ASSESSMENT OF NOISE POLLUTION IN UDGIR CITY OF LATUR MAHARASHTRA

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Abstract
Today urbanization is one of the leading problem in the present days.Noise pollution causes health hazard to Human being. In urbanized areas major sources of noise pollution are traffic and construction activities.Noise levels were measured at selected locations in Udgir such as Shivaji chowk, Captain Chowk, Bidar gate, S.T. Colony and Udayagiri College area and the values were compared with standard values.It has been observed that the Noise level except udayagiri college , exceeds the values more than the prescribed guidelines of WHO and ISI. The noise level was observed highest at Shivaji chowk 110db and lowest at udayagiri College 45db. Noise is having adverse impact on the health of human being and environment, noise should be controlled. The conclusion drawn from the study is that the noise should be controlled at the source only by using technology.
Key Words: Urbanization, noise, WHO, Technology, ISI

Introduction: -

The word noise is derived from the Latin term nausea. It has been defined as unwanted sound, a potential hazard to health and communication dumped into the environment with regard to the adverse effect it may have on unwilling ears. Noise is defined as unwanted sound. Sound, which pleases the listeners, is music and that which causes pain and annoyance is noise. At times, what is music for some can be noise for others (Vidyasagar T. and Rao 2006, Thangadurai N et.al, 2005, Anon. 1989). In the developing era noise is one of the normal feature of life that without it no one live.

There are four types of Noise continuous, Intermittent impulsive and low frequency, each type of noise is having its own characteristics. Noise in low level is not harmful. But when it passes limit it causes harmful effects on living system especially human being. There are two types of noise household and industrial. Both the noise more than 60 decibels causes serious concern. Motor vehicles are the main sources of urban noise emission contributing about 55% to the total noise (Banerjee et al., 2008; Pandya et al., 2002;). Noise pollution may lead to various long-term (chronic) and short-term (severe) effects on the health of the citizens (WHO 2012). Epidemiological and physiological evaluations show that noise pollution causes hearing impairment (Díaz et al. 2021a, b; Münzel et al. 2021). Due to the various adverse impacts of noise on humans and environment, noise should be controlled. The technique or the combination of techniques to be employed for noise control depend upon the extent of the noise reduction required, nature of the equipment used and the economy aspects of the available techniques (Mathur J.S.B 1981, Anon 2005).

Table-1 Guidelines on noise pollution from MOEF (GOI)

Category of Domestic Appliances/ Construction Equipments	Noise limits in dB(A)
(a) Window air conditioners of 1 tonne to 1.5 tonne	68
(b) Air Coolers	60
(c) Refrigerators	46
d) Diesel Generator for domestic purposes	85-90
(e) Compactors (rollers), front loaders, Concrete mixers, Cranes (movable),Vibrators and Saw	75
Construction Activities – measures of abatement Acoustic barriers should be placed near construction sites The maximum noise levels near the construction site should be limited to 75 dB(A) Leq (5 min.) in industrial areas and to 65 dB(A) Leq (5 min.) in other areas. There should be fencing around the construction site to prevent people coming near the site. Materials need not be stockpiled and unused equipment to be placed between noisy operating equipment's and other areas. Constructing temporary earth bund around the site using soil, etc., which normally is hauled away from the construction site.	

Table-2 Guidelines on noise pollution from CPCB

Sr. No	Zone	Noise level in dbA	
		Day time	Night Time
1	Industrial	75	70
2	Commercial	65	55
3	Residential	55	45
4	Silence	50	40

Study area

Udgir is a second largest city in the District Latur. It has historic al background. Udgir is famous for the historic war between the Marathas and the Nizam, led by Sadashivrao Bhau, who defeated Nizam in 1759 when the treaty of Udgir was signed. Marathas won a convincing victory in the Battle of Udgir under the leadership of Sadashivrao Bhau. It is leading taluka with agriculture, Industry and Urbanization. All over the world in development area pollution is one of the serious issue. But due to this we cannot stop the development.

