

The Social Rituals and Environmental Degradation: How to Tackle?

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It is my pleasure to present before you this issue of Current World Environment. I must acknowledge the choice of the authors, dedication of our reviewers and untiringly efforts of management team which help in timely publication of the issue of the journal. This issue has total twenty articles covering different important environmental topics such as noise pollution, waste water treatment, ecosystem, soil pollution, energy efficiency, Ganga water quality, forest fire risk assessment and land cover and land use changes etc.


The theme of this Editorial is 'The Social Customs Responsible for Environmental Degradation: How to Tackle?'. The present era is experiencing the changes in the quality of air, water and soil mainly due to the industrial products and related wastes which cannot be disintegrated easily through biogenic processes. Even the domestic waste has the major fraction of non-biogenic ingredients. The regulating authorities are sometimes helpless to manage the emissions and effluents on the special occasions due to social pressure. Social, cultural, religious and victorious celebrations many times cause huge environmental degradation. There are events of such celebrations across the globe.

The New Year celebration, sport match winning, Diwali festival of India etc. are the events when huge accumulation of heavy metals is recorded in the atmosphere.¹ The Diwali is one of the major festivals of India which is traditionally a festival of light when people light the 'Diya' lamps and distribute sweets. But

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unfortunately, due to the dominance of cracker burning, this festival is turned to the festival of fireworks. The emissions of fireworks consist of gases and respirable particles which can damage the respiratory system.² The metal aerosols are considered as a source of reactive oxygen species (ROS) resulting in a range of health implications.³ Fireworks emissions during Diwali night release highly toxic metals such as Sr, Al, Cu, Ni, Ba in air Diwali into a severe episodic or extreme air pollution event.⁴ Sometimes fire accidents and explosion during manufacturing cause a number of casualties. The appropriate law enforcement can probably reduce such mishappenings. Also, there is a need to develop community level awareness so that people are encouraged to celebrate the festival in an eco-friendly manner avoiding the exposure to the episodic toxic emissions of fireworks.

Idol immersion during some rituals and cultural event is another source of environmental degradation. Water pollution and food contamination are the major consequences of idol immersion. Paints and decoration materials used in the idols contain heavy metals which contaminate water when we immerse idols. According to a report from Central Pollution Control Board (CPCB), the Durga Puja post immersion recorded the exceedance of As, Cd, Cu, Pb, Zn and Hg in the river Yamuna during October 2018.⁵ During Durga Puja post idol immersion, Fe was 71 times higher against 0.3 mg/l of Bureau of Indian Standards (BIS) permissible limit while the Cr level was noticed 11 times higher than the BIS permissible limit of 0.05 mg/l. Even the BOD was increased significantly crossing the permissible limit.

During post immersion of Ganesh Chaturdashi idols during September 2018, metals such as As, Cr, Cu, Fe, Pb, Ni, Hg were recorded higher than their prescribed limits in Yamuna water in Delhi.⁶ Fe was increased 331 times from its BIS limit of 0.3 mg/l, Pb was increased 25 times from its BIS limit of 0.01 mg/l, Ni was increased 4 times from its BIS limit of 0.02 mg/l, As was increased 3 times from its BIS limit of 0.01 mg/l, Cr was increased 2.8 times from its BIS limit of 0.05 mg/l. In order to avoid environmental problem, ideally, the idol immersion should follow the guidelines of the governments. The CPCB has published its guidelines on idol immersion.⁷

After the immersion, these toxins are transported to food chain. A small amount of these toxic compounds can have significant future health effects. Earlier the idols were made out of mud and were non-damaging on immersion but the presently used *plaster of paris* (PoP) is not readily dissolved in water and hence, can affect water quality and aquatic life significantly. Therefore, the policy makers need to address the issue to the public so that in the era of modern science and technology, people understand and consider the issue of pollution above the cultural and religious sentiments.

Throwing flowers and fruits into the river water during festivals becomes a source of contamination of water and sediments. On some occasions, the animal sacrifice is also a source of river water pollution and also a source of foul odor due to the decay of tissues in the open air. On such occasions, huge large traffic jams are seen which add to the air pollution problem. The noise pollution levels are also increased during such ritual and festivals. Therefore, each environmentalist needs to spread public awareness about the harmful effects of chemically contaminated air, water and soil and its long term consequences.

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