The toxicity

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Highlights

On parts of Bengaluru where hazardous substances exist at levels and conditions that pose existing or imminent threat to health and environment 5 contaminated sites identified in CPCB report

By Garima Prasher

Bengaluru has five contaminated sites, a Central Pollution Control Board (CPCB) report has said.

In the report released a few months ago, CPCB identified five locations 'contaminated' by toxic and hazardous substances. Besides, 12 sites were 'probable contaminated sites', where further investigation is recommended in the report.

The aforementioned five contaminated sites are Goripalya near Mysore Road, Mangammanapalya near Hosur Road, Peenya Industrial area, Mavallipura dumpsite near Yelahanka and Begur Lake.

The probable contaminated spots mentioned in the CPCB report include waterbodies: Lalbagh Lake, Madiwala Lake, Hebbal Lake, Bellandur Lake, Kengeri Tank, Arekere Lake and Agara Lake.

The polluted sites often housed production areas, landfills, dumps, waste storage and treatment areas, mine tailings, spill sites, chemical waste handling facilities and storage sites located in various parts of the city.

According to the report, contaminated sites are delineated areas where constituents and characteristics of the

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human-generated toxic and hazardous substances, exist at levels and conditions that pose existing or imminent threats to human health or the environment.

Experts said that dumping or spillage of hazardous wastes and chemicals adversely impacts the surrounding environment, particularly soil, surface water and groundwater, posing a threat to people in and around the impact zone. Moreover, as they get exposed to toxic substances, various health and environmental problems are bound to manifest over time.

"It is a serious concern. Harmful chemicals from these sites can enter our food chain and cause irreparable damage. We have witnessed the impact of harmful chemicals from Varthur and Bellandur lakes. Farmers around these waterbodies raised vegetables and crops using contaminated lake water. When the food items were analysed, high levels of heavy metals were detected. As a result, many in that region are already suffering from kidney-related ailments. Harmful chemicals can also easily seep into groundwater, contaminating the water table," said Dr TV Ramachandra of Centre for Ecological Sciences at the Indian Institute of Science.

CPCB, in its report, also declared that Karnataka overall has six 'contaminated' sites and 19 'probable contaminated sites'. It also recommended that these sites need to be investigated in detail and remediation activity should be carried out to reduce human health risks and environmental impacts.

The board said remediation of contaminated sites can be achieved by cleaning of contaminated media, which in these cases are soil, groundwater, surface water and lakebed sediments. Environmentalists are of the view that it is the lackadaisical approach of regulatory authorities in the implementation of rules and regulations in relation to waste disposal and management, which leads to such dangerous outcomes.

"Over 40% of the city population is dependent on groundwater. We are already witnessing a high number of people suffering from diseases such as cancer. Despite all legal remedies in place, implementation by the regulatory authorities has been subpar. We are allowing industries to pollute our resources in the name of development. The pollution control board should enforce the 'polluters pay' principle in true spirit," said environmentalist Dr AN Yellappa Reddy.

This number is a gross underestimation by CPCB. Many lakes in the city are fed with industrial effluents regularly. All industries are discharging chemicals into the waterbodies. The fact that CPCB could find only five contaminated and 12 probable contaminated sites surprised me

. — Dr TV Ramachandra, IISc

KSPCB disagrees

While the CPCB's investigation report mentions the six 'contaminated sites' and 19 'probable contaminated sites' in the state, the Karnataka State Pollution Control Board (KSPCB) seemed to hold a different point of view. KSPCB sources said site assessment studies of all the 25 sites have been completed as per CPCB's reference document on 'Identification, Inspection and Assessment of Contaminated Sites'. The results indicate that only one out of the 25 sites is contaminated.

"We have requested the CPCB to delist the rest of the 24 sites. Based on the SOP given by CPCB, we conducted studies on all 25 sites with the help of the Environmental Management and Policy Research Institute (EMPRI). The subsequent investigative report submitted by EMPRI said just one site near Yelahanka is contaminated, and remediation of this site is in progress.

In other sites identified by the CPCB, the land use has changed. CPCB is yet to take the final call on this," said a KSPCB official.

However, researchers and scientists who have been working on the city's waterbodies for years, begged to differ. According to Dr Ramachandra, the majority of the waterbodies in Bengaluru are contaminated.

"Many lakes in the city are fed with industrial effluents regularly. All industries are discharging chemicals into the waterbodies. The fact that CPCB could find only five contaminated and 12 probable contaminated sites surprised me. According to a study done by us, most of the lakes in the city are contaminated and pose health-related risks to those living in the vicinity and using the polluted water. This number was already grossly underestimated by the CPCB," said Dr Ramachandra.

At the moment, the report submitted by the KSPCB on the 25 sites is with the CPCB, under review.