

The Pollution Watchdog

By Laveesh Bhandari

A spate of news stories over the last few months point to an interesting situation in India. Both the regulator and the government – whether central, state or local, have been lax on pollution since long. While this appears to be changing, it is apparent, that with greater growth and higher incomes, pollution will be a constant problem for many decades to come. The solution therefore is to ensure that there is a constant push from the masses for focusing on pollution reduction.

In democracies specially, the ability of the bottom up forces to catalyse action by the state is significant. But such pressures work only when there is credible information that can be shared with the world and form the basis for a collective view. This collective view has been missing in India for long largely because of lack of information.

In the case of recent high pollution events across North India as well, source-specific information on pollution has been missing. This in part is because air quality monitoring has been largely in the arena of government agencies. These agencies have not been very active in improving and expanding their own infrastructure as both extreme pollution events and general pollution levels steadily worsen. But that is not all.

The public sector has been a major polluter in India. These public sector commercial enterprises are managed by the bureaucracy and operated by a technocracy. The same people also rotate back and forth between regulatory agencies. The system was not designed for this, but effectively it has become highly incestuous with multiple pressures to maintain status quo. Even the strongest of political leaders will find it extremely difficult to smash this tacit cartel. This is visible in many ways, and recent events where apparent corrupt practices went unpunished is another symptom of the same underlying problem.

But our objective is to reduce pollution, and like in everything else, a technology solution can provide a good option. Consider the broad categorization of air pollution sources as (i) point and (ii) non-point sources, where vehicular pollution, field burning, dust and road dust can be categorized as the latter, and industrial stacks, coal power plants, refineries as the former. While the bulk of continuous monitoring and reporting is of ambient air quality, precise data on a source-by source basis is missing. If such source-wise data were available on a real-time basis, it would enable direct targeting of civil society pressure and eventually executive action.

Fortunately, such technologies exist and are being used globally. They come under the name of open-path-remote-emission-monitoring. There are distinct technologies within this category but what they all do is, send a beam of infra-red radiation or laser over a distance. Some of this is reflected back, and depending upon the character of reflection they can measure the extent and type of pollutants. The science is important to understand, because the technology has a major advantage and a key disadvantage.

The advantage is, anyone, be it a civil society organization or a university department, or a maverick do-gooder, can take such an instrument and scan an area whose radius can be as much as 500 metres or even more. The dependence on managers and technocrats hiding their misdeeds behind permission to enter their private or public-sector unit gets eliminated. The reliance on bureaucrats to implement real time monitoring is also not required. Anyone with such an instrument can measure and report publicly what is happening in that coal power plant, or that iron refinery or for that matter

that brick kiln that is purportedly cleaning its emissions. The democratization of monitoring is a highly powerful tool in enabling discipline within the government and industry.

But the technology being what it is, it is not very precise and susceptible to environmental and climatic conditions, not to mention distance. In other words, such technologies cannot be used to mandate compliance by industrial units because their estimates are not very precise. Moreover, such technologies also take away the experts' monopoly over data. Perhaps because of this, the experts may not approve of such technologies.

But such technologies can play the role of watchdog extremely well, as soon as basic emission benchmarks are crossed they can bring attention to that unit, be it a stack in a coal power plant or a refinery or an industrial unit. This call to attention can then be followed by a more precise measurement using other technologies by the regulator.

What is critical in India is how to monitor the monitor, when we do not do so, corruption occurs. The single biggest reason why inspector – raj survived and prospered in India was that no one was monitoring the antics of the inspectors. As we become more stringent on polluters, but do not monitor the governments agents the potential for corruption will increase dramatically. Technologies such as those discussed, enable the sharing of information publicly, and reduce the power of the corrupt to extract rent in the name of pollution.

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