A Brief Report
Shri AK Dave Memorial Lecture organized by ARSIPSO
January 06, 2024

Context Setting

The 10th A.K Dave Memorial Lecture was organised by ARSIPSO (Association of Retired Senior IPS Officers) on January 06, 2024 at New Delhi. Reminiscing the invaluable contributions of Late Shri A.K. Dave towards establishment and development of the ARSIPSO, the lecture brought together Senior IPS Officers. The President, ARISPSO set the context and underscored that the topic of the talk - Toxic air, ailing health, and urgency of simultaneous interventions' was topical given the pressing need for climate management scenario as humanity stood at the precipice of unprecedented environmental change. The distinguished speaker for the lecture - eminent environmentalist, Ms. Sunita Narain, Director General, Center for Science and Environment and Editor, Down to Earth fortnightly.

Talk by Ms. Sunita Narain

Ms. Narain spoke of the challenges of air pollution in 1990s. She recalled that during those times Delhi's air was very black, but pollution was not recognized as a problem. In contrast, in the present times understanding around air pollution increased manifold. The people understood that air had particulate matter like PM2.5 small enough for people to breathe and polluted air could be a potent killer. The nanoparticles in fact were so small that they could go through one's skin. The data had shown that 13% of deaths in India were due to pollution and the highest was borne by Delhi, Punjab, Uttar Pradesh and Haryana – the Indo-Gangetic plain. Pollution also contributes significantly to disability adjusted life years (DALYs) which were the sum of the years of life lost to due to premature mortality (YLLs) and the years lived with a disability (YLDs) due to prevalent cases of the disease or health condition in a population. About 29.2% of DALYs were caused due to chronic obstructive pulmonary diseases, therefore pollution affected both heart and lungs.

A recent study revealed that there was a huge rise in cases of acute respiratory infections among children and Delhi bore the highest burden. Another frightening finding of the study was a reduction in life expectancy of children by five years due to polluted air they breathed in when they were young.

Winter months remained particularly bad because of inversion. During the winter of 2023, Delhi was choking as pollution levels were very high, air was foul and people could not breathe. This has been true every winter as inversion set in winters. Consequently, there was no dispersion of the pollutants. It is only by divine intervention that the wind blows and pollution plummets. The sources of pollution remain same, only two sources of pollution are added i.e., burning of biomass and stubble by farmers. Every winter, frustration rises, and the pollution games begin. The governments during the political debates try to shift blame on each other. Polluters also resort to similar tactics by minimizing their role in the problem by stating that they lead to only 1% of the pollution. The fact is everybody makes up the problem.

The key sources of pollution include road dust, vehicular pollution, domestic burning of firewood and industrial pollution. Dust was a major source of pollution. When it was coated with the emissions from burning of fossil fuel, it became a pollutant. Similarly, nitrogen dioxide and other nitrogen oxides reacted with other chemicals in the air to form other pollutants, known as secondary pollutants. Ms Narain emphasized that the right to blue skies and clear lungs must not be taken for granted

