Assessment of Noise Pollution during Simhastha Kumbh Mahaparv in Ujjain City, Madhya Pradesh

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Abstract—The present study is carried to investigate the noise level caused during simhastha kumbh mela 2016 in Ujjain city as compared to standard stipulated by central pollution control board (CPCB) New Delhi. It is found in the study that location chosen for study viz. ramghat and mangalnath ghat noise level was more than permissible limits. The maximum noise level during normal days was recorded i.e. 85.6 dB(A) at day time at the location mangalnath. While during festival days maximum noise level was reached up to i.e. 88.2 dB(A) in day time at the location mangalnath. these high noise levels may cause various negative effects on human and other beings.

Key words: Kumbh Mahaparv, Noise Pollution

I. INTRODUCTION

The word noise is obtained from Latin word “Nausea” which means’ undesirable sound or unpleasant sound’, generally, noise is created by human’s all activities. It is the fact the sound level more than permissible limit cause psychological and physical effects on human being. Along with increasing degree of water and air pollution, noise pollution is also emerging as a new threat to the developing countries. We are often used to it at the cost of peace and discipline and even sometimes health. Thus we are ignoring, but for sure it disturbs our whole system and often we become a cause and victim of it either knowingly or unknowingly, noise level is gradually increasing due to reasons likes Rapid growth in population and traffic, pollution has an average elevation of 494 metres (1620 feet). The city is the ancient bathing ghat most popularly visited during Simhastha kumbh mela. It is situated near harsiddi temple and approximately 1.1 km far away from Mahakaleshwar temple. Its impact on human health by survey. He found that at survy site Har ki pauri maximum noise level was recorded in the evening during sahi snan festival, although noise levels in all the areas were found to be above the standard ambient noise.

II. LITERATURE REVIEW

With the rapid growth in population and traffic, pollution have seeks attention of many researchers to study and understand the effect of these pollutants on noise

- S.Madan and Pallavi (2010) have assessed noise pollution in different hardiwdar city of Uttarakhand state, India during kumbh mela 2010 and studied its impact on human health by survey. He found that at survey site Har ki pauri maximum noise level was recorded in the evening during sahi snan festival, although noise levels in all the areas were found to be above the standard ambient noise.

- Asso. Pro.- Prashant A. Kadu and Anurag v. Tiwari [2013] have studied the noise pollution due to railway and vehicular traffic at level crossing and its remedial measures and comparison of their measurement with standard stipulation of central pollution control board(CPCB)

- Ms. Renesha Singh [2013] studies the noise pollution during festival season in Gorakhpur city, Uttar Pradesh, India and found that the noise during dussehra and diwali are greater than 217.45% and 237% of the permissible limits at night which is not accepted at all.

III. METHODOLOGY

A. Study Sites

The noise monitoring was carried out in Ujjain city from 22-april-2016 to 21-May 2016 during the Simhastha kumbh mela with the help of portable cirrus noise level meter. In this study we have consider the effects of mass gathering which increases the ambient noise levels of Ujjain city during Simhastha kumbh mela so following two sites were selected i.e.

1) Ramghat

It is the ancient bathing ghat most popularly visited during kumbh mela. It is situated in the centre of Ujjain city. It is located near harsiddi temple and approximately 1.1 km far away from Mahakaleshwar temple. So administration has kept good maintenance near this ghat provides a lot space on the both side to control the rush and to control the noise produce by pilgrims.

2) Mangalnath Ghat

It is located near the bridge of auspicious mangalnath temple, on the right and left bank of holy river Kshipra around 8.5 km in the north side away from nanakhedha bus stand Ujjain.

Monitoring method: The assessment of noise was conducted at two different locations of Ujjain on the festival Simhastha.
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The data of noise level had been collected on the occasion of Simhastha kumbh mahotsav 2016 in Ujjain city with the help of cirrus noise level meter at Ramghat and Mangalnath ghat sites. Both locations declared as zero zone due to simhastha kumbh mela in Ujjain. In this study we analyzed the effect of mass gathering on noise pollution. It was observed that in the beginning of kumbh mela noise level was comparatively smaller than last week of kumbh mela. But Sound level was greater than permissible limits as given by central pollution control board (CPCB). It was also considered that during holidays (sunday), Ekadashi, Amavasya and sahi snans noise level was greater than normal days of kumbh. Now here the variations of noise level data represent as in form of Leq (in dB) in following graphs. These areas are famous for aarti and puja with the help of loudspeakers which add to the high noise level. It is observed that the noise level in these locations is higher in morning time at 7 am to 9 am and in evening time at 6 pm to 9 pm than other time of the day. Various chart which shows the weekly variation in the noise level are given below. It can be concluded from the results that both sites of the sampling were badly affected with noise pollution due to mass gathering and various religious rituals performed by devotees. The study deals that maximum noise level in first week was recorded as 83.5dB in day time at mangalnath site and minimum noise level was 60.6 dB in night time as shown in fig.1. In the 2nd and 3rd week of simhastha kumbh the noise levels were less and maximum noise level were 75.8dB and 73.8dB respectively at mangalnath site as shown in fig 2 and fig 3. The maximum noise level in the last week of simhastha was 85.6dB at ramghat site in day time whereas at mangalnath maximum noise level was reached upto 82.3dB in night time as shown in fig 4. The present study revealed highest noise level i.e. 88.2dB at mangalnath on festival day of shahi snan in the evening hour (6pm to 7pm) due to religious peshvai of pilgrims along with loud musical instruments and maximum noise level at ramghat site was 79.5dB on festival day of shahi snan in afternoon time (1pm to 2pm) as shown in figure no.5.

Thus Noise levels in both the studied areas were found to be above ambient noise standard which had a critical impact on human health during period of kumbh mela, 2016.
V. CONCLUSION

The study revealed that noise level had exceeded permissible limits during festival kumbh due to mass gathering and due to instruments used by human like DJ, loud speaker etc. From the above observations we can concluded that in public events like Simhastha kumbh there is a need to apply guidelines to control the noise level by relevant authorities. Hence controlling the noise pollution is impossible without aware each one of us about its impacts. So there is a need to educating people about the hazards of loud sound. This can be done by communication means of entertainment like radio, theater group etc. Proper spacing near the study sites and dense tree plantation can reduce the sound pressure level effectively. Our government and we must bring this noise pollution to an end for our own peace.

REFERENCES


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Fig. 5: Variation in noise level in shahi snaan of simhastha kumbh