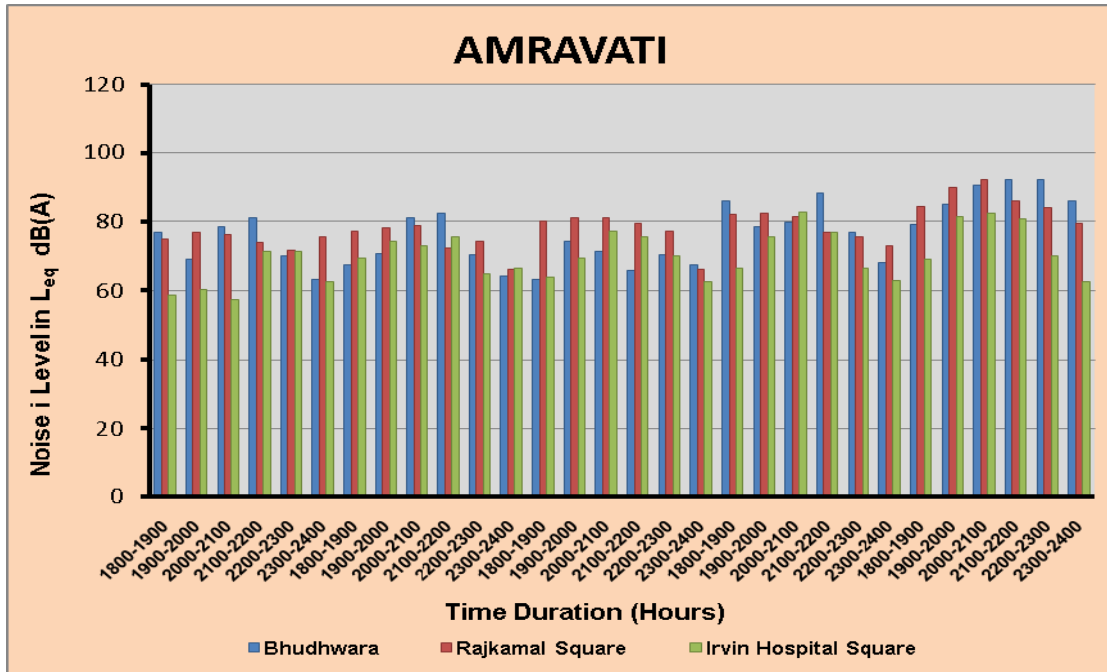


Chart 4.21: Hourly Noise levels from 18th-22nd Sept., 2010 in Amravati

Table 4.11 (a): Hourly Noise levels at various locations in Jalgaon on 18th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|--------------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Subhash Chowk | 68.6 | 67.4 | 72.2 | 76.5 | 74.0 | 66.2 |
| Shashtri Tower Chowk | 74.1 | 76.3 | 76.0 | 80.2 | 78.5 | 68.1 |
| Shanipeth Police Station | 62.2 | 68.5 | 66.6 | 58.4 | 56.2 | 56.4 |

Table 4.11 (b): Hourly Noise levels at various locations in Jalgaon on 19th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|--------------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Subhash Chowk | 66.2 | 70.4 | 76.3 | 77.0 | 76.4 | 70.0 |
| Shashtri Tower Chowk | 72.1 | 78.6 | 80.1 | 79.8 | 72.0 | 70.1 |
| Shanipeth Police Station | 59.2 | 68.5 | 65.3 | 70.8 | 71.1 | 59.2 |

Table 4.11 (c): Hourly Noise levels at various locations in Jalgaon on 20th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|--------------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Subhash Chowk | 67.5 | 71.2 | 75.6 | 79.4 | 72.3 | 68.8 |
| Shashtri Tower Chowk | 74.5 | 76.3 | 79.6 | 82.3 | 76.2 | 70.1 |
| Shanipeth Police Station | 54.1 | 56.6 | 64.8 | 69.2 | 59.1 | 58.6 |

Table 4.11 (d): Hourly Noise levels at various locations in Jalgaon on 21st Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|--------------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Subhash Chowk | 72.1 | 70.6 | 75.6 | 68.2 | 69.7 | 65.0 |
| Shashtri Tower Chowk | 75.3 | 79.7 | 77.2 | 72.5 | 69.0 | 66.3 |
| Shanipeth Police Station | 62.2 | 66.6 | 70.1 | 64.8 | 54.4 | 53.1 |

Table 4.11 (e): Hourly Noise levels at various locations in Jalgaon on 22nd Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|--------------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Subhash Chowk | 78.6 | 88.6 | 89.8 | 94.2 | 87.5 | 76.4 |
| Shashtri Tower Chowk | 82.2 | 93.3 | 97.3 | 98.0 | 90.1 | 88.6 |
| Shanipeth Police Station | 68.6 | 73.2 | 76.5 | 70.1 | 69.7 | 65.0 |

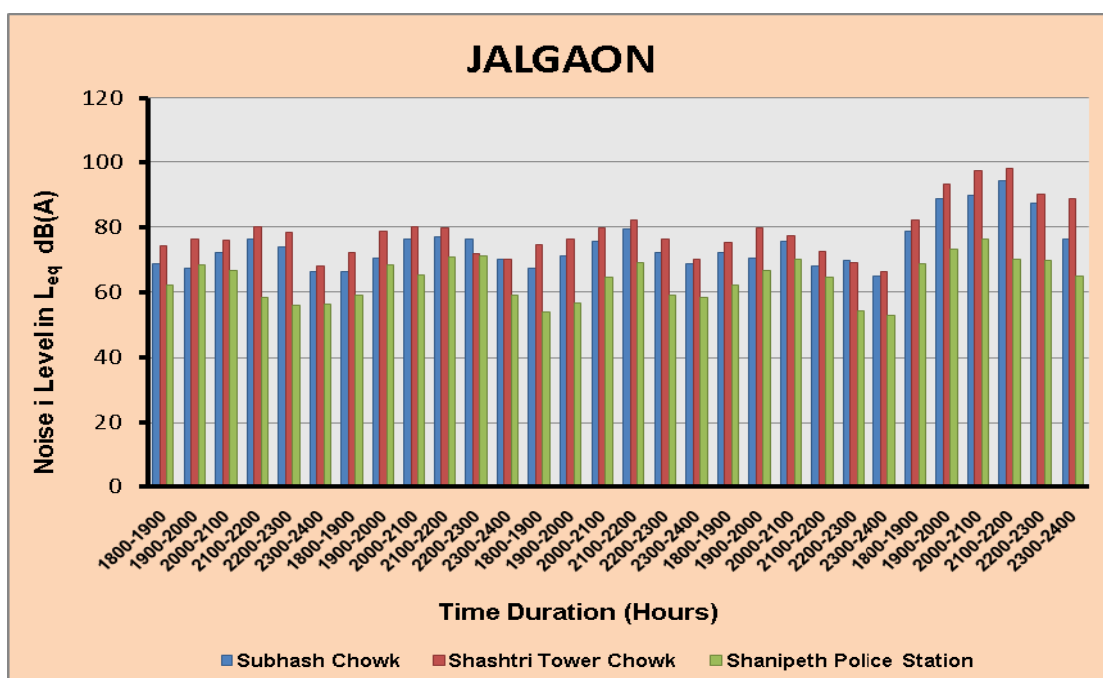


Chart 4.22: Hourly Noise levels from 18th-22nd Sept., 2010 in Jalgaon

Table 4.12 (a): Hourly Noise levels at various locations in Kolhapur on 18th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Rajaram Puri | 66.3 | 68.9 | 69.1 | 71.9 | 71.3 | 69.3 |
| Mahalaxmi Mandir | 85.2 | 85.0 | 76.4 | 77.9 | 80.2 | 79.2 |
| Khas Baug Maidan | 78.0 | 78.6 | 71.9 | 72.9 | 72.3 | 68.8 |

