

Diwali will be 'happy' if environment is clean

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Increasingly, each year, the festival of Diwali is an occasion when the air that we breathe reaches levels of pollution which are seriously harmful to our health and wellbeing. The capital of the country generally provides the worst example of air pollution during and after Diwali, despite appeals by citizens' groups and officialdom to celebrate Diwali without fireworks and crackers.

The air in Delhi, which is far from satisfactory at the best of times, reaches levels of pollution which can seriously harm the health of citizens, particularly the elderly, small children and those who are prone to upper respiratory disease and breathing disorders. A celebration of what is perhaps the most extensively observed festival in India in fact turns into a nightmare and threat to human health.

It is time that a serious movement by the citizens of Delhi and other parts of India takes timely and adequate steps to ensure improvement of air quality in general and prevent the defiling of Diwali.

Years ago, schoolchildren in Delhi took a pledge to celebrate the festival without crackers, and this had a marked effect in reducing both the noise as well as levels of air pollution for a few years. But that trend has now been reversed, and the very spirit of Diwali has been distorted to commercialise the occasion and create a hazard to people's health.

The practice of giving presents to friends and family is certainly a part of celebrating any joyous occasion, but the extent to which this has become a massive exercise in advertising and sales promotion replicates the commercialisation of Christmas across the developed countries.

There are various legends which are associated with Diwali as a festival of joy and celebration, symbolic of the triumph of good over evil. The most widely held belief associates Diwali as the day when lord Ram returned to Ayodhya after his 14- year-long exile and vanquishing Ravan in his own kingdom. The people of Ayodhya lit up their homes as an expression of joy and celebration.

But this symbolic celebration has crossed acceptable bounds with the volume and variety of fire crackers in the market today and the sums of money that people spend on them, which are staggering. This represents the sad reality of short-lived personal gratification at a huge and unacceptable cost to society.

All forms of damage to the environment from human activities are the result of this major difference between an individual consumer's benefit — often illusory and driven by a desire to outdo one's neighbour — and benefit to society, which is negative and serious in proportion. In a city like Delhi, which perceptions and media reports across the world describe as the most polluted city in the world, the harmful effects of the polluted air which we breathe has not really sunk in.

Several studies have shown the rapid deterioration of air quality in Delhi, but as yet we see no effective policies or actions to reverse this menacing trend. This year's Diwali celebration, in particular, saw air quality dropping to levels unprecedented even as compared earlier years. The *Wall Street Journal*, a publication with an extensive global readership, reported that PM2.5 (which refers to small particles less than 2.5 microns in width) had reached a level of 1,238 on Diwali this year, as compared to 435 last year.

The article also referred to the World Health Organisation (WHO) recommendation that PM2.5 be kept below an average of 10, and that a level above 35 carries a 15 per cent higher risk of long-term mortality of those exposed. It is, therefore, no surprise that the health of people living in Delhi, already affected by growing incidence of disease due to epidemics and lifestyle-related stresses, is a significant cause of growing concern.

The WHO estimates that ambient air quality (outdoor air pollution) resulted in three million deaths in 2012. There is every reason to believe that this figure is actually an underestimate. India is undoubtedly a country with high risk among those which WHO included in its analysis, and many of those who lose their lives due to this cause lie outside the data that is available for such computation.

Among those included in WHO's figures, it was estimated that 72 per cent deaths occurring on account of air pollution were cases of ischaemic heart disease and strokes, 14 per cent due to "chronic obstructive pulmonary

disease or acute lower respiratory infections, and 14 per cent due to lung cancer”.

The problem of air pollution in our cities, which gets accentuated during the celebration of Diwali, requires concerted action across several fronts. There are still a number of industrial units in the vicinity of our cities, including Delhi, which have unacceptable levels of emissions. Brick kilns, which litter the landscape just a few kilometres outside our cities, for instance, require urgent improvement in technology. The transport system, both within and around cities, requires an urgent overhaul. And the shopping spree before and during Diwali, when traffic is unable to move, only adds to the burden of air pollution.

The buildings in this country need urgent improvements in energy-use efficiency, which is in fact an economic imperative, since occupants of homes, commercial complexes and shops etc would actually save money with such improvements.

A much larger share of electricity supply has to be provided through non-polluting sources. With a decline in the cost of photovoltaic panels, the option of rooftop solar would make sense on a large scale. With the onset of winter, we would see small open fires all over, using poor quality biomass in the cities and agricultural waste in surrounding rural areas. This can add substantially to air pollution.

The time has come for the citizens of the country to declare that enough is enough, and to put in place a plan of action involving all stakeholders — Governments, businesses, academic institutions and civil society. And we should not wait for the next Diwali to give us even worse levels of air quality, but act now, while the evidence of dangerous pollution levels this year is still fresh in our minds.

(The writer is former chairman, Intergovernmental Panel on Climate Change)