Steps taken to combat pollution thus far and challenges faced

- ***Leapfrogging from diesel to CNG:*** In 1996 it was suggested to replace diesel with CNG at that time India was on pre-Euro one diesel and petrol containing 10,000 parts of sulfur. The efforts bore fruit and the Supreme Court mandated CNG to come into Delhi. About 100,000 CNG vehicles were introduced within a year and the air became clean.
- ***Air quality monitoring:*** Ms. Narain pointed out that it was possible to clean up but concerted efforts were required. For instance, the air quality index has been developed. It has linked health to dirty air. India has managed to set up perhaps the world's densest network of air quality monitoring.
- ***Setting up of CPCB and launch of GRAP:*** The Central Pollution Control Board (CPCB) has been set up. The IMD, under the Ministry of Sciences provides real time information on weather. The GRAP in 2017 was launched as an emergency action and it was not a substitute for acting throughout the year. The purpose of GRAP was to issue alert actions when pollution levels were high. These include closing schools, stop trucks from coming in the city and halt construction as pollution has reached at severe levels. The idea was to introduce such measures to make it inconvenient for everyone so that constructive action is taken to reduce pollution and GRAP like measures are not required again.
- ***Clean fuel:*** In 2019, India leapfrogged from BS4 to 6 was taken. These standards ensured that quality of the fuel is very clean. Indian refineries have worked hard with huge investment to produce very clean fuel. India has world quality petrol and diesel. Although the fuel is clean, but vehicles are dirty, and they had the same impact on the emissions. Disincentivizing diesel fuel vehicles was another crucial step that was that was taken after persistent efforts. A perverse incentive was given to diesel vehicles where in diesel was kept cheaper because it was used by trucks, busses, and railways. But private consumption of diesel in early 2000s made use of differential pricing between petrol and diesel. Thus, it was contended how individuals who could afford private vehicles was using the subsidized diesel. Today at least the price differential between diesel and petrol has been removed.
- ***Transition of coal-based power plants to cleaner technology:*** All the coal based power plants in Delhi have been shut. The idea was to shut the power plants and to move towards gas. Gas plants have been set up in the city. Two plants are running, but the price of gas has not been equated with the price of our coal and that makes it very difficult for people to switch to gas. The gas and the coal based power plants in this region have also been asked to move to cleaner alternatives. As of 2020, there has been no implementation on this front. There has been no agreed deadline of coal based power plants to move to cleaner technologies.
- ***Congestion charge on trucks:*** Trucks used to ply through the length and breadth of Delhi. The trucks were coming in Delhi because the cost of coming through the city was cheaper than to take the roads outside. Thus, a congestion charge was demanded on Delhi. The idea was to disincentivize

them from plying in Delhi so that they found alternative routes. Another big battle was to get Eastern and Western Express opened so that there were alternatives routes.

Way Forward

To mitigate the present pollution crisis emphasis must be on on three key agendas viz., **mobility transformation, dual fuel use and handling local sources dust and garbage and farm stubble**.

- ***Mobility transformation:*** With respect to mobility transformation, the quality of fuel and emission standards of the vehicles have improved but more vehicles ply on the roads and neutralize the benefits of clean fuel. Today, only 15 to 12% of people in the city drive cars, but they make up 90% of the road space, and roads take up 26% of Delhi's land area. More land area is taken up by roads and flyovers than green areas in Delhi. For mobility transformation, instead of engineering solutions comprehensive and integrated solutions of mobility providing last mile connectivity are required. Despite having a vast metro rail network, it is not connected to walkable roads or modes of transport which provide last mile connectivity. To divide and disincentivize car users, availability of adequate buses and pedestrian walkways would have to be ensured. To facilitate easy pedestrian and cycle commute pavements are crucial. Equally significant are lighting and surveillance to ensure women's safety. Ensuring NCR connectivity with metro and railway line, last mile connectivity is required. Better road engineering, providing a well-connected system of roads allowing space for buses, pedestrians and cyclists is the need of the hour.
- ***Clean fuel transition:*** Use of clean fuel is imperative. In NCR, coal is banned. But implementation is very weak because people have no alternative. The cost of coal is less compared to gas. The gas industry does not remain competitive. The transition to clean gas would require not levying VAT on CNV and keeping the price of CNG below coal. The coal-based power plants would have to move to cleaner technologies, the implementation in this regard has been weak. To strengthen implementation stronger enforcement and deterrence is required.
- ***Managing local sources of pollution:*** Managing local sources of pollution through local enforcement and deterrence is important to ensure garbage is not burnt, road dust and construction dust is managed. These steps require strong enforcement. Unfortunately, enforcement hitherto has been weak. Lastly, the farmers need incentives for not burning stubble through initiatives such as Satat programme under which plants are being set up in Punjab to buy paddy residue from farmers and produce compressed biogas.

Conclusion

Ms Narain emphatically pointed out that air pollution was a great equalizer as rich could not buy themselves out of the crisis. In the water versus air story, people can drink bottled water, but air purifiers cannot be put everywhere. Further air shed has no boundaries; thus, states cannot blame each other for air pollution as everyone was responsible for reducing air pollution. The air pollution crisis teaches us that without equity and inclusion, clean air cannot be ensured. The solution thus lies in inclusive and sustainable growth. Governments are acting and there is interest in doing things, but transformative actions are required at scale on a war footing.