Table 4.12 (b): Hourly Noise levels at various locations in Kolhapur on 19th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Rajaram Puri | 68.5 | 71.4 | 72.4 | 73.9 | 73.1 | 70.8 |
| Mahalaxmi Mandir | 84.6 | 79.9 | 74.6 | 86.4 | 82.3 | 79.1 |
| Khas Baug Maidan | 78.6 | 75.6 | 74.2 | 74.0 | 72.5 | 69.3 |

Table 4.12 (c): Hourly Noise levels at various locations in Kolhapur on 20th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Rajaram Puri | 66.1 | 68.7 | 72.9 | 74.5 | 72.4 | 75.8 |
| Mahalaxmi Mandir | 83.4 | 82.1 | 80.1 | 83.1 | 83.7 | 80.1 |
| Khas Baug Maidan | 73.9 | 72.6 | 72.1 | 74.3 | 72.5 | 79.4 |

Table 4.12 (d): Hourly Noise levels at various locations in Kolhapur on 21st Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Rajaram Puri | 70.5 | 72.4 | 73.2 | 72.7 | 75.5 | 73.4 |
| Mahalaxmi Mandir | 78.6 | 73.1 | 83.1 | 82.8 | 82.0 | 82.6 |
| Khas Baug Maidan | 78.1 | 78.0 | 71.8 | 66.6 | 68.2 | 67.6 |

Table 4.12 (e): Hourly Noise levels at various locations in Kolhapur on 22nd Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|------------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Rajaram Puri | 64.7 | 64.7 | 65.7 | 64.7 | 63.6 | 62.7 |
| Mahalaxmi Mandir | 127.8 | 131.1 | 123.7 | 108.4 | 110.5 | 125.6 |
| Khas Baug Maidan | 82.9 | 88.1 | 98.8 | 97.2 | 98.9 | 97.6 |

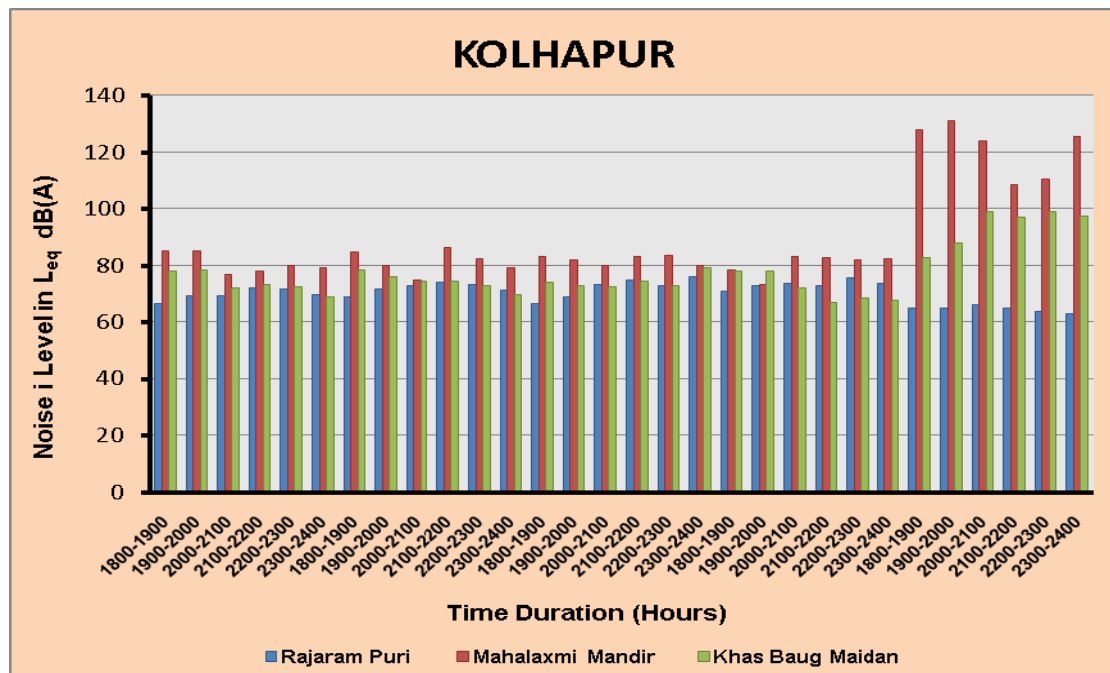


Chart 4.23: Hourly Noise levels from 18th-22nd Sept., 2010 in Kolhapur

Table 4.13 (a): Hourly Noise levels at various locations in Satara on 18th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Powai Naka | 59.3 | 75.0 | 63.3 | 65.5 | 76.0 | 65.8 |
| Moti Chowk | 56.7 | 73.7 | 77.2 | 78.2 | 76.0 | 76.6 |
| Rajwada | 62.7 | 67.2 | 74.8 | 73.3 | 79.4 | 75.4 |

Table 4.13 (b): Hourly Noise levels at various locations in Satara on 19th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Powai Naka | 77.2 | 80.6 | 80.8 | 72.8 | 68.3 | 81.1 |
| Moti Chowk | 75.9 | 62.8 | 80.5 | 72.6 | 81.7 | 75.2 |
| Rajwada | 73.9 | 76.8 | 77.4 | 76.8 | 73.1 | 70.7 |

Table 4.13 (c): Hourly Noise levels at various locations in Satara on 20th Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Powai Naka | 71.2 | 77.9 | 100.1 | 86.1 | 82.4 | 79.2 |
| Moti Chowk | 81.2 | 55.6 | 76.7 | 68.7 | 76.6 | 81.0 |
| Rajwada | 82.3 | 83.6 | 83.4 | 89.3 | 91.6 | 85.1 |

Table 4.13 (d): Hourly Noise levels at various locations in Satara on 21st Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Powai Naka | 77.8 | 88.6 | 91.8 | 89.9 | 90.5 | 79.6 |
| Moti Chowk | 86.4 | 88.2 | 96.6 | 98.5 | 98.6 | 105.6 |
| Rajwada | 78.4 | 87.5 | 86.1 | 96.3 | 93.7 | 90.2 |

Table 4.13 (e): Hourly Noise levels at various locations in Satara on 22nd Sept.

| Location | 1800-1900 | 1900-2000 | 2000-2100 | 2100-2200 | 2200-2300 | 2300-2400 |
|------------|-----------|-----------|-----------|-----------|------------|------------|
| | Day Time | Day Time | Day Time | Day Time | Night Time | Night Time |
| Powai Naka | 80.3 | 97.1 | 97.7 | 87.7 | 74.3 | 102.5 |
| Moti Chowk | 73.5 | 85.6 | 94.3 | 100.8 | 84.6 | 107.3 |
| Rajwada | 75.3 | 85.8 | 90.7 | 90.7 | 89.3 | 98.6 |