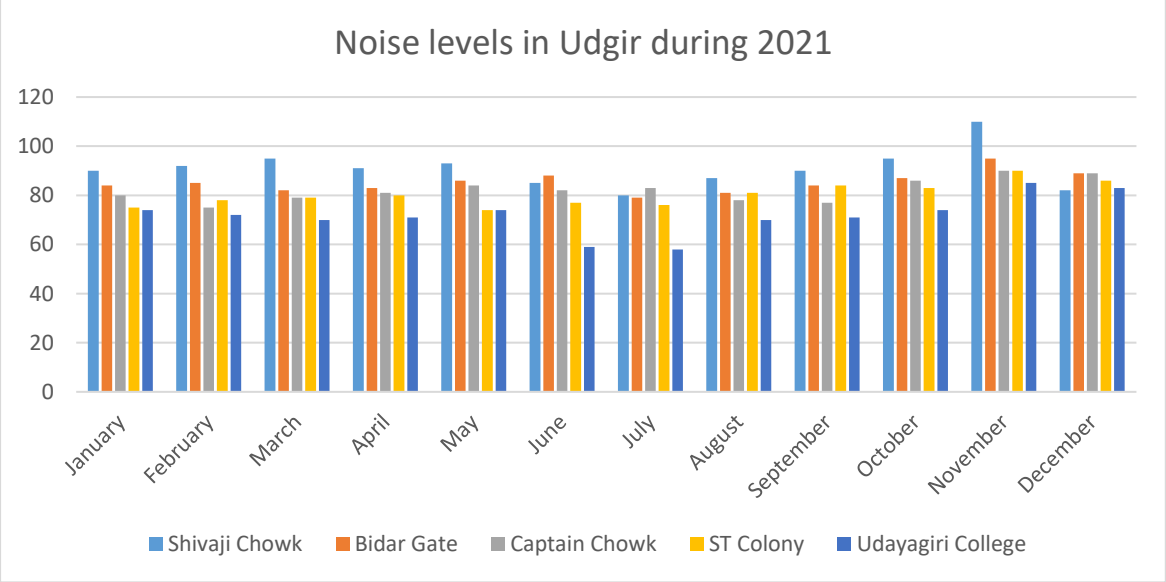
Material Methods

The decibel meter of Milwaukee japan is utilized for the noise level measurement. Five sampling stations were selected for the analysis of Noise. Shivaji Chowk, Captain Chowk, Udayagiri College, S.T Colony and Bidar gate. These all five stations cover whole Udgir city and get the representative value of Noise pollution. As these are from Market place and Periphery of the city. Monthwise analysis was done for the period of January 2021to December 2021

Table-3-Noise levels at Udgir during 2021

Sr.No	Month	Shivaji Chowk	Bidar Gate	Captain Chowk	ST Colony	Udayagiri College
01	January	90	84	80	75	74
02	February	92	85	75	78	72
03	March	95	82	79	79	70
04	April	91	83	81	80	71
05	May	93	86	84	74	74
06	June	85	88	82	77	59
07	July	80	79	83	76	58
08	August	87	81	78	81	70
09	September	90	84	77	84	71
10	October	95	87	86	83	74
11	November	110	95	90	90	85
12	December	82	89	89	86	83

Graph: -Levels of Noise at Udgir during 2021



Results and Discussion

In Udgir the sampling was done at five stations monthwise it has been observed that all the stations except udayagiri college had lower noise level only in June and July 2021. Rest of the stations shown the levels of noise more than permissible standards prescribed by ISI, MPCB. At first station shivaji chowk the level of noise was maximum in November it was 110 db and minimum was 82 in December. At station two

bidar gate the range of noise was in between 89 to 79 db. The third station captain chowk found the range in between 90 to 75db. 90to 74db was observed at fourth station ST colony and last fifth station was udayagiri college it has shown the levels in between 58 to 85 throughout the year. Shivaji chowk is the busiest square in the Udgir and the levels was high as 110 these are because of dipawali and routine traffic. And the lowest is at udayagiri college it is far from the city having less population and with green zone.

Conclusion

Noise pollution adversely affects the human being leading to irritation, loss of concentration, loss of hearing. One has to identify the sources of noise pollution. Once identified, the reason(s) for increased noise levels to be assessed. (Dasarathy. A , K.,Dr. T.S. Thandavamoorthy 2013) The noise level is much higher than the permissible standards. If the noise has not been reduced those people who are exposing to it they will get affected at the older age and the new born or foetus will be affected due to this noise. This is not good sign for future generations. Previously, several researchers worldwide have studied the urban noise pollution (Ozer et al., 2009; Tripati et al., 2006; Yusoff and Ishak, 2005). Overall trend of the research papers show that noise pollution is becoming a severe problem in the urban environment.

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