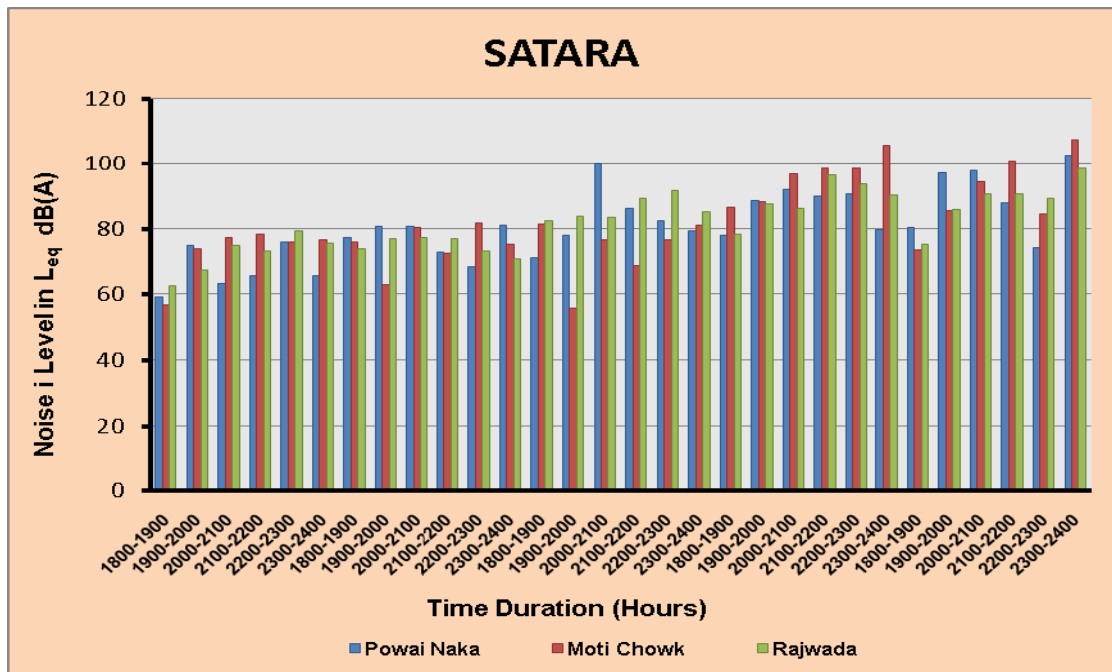


Chart 4.24: Hourly Noise levels from 18th-22nd Sept., 2010 in Satara

Comparative Study of Noise levels from 2007 to 2010

Table 4.14 shows the maxima and minima noise levels in last four years during Ganesh Festival. Comparative study shows that noise levels in some of the cities decrease this year significantly, but these are still higher than the permissible limits. Maxima and minima values gives the range of noise levels measured during Ganesh Festival.

By comparing the noise levels of previous year during Ganesh Festival with this year results, we can observe that the maximum noise level came down in all the cities except Mumbai and Satara, however Navi Mumbai and Kolhapur shows the similar pattern as it was in previous year.

Although the noise level get decreased but these are still higher than the permissible limits, which is the matter of concern. Comparative study shows the following results in different cities of Maharashtra:

Mumbai: Comparative study shows increase in noise levels this year in Mumbai as compared to last years. In 2007, it was higher (63-102dBA), then decreased in 2008 (50.2-91dBA) which get increased in 2009 (46-105dBA) and now in 2010 it is increased upto 111.3dBA.

Navi Mumbai: In Navi Mumbai 26% increase in noise levels is observed this year as compared to year 2009.

Thane: In Thane, minimum level of noise level decreased this year, however maxima get increased In 2009, it was in the range of 60-95dBA, in 2008 it was 56-96dBA, and now in 2010 it is 50.3-108dBA.

Pune: A significant decrease in noise level is observed in Pune city this year as compared to last three years. In 2007 it was 56-99dBA, in 2008 it was 62-107dBA, in 2009, 53-101dBA and now in 2010 it is 39-101dBA.

Nashik: In Nasik also. although the maxima increased but overall range of noise levels decreased. In year 2009, it was inbetween 61-97dBA, but this year in 2010, it is observed in between 46-104dBA. In 2008 it was 41-99dBA, in 2007, 40-89dBA

Aurangabad: In Aurangabad, little increase in noise levels are observed this year as compared to last year. The noise levels of 2010 fall in the range of 55-98dBA, in 2009 it was inbetween 41-96dBA.

Nagpur: The maximum and minimum noise levels this year (51-90dBA) in Nagpur are found to be almost similiar as it was in previous year i.e. in 2009 (53-89dBA). However it decreased during last four years.

Kalyan: In Kalyan, little increase in noise levels are observed this year as compared to last year. The noise levels of 2010 fall in the range of 69-98dBA, in 2009 it was inbetween 95-67dBA.

Amravati: Increase in noise levels are observed in Amravati this year (57-92dBA) as compared to noise levels in year 2009 (51-85dBA). However, overall noise levels are lesser than the year 2007.

Jalgaon: In jalgaon, the maximum and minimum noise levels this year (53-98dBA) are found to be almost similiar as it was in previous year i.e. in 2009 (54-96dBA).

Kolhapur: The maxima in Kolhapur is found to be exceptionally high (130dB), this may be because of sudden honking of any vehicle nearby the monitoring place. Also, in comparison to last three years this year noise levels increased significantly.

Satara: In Satara also, increase in maximum noise level is observed this year, however minimum level decreased. If we consider the overall range of values, the overall decrease in noise levels is predicted this year in satara as compared to year 2008 and 2009.

Table 4.14: Noise Levels during Ganesh Festival for last 4 years in different cities of Maharashtra

| Sr. No. | City | 2007 Noise Levels in L_{eq} dB(A) | | 2008 Noise Levels in L_{eq} dB(A) | | 2009 Noise Levels in L_{eq} dB(A) | | 2010 Noise Levels in L_{eq} dB(A) | |
|---------|-------------|-------------------------------------|------|-------------------------------------|------|-------------------------------------|------|-------------------------------------|------|
| | | Max | Min | Max | Min | Max | Min | Max | Min |
| 1 | Mumbai | 102.7 | 63.4 | 91.3 | 50.2 | 105.8 | 46.0 | 111.3 | 58.2 |
| 2 | Navi Mumbai | 100.6 | 85.9 | 95.8 | 51.3 | 93.3 | 42.1 | 126.3 | 57.4 |
| 3 | Thane | 92.4 | 59.2 | 96.5 | 56.0 | 95.0 | 60.1 | 108.0 | 50.3 |
| 4 | Pune | 99.3 | 56.8 | 107.0 | 62.0 | 101.8 | 53.3 | 101.3 | 39.1 |
| 5 | Nashik | 89.3 | 40.2 | 99.8 | 41.9 | 97.3 | 61.5 | 104.4 | 46.1 |
| 6 | Aurangabad | 114.1 | 65.2 | 99.5 | 51.3 | 96.5 | 41.3 | 98.0 | 55.6 |
| 7 | Nagpur | 98.3 | 66.2 | 85.9 | 60.7 | 89.6 | 53.0 | 90.6 | 51.4 |
| 8 | Kalyan | 103.8 | 65.4 | 92.7 | 59.6 | 95.7 | 67.8 | 98.4 | 69.3 |
| 9 | Amravati | 93.6 | 52.6 | 79.7 | 59.0 | 85.6 | 51.7 | 92.2 | 57.2 |
| 10 | Jalgaon | 102.9 | 54.0 | 79.0 | 60.0 | 96.3 | 54.5 | 98.0 | 53.1 |
| 11 | Kolhapur | 105.4 | 56.9 | 86.0 | 65.0 | 104.5 | 52.9 | 131.1 | 66.1 |
| 12 | Satara | 96.7 | 62.5 | 100.0 | 66.0 | 92.2 | 66.1 | 107.3 | 55.6 |

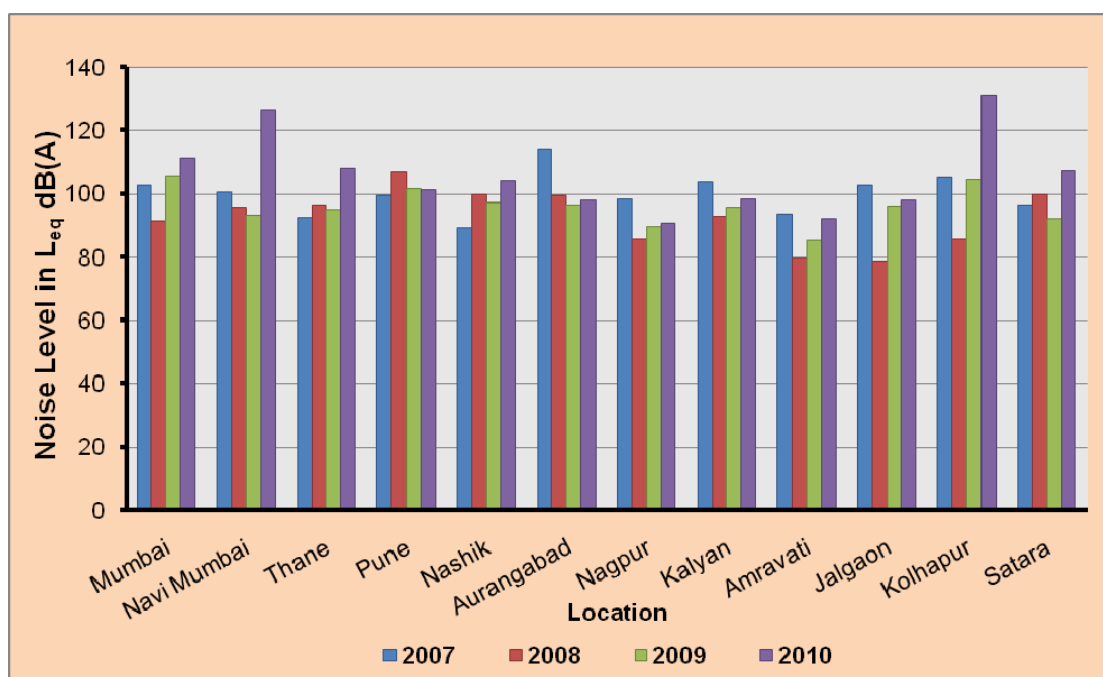


Chart 4.25: Noise Levels during Ganesh Festival for last 4 years in different cities of Maharashtra

5.0 CONCLUSION

In present study, it is concluded that there is significant decrease in noise levels in some of the cities like Thane, Pune, Nashik and Satara. However, in some cities like Mumbai, Navi Mumbai and Kolhapur showed significant increase in noise levels. Besides this, cities like Nagpur and Jalgaon showed similiar range of noise levels as it was in year 2009.

Decrease in noise levels resulted may be due to increase in awareness among citizens by the enforcement of environmental awareness programs and campaigns conducted by Maharashtra Pollution Control Board and other Regulatory Agencies.

However more efforts are needed to bring down the noise levels upto the permissible limits which may include more awareness among people about noise pollution and its adverse health effects without disturbing their spiritual thoughts about the festival.

6.0 DEFINITIONS

A-Weighting

"A-weighting" is the frequency weighting characteristic as specified in IEC 123 or IEC 179 and intended to approximate the relative sensitivity of the normal human ear to different frequencies (pitches) of sound.

A-weighted Sound Pressure Level

The "A-weighted sound pressure level" is the sound pressure level modified by application of the A-weighting. It is measured in dBA, A-weighted, and denoted as dBA.

Decibel

The "decibel" is a dimensionless measure of sound level or sound pressure level; see sound pressure level.

Equivalent Sound Level

The "equivalent sound level" sometimes denoted L_{eq} , is the value of the constant sound level which would result in exposure to the same total A-weighted energy as would the specified time-varying sound, if the constant sound level persisted over an equal time interval. It is measured in dBA.

Fast Response

"Fast response" is a dynamic characteristic setting of a sound level meter meeting the applicable specifications.

Percentile Sound Level

The "x percentile sound level", designated L_x , is the sound level exceeded x percent of a specified time period, It is measured in dBA.

Sound

"Sound" is an oscillation in pressure, stress, particle displacement or particle velocity, in a medium with internal forces (e.g. elastic, viscous), or the superposition of such propagated oscillations, which may cause an auditory sensation.

Sound Level

"Sound level" is the A-weighted sound pressure level.

Sound Level Meter

A "sound level meter" is an instrument which is sensitive to and calibrated for the measurement of sound.

Sound Pressure Level

The "sound pressure level" is twenty times the logarithm to the base 10 of the ratio of the effective pressure (p) of a sound to the reference pressure (P_r) of 20 μ Pa. Thus the sound pressure level in dB = $20 \log_{10} P/P_r$.

GLIMPSES OF THE EVENT



**Pradnesh with Field Officer
Mr. Rajesh Nandgaonkar at
Mulund, Mumbai**



**Duryodhan with Field Officer
Mr. Hemant Kulkarni at
Wagle Estate, Thane**



**Ganesh & Ashwin at
Chinchpokali (W)**



Ketan at Chinchpokali (E)



**Mahesh at Main Road,
Naupada, Thane**



**Sanjay with PI on duty at
Ulhasnagar Station, Kalyan**



Abdulla at Vashi, Navi Mumbai



Shiv at Chembur (W), Mumbai



Mr. Kurmude (FO), Dr. Munde (FO), Mr. Mohekar (RO), Mr. Vilas Kadi (EBM A'bad), Inauguration on 18.09.2010 at Krantichowk, A'bad



Dr. Munde (FO A'bad) showing the Sound Level Meter to traffic policemen at Krantichowk, Aurangabad



Mr. Shivdarshan Ukarande & Mr. Jitesh Murhade, Osmanpura, A'bad



Mr. Sunil Deshpande & Mr. N. Chavan at Kranti Chowk, A'bad



Mr. Manoj Ubale & Mr. Vikas Murade at Gulmandi, A'bad



Mr. Santosh Raut & Mr. Sanjay Ajabe at Citychowk, A'bad



Mr. Shashikant Ajabe & Mr. Prashant Fulluke at CIDCO, A'bad



Shani Peth Police Station, Jalgaon



Subhash Chowk, Jalgaon



Khas Baug Maidan - Kolhapur



Mr. A.S. Fulse RO MPCB during Noise Monitoring at Panchavati, Nashik



Cotton Market, Nagpur



Gandhi Putla, Nagpur



Golibar Chowk, Nagpur



Ramdaspath, Nagpur



Reshimbagh, Nagpur



Hadapsar, Pune



Deccan, Pune



Karve Road, Pune



Khadki Bazar, Pune



Kothrud, Pune



Laxmi road (Azad Mitra Mandal)



M G Road, Pune



Pimprigaon, Pune



Sarus Baug, Pune



Satara Road, Pune



Shanivarwada, Pune



Shivaji nagar, Pune



Swargate, Pune



Yerwada, Pune



Moti Chowk - Satara



Pawai Naka - Satara

ANNEXURE I

ध्वनी प्रदूषण (नियंत्रण व नियमन) नियम, २०००
ची प्रभावीपणे अंमलबजावणी करण्यासाठी
प्राधिकरणाची नियुक्ती करण्याबाबत

महाराष्ट्र शासन

पर्यावरण विभाग, मंत्रालय,

शासन निर्णय क्रमांक : ध्वनीप्र-२००९/प्र.क्र.९५/तांक-१

नविन प्रशासन भवन, १५ वा मजला, मादाम कामा रोड, मुंबई - ४०० ०३२

दिनांक: २१ एप्रिल, २००९

- वाचा - १) शासन निर्णय क्रमांक : ध्वनीप्र-२०००/प्र.क्र.२४/तांक ३, दिनांक १६ ऑगस्ट, २००० आणि दिनांक १५ जून, २००१
२) मे. उच्च न्यायालयाच्या मुंबई खंडपीठामध्ये दाखल करण्यात आलेल्या सार्वजनिक हिताच्या याचिका क्र. (१) २०५३/२००३, (२) ७४/२००७, (३) ८५/२००७ आणि (४) १/२००९ मधील दिनांक २६/२/२००९ चे आदेश

प्रस्तावना :-

पर्यावरण विभाग, शासन निर्णय क्र. एन.पी./२०००/२४/क्र.३, दिनांक १६/८/२००० व दिनांक १५/०६/२००१ रोजी ध्वनी प्रदूषण (नियंत्रण व नियमन) नियम, २००० च्या २ (क) नुसार, राज्यातील पोलीस आयुक्त असलेल्या शहरामध्ये पोलीस उप आयुक्त व इतर ठिकाणी जिल्हा पोलीस अधिक्षक यांना एक सदस्य प्राधिकरण म्हणून ध्वनी प्रदूषण नियमाची अंमलबजावणी करण्यासाठी नियुक्ती करण्यात आली आहे.

मा. उच्च न्यायालय, मुंबई खंडपीठाने वरील याचिकांमध्ये महाराष्ट्र शासन व इतर विभागांनी ध्वनी प्रदूषण (नियंत्रण व नियमन) नियम, २००० ची प्रभावी अंमलबजावणी करण्याकरीता दिनांक २६/२/२००९ रोजी ठराविक निर्देश दिलेले आहेत. त्यानुसार स्थानिक स्वराज्य संस्थांनी शहरी भागात शांतता झोन जाहीर करणे आवश्यक आहे.

शासन निर्णय :-

१) मा. उच्च न्यायालयाच्या आदेशानुसार तसेच ध्वनी प्रदूषण (नियंत्रण व नियमन) नियम, २००० च्या कलम ३ (५) नुसार स्थानिक स्वराज्य संस्थांनी शहरी भागात शांतता झोन त्वरीत जाहिर करून योग्य ते आदेश काढावेत. तसेच शहरात शांतता झोनचे फलक लावून आदेशाची प्रभावी अंमलबजावणी करण्यासाठी योग्य ती प्रसिध्दी करावी.

- १) शैक्षणिक संस्थांच्या सभोवताली १०० मीटर क्षेत्र
- २) सर्व न्यायालयाच्या सभोवतीली १०० मीटर क्षेत्र
- ३) रुग्णालयाच्या सभोवताली १०० मीटर क्षेत्र

२) ध्वनी प्रदूषणाची वाढती पातळी व निरनिराळे प्रदूषण स्रोत विचारात घेता, शासनाच्या निरनिराळ्या विभागांनी सद्यःस्थितीत ते राबवीत असलेल्या नियमाद्वारे ध्वनी प्रदूषण नियंत्रण व नियमनाची अंमलबजावणी करावी. त्याकरिता परिशिष्ट १ मध्ये नमूद केल्याप्रमाणे, शासनाच्या संबंधित विभागांच्या अधिपत्याखालील संस्थांच्या अधिकाऱ्यांना पदनाम प्राधिकरण म्हणून जाहीर करण्यात येत आहे. याबाबत संबंधीत

रोटा/एच-०१००[५००-५-२००९]-१

विभागांनी स्वतंत्र आदेश निर्गमित करावेत. सदर प्राधिकरण, ते राबवित असलेल्या नियमांच्या तरतुदीनुसार तसेच ध्वनी प्रदूषण (नियंत्रण व नियमन) नियम, २००० च्या तरतुदीनुसार ध्वनी प्रदूषण नियंत्रण व नियमनाची कार्यवाही करण्यास सक्षम असेल.

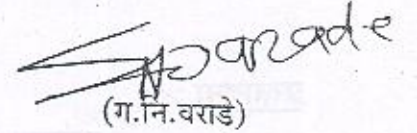
A.

३) ध्वनी प्रदूषण करणारे उपकरणे / स्रोत जसे D.G. Sets (15-500 KVA); Coal Washeries ; Fire Crackers Generator Sets with Diesel (upto 1000 KVA) manufactured on or after 1st July, 2003 ; Vehicles a manufacturing stage from the year, 2003 and 1st April, 2005 respectively as well as Noise Limits for Automobiles and Domestic appliances and construction equipments at the manufacturing stage laid down under the provisions of the Environment (Protection) Act, 1986 and Rules made there under इत्यादींची, सभोयतालच्या हवेतील ध्वनी प्रदूषण गुणवत्तेच्या विहित मर्यादा परिशिष्ट २ मध्ये नमूद केल्याप्रमाणे असेल.

४) या शासन निर्णयान्वये, पर्यावरण विभागाने यापूर्वी दिनांक १६ ऑगस्ट, २००० आणि दिनांक १५ जून, २००१ रोजी या विषयाबाबत निर्गमित केलेला शासन निर्णय खारीज करण्यात येत आहे. हा शासन निर्णय निर्गमित झाल्याच्या दिनांकापासून लागू राहील.

महाराष्ट्राचे राज्यपाल यांच्या आदेशानुसार व नावाने.

B.


(ग.नि.वराडे)

संचालक (पर्यावरण)

प्रत माहितीसाठी :-

मा.मुख्यमंत्र्यांचे प्रधान सचिव

मा.उपमुख्यमंत्र्यांचे प्रधान सचिव

मा. मुख्यसचिव

अतिरिक्त मुख्यसचिव, गृह विभाग, मंत्रालय

अतिरिक्त मुख्यसचिव, सार्वजनिक आरोग्य विभाग, मंत्रालय

प्रधान सचिव (अ. व सु.), गृह विभाग

प्रधान सचिव, नगर विकास विभाग (१), मंत्रालय

प्रधान सचिव, नगर विकास विभाग (२), मंत्रालय

प्रधान सचिव, महसूल विभाग, मंत्रालय

प्रधान सचिव, उच्च व तंत्रशिक्षण विभाग, मंत्रालय,

प्रधान सचिव, शालेय शिक्षण विभाग, मंत्रालय

सचिव, गृह विभाग (परिवहन),

सचिव, पर्यावरण

मा. मंत्री (पर्यावरण), यांचे खाजगी सचिव,

मा. राज्यमंत्री (पर्यावरण), यांचे खाजगी सचिव,

सर्व मा. मंत्री / राज्यमंत्री यांचे खाजगी सचिव

सर्व जिल्हाधिकारी

सर्व पोलीस आयुक्त / उप आयुक्त

सर्व जिल्हा पोलीस अधिक्षक / उप अधिक्षक

पर्यावरण विभाग सर्व अधिकारी / कार्यासन / निवडनस्ती - तांक १

परिशिष्ट - १

एच-०१०० -१३

ध्वनी प्रदूषण व नियमन व नियंत्रणाची अंमलबजावणी करण्यासाठी शासनाच्या अधिपत्याखाली असलेल्या संस्थांमधील संबंधीत अधिका-याची पदनाम प्राधिकरण म्हणून नियुक्ती

| Sr. No | Officer /Agency | Concerned Department | Duties |
|--------|--|--|--|
| 1. | District Magistrate, Sub-Divisional Magistrate, | Revenue | Corresponding Rules for the enforcement of the Noise Pollution Control measures within their respective jurisdiction. |
| 2. | Police Commissioner or any other officer not below the rank of the Deputy Superintendent of Police designated for the maintenance of Ambient Air Quality Standards, as mentioned in the Rule 2(c) of Noise Pollution(Regulation and Control) Rules, 2000. | Home | The Police Authorities will be responsible for initiating further legal actions in respect of the violations.. |
| 3. | Municipal Commissioner, Additional/Deputy Municipal Commissioner/ Chief Officer of Municipal Council/Committee Govt. of Maharashtra not below the rank of the Deputy Superintendent of Police. | Urban Development | <p>Corresponding Rules for the enforcement of noise standards laid down under the Environment (Protection) Rules, 1986 at source for construction projects, utilities for buildings (ACs, DG sets etc.), domestic appliances, development and other activities in their jurisdiction.</p> <p>The urban local bodies shall be responsible for demarcation of the silent zones as per the Noise Rules, 2000 and displaying the same adequately.</p> <p>The urban local bodies shall include an Action Plan for noise control in the Environmental Status Report submitted by them annually, including noise monitoring and noise mapping studies.</p> <p>The Local Body and Urban Development Deptt., Govt. of Maharashtra will not grant any permissions for development activities in consistent with or in conflict with the categorization of zone. In case of overlapping zones, stringent standards will prevail over in that particular area.</p> |
| 4. | Registrar /Head Master of the Educational Institutions duly approved by the concerned Government not below the rank of the Deputy Superintendent of Police | Higher & Technical Education/ School Education | Corresponding Rules for the enforcement and maintenance of the Ambient Noise Standards laid down for domestic appliances, automobiles etc. in respect of any activity in its jurisdiction. |
| 5. | Dean/Superintendent of the Government Hospitals not below the rank of the Deputy Superintendent of Police | Public Health | Corresponding Rules for the enforcement and maintenance of the Ambient Noise Standards laid down for domestic appliances, automobiles etc. in respect of any activity in its |

| | | | |
|----|--|-----------------------------|---|
| 6. | Head of M.M.R.D.A., M.S.R.D.C., C.I.D.C.O., having local jurisdiction constituted under various Laws and Public Works Department. | Urban Development | jurisdiction. Corresponding Rules for the enforcement and maintenance of Noise Standards laid down under the Environment (Protection) Rules, 1986 at source for construction projects, utilities for buildings (ACs, DG sets etc.), domestic appliances, development and other activities in their jurisdiction These Developmental Authorities should include adequate noise abatement measures in their project activities such as noise barriers to the bridges and flyovers, tree plantation for roads etc. |
| 7. | Member Secretary and any officer Maharashtra Pollution Control Board not below the rank of the Deputy Superintendent of Police | Environment Department | (i) Monitoring of Ambient Noise Levels in case of specific requests from other authorities referred in the table and communicating the results to the respective Authorities for further necessary action at their end. (ii) For the enforcement of Noise Pollution Control Measures and Standards in industrial areas. |
| 8. | (i) Any officer from the State Transport Department / Deputy Regional Transport Officer in their respective jurisdiction not below the rank of the Deputy Superintendent of Police (ii) Head of Maharashtra State Road Transport Corporation or any officer/ Depot Manager not below the rank of the Deputy Superintendent of Police. (iii) Traffic Police Authorities not below the rank of the Deputy Superintendent of Police | Home Department (Transport) | Enforcement and maintenance of the Noise Standards laid down under Environment (Protection) Rules, 1986 and Motor Vehicles Act, 1939 for the new and operating vehicles within their respective jurisdiction. The noise levels generated by the in-use vehicles should be monitored while grant of Pollution Under Control Certificate. |

परिशिष्ट- २

Schedule
(Under rule 3(1) and 4(1)) of Noise Pollution (Control and Regulation) Rules, 1999

Ambient Air Quality Standards in respect of Noise

| Area Code | Category of Area/Zone | Limits 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 |

- i. Day time shall mean from 6.00 a.m. to 10.00 p.m.
- ii. Night time shall mean from 10.00 p.m. to 6.00 a.m.
- iii. Silence Zone is defined as an area comprising not less than 100 meters around hospitals, educational institutions and courts. The silence zones are zones which are declared as such by the competent authority.
- iv. Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.

*dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.

A "decibel" is a unit in which noise is measured.

"A" , in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.

Leq : it is an energy mean of the noise level, over a specified period.

2. Standards / Guidelines for control of Noise Pollution from Stationary Diesel Generator (DG) Sets.

(A) Noise Standards for DG sets (15-500 KVA)

The total sound power level, L_w of a DG set should be less than, $94+10 \log_{10} (KVA)$, dB(A), at the manufacturing stage, where, KVA is the nominal power rating of a DG set. This level should fall by 5 dB(A) every five years, till 2007, i.e. in 2002 and then in 2007

(B) Mandatory acoustic enclosure/acoustic treatment of room for stationary DG sets (5KVA and above).

Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.

The acoustic enclosure / acoustic treatment of the room should be designed for minimum 25 dB (A) Insertion Loss or for meeting the ambient noise standards, whichever is on the higher side (if the actual ambient noise is on the higher side, it may not be possible to check the performance of the acoustic enclosure/acoustic treatment. Under such circumstances, the performance may be checked for noise reduction upto actual ambient noise level, preferably in the night time). The measurement for Insertion Loss may be done at different points at 0.5 m from the acoustic enclosure/room, and then averaged.

The DG set should also be provided with proper exhaust muffler with insertion loss of minimum 25dB (A).

- A. (C) **Guidelines for the manufacturers/users of DG sets (5 KVA and above).**
01. The manufacturer should offer to the user a standard acoustic enclosure of 25 dB(A) Insertion Loss and also a suitable exhaust muffler, with Insertion Loss of 25 dB(A).
 02. The user should make efforts to bring down the noise levels due to the D.G. set, outside his premises, within the ambient noise requirements by proper siting and control measures.
 03. The manufacturer should furnish noise power levels of the unsilenced DG sets as per standards prescribed under (A).
 04. The total sound power level of a D.G. set, at the user's end, shall be within 2 dB(A) of the total sound power level of the DG set, at the manufacturing stage as prescribed under (A).
 05. Installation of a DG set must be strictly in compliance with the recommendations of the DG set manufacturer.
 06. A proper routine and preventive maintenance procedure for the DG set should be set and followed in consultation with the DG set manufacturer, which would help to prevent noise levels of the DG set from deteriorating with use.

3. Noise Level Standards for Coal Washeries

Operational / Working Zone – not to exceed 85 dB(A) Leq for 8 hours exposure.

The Ambient Air Quality Standards in respect of noise as notified under Environment (Protection) Rules, 1986 shall be followed at the boundary line of the coal washery.

Code of Practice of Coal Washery

Water or Water mixed chemical shall be sprayed at all strategic coal transfer points such as conveyors, loading/unloading points etc. As far as practically possible conveyors, transfer points etc. shall be provided with enclosures.

- * The crushers/pulverizers of the coal washeries shall be provided with enclosures, fitted with suitable air pollution control measures and finally emitted through a stack of minimum height of 30m, conforming particulate matter emission standards of 150 mg/Nm³ or provided with adequate water sprinkling arrangement.
- * Water sprinkling by using fine atomizer nozzles arrangement shall be provided on the coal heaps and on land around the crushers/pulverisers.
- * Area, in and around the coal washery shall be pucca either asphalted or concreted.
- * Water consumption in the coal washery shall not exceed 1.5 cubic meter per tonne of coal.
- * The efficiency of the settling ponds of the waste water treatment system of the coal washery shall not be less than 90%.
- * Green belt shall be developed along the road side, coal handling plants, residential complex, office building and all around the boundary line of the coal washery.
- * Storage bunkers, hoppers, rubber decks in chutes and centrifugal chutes shall be provided with proper rubber linings.

* Vehicles movement in the coal washery area shall be regulated effectively to avoid traffic congestion. High pressure horn shall be prohibited. Smoke emission from heavy duty vehicle operating in the coal washeries should conform the standards prescribed under Motor Vehicle Rules, 1989.

4. Noise Standards for fire-crackers

A.(i) The manufacturer, sale or use of fire-crackers generating noise level exceeding 125 dB(A) or 145 dB(C)_{pk} at 4 meters distance from the point of bursting shall be prohibited.

(ii) For individual fire-cracker constituting the series (joined fire crackers), the above mentioned limit be reduced by $5 \log_{10} (N)$ dB, where N=Number of crackers joined together.

B. The broad requirements for measurement of noise from fire-crackers shall be-

(i) The measurements shall be made on a hard concrete surface of minimum 5 meter diameter or equivalent.

(ii) The measurement shall be made in free field conditions i.e., there shall not be any reflecting surface upto 15 meter distance from the point of bursting.

(iii) The measurement shall be made with an approved sound level meter.

C. The Department of Explosives shall ensure implementation of these standards.

5. Noise Limits for Generator Sets run with diesel

Noise limit for diesel generator sets (upto 1000 KVA) manufactured on or after 1st July, 2003

The maximum permissible sound pressure level for new diesel generator (DG) sets with rated capacity upto 1000 KVA, manufactured on or after the 1st July, 2003 shall be 75 dB(A) at 1 meter from the enclosure surface.

The diesel generator sets should be provided with integral acoustic enclosure at the manufacturing stage itself.

The implementation of noise limit for these diesel generator sets shall be regulated as given in below mentioned paragraph.

Requirement of certification

Every manufacturer of engine or every importer of engine or product must have valid certificates of Type Approval and certificates of Conformity of Production for each year, for all engine models being manufactured or for all engines or product models being imported, after the effective date with the emission limit as specified in earlier paragraph.

6. (1) Noise limits for vehicles applicable at manufacturing stage
from the year, 2003.

| Sr.No. | Type of Vehicle | Noise Limits dB(A) | Date Implementation of |
|--------|---|--------------------|-------------------------------|
| (1) | (2) | (3) | (4) |
| 1. | Two Wheeler | | 1 st January, 2003 |
| | Displacement upto 80 cm ³ | 75 | |
| | Displacement more than 80 cm ³ but upto 175 cm ³ | 77 | |
| | Displacement more than 175 cm ³ | 89 | |
| 2. | Three Wheeler | | 1 st January, 2003 |
| | Displacement upto 175 cm ³ | 77 | |
| | Displacement more than 175 cm ³ | 80 | |
| 3. | Passenger Car | 75 | 1 st January, 2003 |
| 4. | Passenger or Commercial Vehicles | | 1 st July, 2003 |
| | Gross vehicle weight upto 4 tonnes | 80 | |
| | Gross vehicle weight more than 4 tonnes but upto 12 tonnes | 83 | |
| | Gross vehicle weight more than 12 tonnes | 85 | |

(2) Noise Limits for vehicles at manufacturing stage applicable on and from 1st April, 2005

| Sr.No. | Type of vehicles | Noise Limits |
|--------|--|--------------|
| 1.0 | Two Wheelers | |
| 1.1 | Displacement upto 80 cc | 75 |
| 1.2 | Displacement more than 80 cc but upto 175 cc | 77 |
| 1.3 | Displacement more than 175 cc | 80 |
| 2.1 | Three Wheelers | |
| 2.1 | Displacement upto 175 cc | 77 |
| 2.2 | Displacement more than 175 cc | 80 |
| 3.0 | Vehicles used for the carriage of passengers and capable of having not more than nine seats, including the driver's seat | 74 |
| 4.0 | Vehicles used for the carriage of passengers having more than nine seats including the driver's seat and a maximum Gross Vehicle Weight (GVW) of more than tonnes | |
| 4.1 | With an engine power less than 150KW | 78 |
| 4.2 | With an engine power of 150 KW or above | 80 |
| 5.0 | Vehicles used for the carriage of passengers having more than nine seats including the driver's seat: Vehicle used for the carriage of goods. | |
| 5.1 | With a maximum GVW not exceeding 2 tonnes | 76 |
| 5.2 | With a maximum GVW greater than 3 tonnes but not exceeding 3.5 tonnes | 77 |
| 6.0 | Vehicles used for the transport of goods with a maximum GVW exceeding 3.5 tonnes | |
| 6.1 | With an engine power less than 75 KW | 77 |
| 6.2 | With an engine power of 75 KW or above but less than 150KW | 78 |
| 6.3 | With an engine power of 150 KW or above | 80 |

7. Noise Standards Part E:-

A. Noise limits for Automobiles (Free Field Distance at 7.5 meter in dB(A) at the manufacturing stage.

| | | |
|-----|--|----|
| (a) | Motorcycle, Scooters and Three Wheelers | 80 |
| (b) | Passenger Cars | 82 |
| (c) | Passenger or Commercial vehicles upto 4 MT | 85 |
| (d) | Passenger or Commercial vehicles above 4 MT and Upto 12 MT | 89 |
| (e) | Passenger or Commercial vehicles exceeding 12 MT | 91 |

B. Domestic appliances and construction equipments at the manufacturing stage to be achieved by 31st December, 1993.

| | | |
|-----|---|-------|
| (a) | Window Air Conditioners of 1 ton to 1.5 ton | 68 |
| (b) | Air Coolers | 60 |
| (c) | Refrigerators | 46 |
| (d) | Diesel generator of domestic purposes | 85-90 |
| (e) | Compactors (rollers), Front Loaders, Concrete Mixers, Cranes (moveable), Vibrators and Saws | 75 |

ANNEXURE II

List of Noise Monitoring Locations In Maharashtra During Ganesh Festival 2010.

| Sr. No. | City | Location Name (details) |
|----------------|-------------|--|
| 1.0 | Mumbai | Andheri - Azad Nagar, Sarvajanik Utsav Samiti Sr. 2, Vir Desai Marg |
| | Mumbai | Bandra - Sarvajanik Ganeshutsav Mandal-Sr.A2329, S.V. Road, Bandra (W) |
| | Mumbai | Bhandup - Jay Bajrang Mitra Mandal (Bhandup Samrat), Bhandup Station Rd |
| | Mumbai | Borivali - Manav Mitra Mandal, L.T. Road, Borivali (W), Mumbai - 400092 |
| | Mumbai | Byculla - Sarvajanik Ganeshutsav mandal, Dr. Ambedkar Marg, Byculla (E) |
| | Mumbai | Chembur (East) - Near Ashish Talao / Ashish Theatre |
| | Mumbai | Chembur (West) - Sahyadri Krida Mandal Tilak Nagar, Chembur |
| | Mumbai | Chinchpokali (E) - Lalbaug Raja Sarvajanik Ganeshutsav Mandal |
| | Mumbai | Chinchpokali (W) - Parsiwadi Mitra Mandal, Auther Road Naka, Sarvajanik Ganeshutsav Mandal |
| | Mumbai | Dadar (East) - Khodadad Circle, Dadar TT |
| | Mumbai | Dadar (West) - Sai Ganesh Sadan, Senapati Bapat Marg, Sarvajanik Ganeshutsav Mandal, Sunder Nagar |
| | Mumbai | Elphinstone - Shiv Sai Sarvajanik Ganeshutsav Mandal, B.M. Marg, Elphinstone Rd |
| | Mumbai | Ghatkopar - Amar Mitra Mandal, Tilak nagar, Ghatkopar (E) |
| | Mumbai | Girgaon Chowpati - Akhil Chowpati Bhirvi Lane, Sarvajanik Ganeshutsav |
| | Mumbai | Grant Road - Saltar Road Sarvjanik Ganeshutsav Mandal, Grant Road (W) |
| | Mumbai | Juhu Chowpati - Om Kareshver Shiv Mandir (Trust), Fort Juhu Choupati |
| | Mumbai | Kandivali (East) - Thakur Village |
| | Mumbai | Kandivali (W) - Balla Mitra Mandal, Behind Poisur Depot, Nr Ganesh Medics |
| | Mumbai | Khar - Sarvajanik Ganeshutsav Mandal Sr. 1441-34/35, Sharma Building, 4th Road, Opp. Khar Police Station(W) |
| | Mumbai | Mulund - Sargam Mitra Mandal R.H.B. Road, Mumbai - 400 080 |
| | Mumbai | Mumbai Central - Belasis Road, B.I.T. Chawl, Mumbai Central |
| | Mumbai | Parel - Sarvajanik Ganeshutsav Mandal Bal Gopal Mandal Parel (W), Tata Mill Compound |
| | Mumbai | Santacruz (East) - Milan Subway, Neet & Geet Society |
| | Mumbai | Vikhroli - Balmitra Kala Mandal, Vijay House, Vikhroli Statn Rd, Vikhroli (W) |
| | Mumbai | Wadala - G.B.S. Sarvajanik Ganeshutsav Mandal, Shree Ram Mandir, Before Wadala Depot Signal, |
| 2.0 | Navi Mumbai | Airoli - Traffic Police Chouki (before Mulund Airoli Bridge) |
| | Navi Mumbai | CBD - MGM Hospital Chowk, Near Police Chowki |
| | Navi Mumbai | Kopar Khairane - Sector-10, D-Mart Main Road |
| | Navi Mumbai | Uran - Ganpati Chowk |
| | Navi Mumbai | Vashi - Shivaji Chowk Near Bus Depot |
| 3.0 | Thane | 1 Gokhle Road-Malhar Cinema |
| | Thane | 2 Jambli Naka- Lake immersion Point |
| | Thane | 3 Main Road- Gaondevi Mandir, Naupada |
| | Thane | 4 Pokhran Road- Vartak Nagar Chowk |

| | | |
|------------|------------|--|
| | Thane | 5 Wagle Estate- Raila Devi Lake |
| | Thane | 6 Court Naka |
| | Thane | 7 Mental Hospital |
| | Thane | 8 Bedekar Hospital |
| | Thane | 9 Chatrapati Shivaji Maharaj Hospital, Kalwa |
| 4.0 | Pune | 1 Shivaji Nagar (Sakhar Sankul) |
| | Pune | 2 Karve Road (Nul stop) |
| | Pune | 3 Swar Gate (Tilak Road) |
| | Pune | 4 Satara Road (Balaji Nagar) |
| | Pune | 5 Shaniwar Peth (Shanivar Wada) |
| | Pune | 6 Yerawada (Near Gunjan Theatre) |
| | Pune | 7 Laxmi Road (Shagun Chowk) |
| | Pune | 8 Kothrud (Near Shivaji Putala) |
| | Pune | 9 Mahatma Phule Madai (Near Mandai) |
| | Pune | 10 Sarus Baug (Mitra Mandal Chowk) |
| | Pune | 11 Hadapsar (Nera Bhaji Mandai) |
| | Pune | 12 Deccan (Nataraj Theater) |
| | Pune | 13 Dagdu Sheth Mandir (City Post Chowk) |
| | Pune | 14 Alka Chowk (Nera Alka Chowk) |
| | Pune | 15 Babu Genu Chowk (Near Babu Genu Chowk) |
| | Pune | 16 Khadaki (Near Bazar) |
| | Pune | 17 M G Road (Babajan Chowk) |
| | Pune | 18 Chapekar Chowk (Chinchwadgaon) |
| | Pune | 19 Pimprigoan - Shastrinagar |
| | Pune | 20 Thergaon (Dange Chowk) |
| 5.0 | Nashik | 1 Nashik Road |
| | Nashik | 2 Panchvati |
| | Nashik | 3 CIDCO |
| | Nashik | 4 CBS |
| | Nashik | 5 Dahi Pool |
| 6.0 | Aurangabad | 1 Gulmandi |
| | Aurangabad | 2 City Chowk |
| | Aurangabad | 3 Kranti Chowk |
| | Aurangabad | 4 CIDCO Residential |
| | Aurangabad | 5 Usmanpura |
| 7.0 | Nagpur | 1 Ramdaspath |
| | Nagpur | 2 Cotton Market |
| | Nagpur | 3 Golibar Chauk |

| | | |
|-------------|-----------|------------------------------------|
| | Nagpur | 4 Reshimbag |
| | Nagpur | 5 Gandhiputala |
| 8.0 | Kalyan | 1 Bhiwandi- Dhamankar Naka |
| | Kalyan | 2 Shivaji Chawk |
| | Kalyan | 3 Ulhasnagar Station |
| 9.0 | Amaravati | 1 Budhwara |
| | Amaravati | 2 Rajkamal Square |
| | Amaravati | 3 Irvin Hospital Square |
| 10.0 | Jalgaon | 1 Subhash Chowk |
| | Jalgaon | 2 Shashtri Tower Chowk |
| | Jalgaon | 3 Shanipeth Police Station |
| 11.0 | Kolhapur | 1 Rajaram Puri (Near Rajaram Puri) |
| | Kolhapur | 2 Laxmi Puri (Near Laxmi Puri) |
| | Kolhapur | 3 Khas Baug Maidan |
| 12.0 | Satara | 1 Powai Naka (Near Powai Naka) |
| | Satara | 2 Moti Chowk (Near Moti Chowk) |
| | Satara | 3 Rajwada (Near Rajwada) |

ANNEXURE III

Sound Level Meter MS 6701, Type II

