76 major disasters in 10 years, norms diluted even as coal ash accidents became 'routine' - Carbon Copy

Abandoned homes of families forced to relocate due to coal ash pollution stand flooded by ash slurry in Sepakkam, Ennore, Tamilnadu | Photo: Ishan Tankha, Clean Air Collective

76 MAJOR DISASTERS IN 10 YEARS, NORMS DILUTED EVEN AS COAL ASH ACCIDENTS BECAME 'ROUTINE'

By Editorial Team / July 27, 2020

India has diluted coal ash norms despite the occurrence of 76 major coal ash disasters in the past 10 years, states the latest report by Healthy Energy Initiative India and Community Environmental Monitoring.

The report titled *"Coal Ash in India – A compendium of Disasters, Environmental and Health Risks"* states that between 2010 and June 2020, every second month, major coal ash accidents have killed people and extensively damaged water sources, air and soil. The report warned

that it was the “tip of the iceberg” as incidents of fly ash spills are “routine” and go unreported.

Madhya Pradesh, Odisha, Jharkhand, West Bengal, Tamil Nadu, Chhattisgarh and Maharashtra with highest concentrations with coal fired thermal power plants are the hotspots of coal ash accidents. The report points out that a large number of power plants are located close to water bodies like rivers or the coast, the common ash discharge flows directly into them bypassing holding ponds.

Coal ash, the industrial waste generated by power plants by burning coal, contains toxic chemicals like arsenic, aluminum, antimony, barium, cadmium, selenium, nickel, lead and molybdenum among other carcinogens. Along with the increased risk of cancers from toxic heavy metal exposure, coal ash can damage lungs and heart, cause stomach ailments, and contribute to premature mortality.

According to the report, health surveys among communities living close to coal mines and coal ash ponds in Chhattisgarh, revealed chronic health conditions such as hair loss and brittle hair; joint pain, body ache and backache; dry, itchy and/or discoloured skin and cracked sole, and dry cough. Higher cases of kidney and gastrointestinal complaints have also been reported.

Steady dilution of norms

The report highlights that the regulatory framework of coal ash management has been steadily diluted allowing power producers to flout environmental safeguards and public health protocols. Consider this:

To reduce coal ash content washing of coal was made mandatory in 1997. Then on January 2, 2014 the government made coal washing mandatory for supply to all thermal units more than 500 km from the coal mine. However, on May 21, 2020, the Centre made coal washing optional through a controversial amendment based on economic rationale offered by India’s NITI Aayog and ministries of Power and Coal. The report points

out that this rationale does not account for the resulting increase in the fly ash generation and pollution caused from it.

According to the report, two decades ago, in 2000, the classification of fly ash was shifted from the category of “Hazardous Industrial waste” to the category of “Waste material”. No supporting health based scientific rationale has been provided by the ministry on the issue of recategorization.

“utilisation”, a misnomer for disposal

The Fly Ash Mission of 1994 and the 1999 Fly Ash notification mandates the utilisation of fly ash for cement, concrete blocks, bricks, panels and similar materials or for the construction of roads, embankments, dams or for any other construction activities within a radius of 300 km from thermal power stations (TPPs). The aim was also to achieve 100% utilisation of fly ash within a specified period. Despite these efforts, only 77% of the fly ash however has been utilised as of 2018-19.

The report highlights that the term “utilisation” is a misnomer for some of the “uses” like filling of low-lying area reclamation and mine void filling, which are actually simply means of disposal. Despite government approval, certain uses of fly ash like mine void filling, low lying area reclamation and agricultural use were prohibited under the Environment Clearance (EC) conditions for power plants. However, according to the report, “the latest amendment of August 2019 reverses such EC conditions”.

According to the Ministry of Power’s Central Electricity Authority (CEA), India generated 217.04 million metric tons of ash in 2018-19. This figure is expected to cross 600 million metric tons by 2032.

Risk of cancer and radiation exposure

Along with the increased risk of cancers from toxic heavy metal exposure, coal ash can affect human development, create lung and heart problems, cause stomach ailments, and contribute to premature mortality. Health studies conducted among communities living close to coal mines and coal

ash ponds in Chhattisgarh, India, revealed increased incidences of physiological ailments including kidney and gastrointestinal disorders.

“Coal ash overall is a deadly poison that looks harmless. Typically, coal ash consists of arsenic, lead, mercury, selenium, hexavalent chromium among other carcinogens and neurotoxins. Studies have also linked fly ash with radiation exposure among workers and public. The only way to be safe is not to burn coal,” said Manan Ganguli, Healthcare consultant from Cambridge, UK.

Since Indian regulations do not recognize coal ash as hazardous waste, the power companies cut costs of maintaining engineered landfills for scientific disposal of fly ash, and instead dump the toxic coal fly ash in open lands, unlined and uncovered pits close to the power plants.

Over a period of time the ash piles up and power companies reinforce the embankments of such ash disposal areas with the same fly ash. Given that the area is unlined the toxins from coal ash seep in and contaminate groundwater. During monsoon, the report states, that such ash ponds regularly give way as embankments breach discharging huge quantities of ash in the neighboring areas including homes, villages, agricultural lands and water bodies. During dry seasons, these ash ponds become a source of air pollution, as dust storms carry huge clouds of ash into the environment.

Toxins encapsulated into products

Out of the total 217 million tons of coal ash generated in the year 2018-19, only 168 million tons (77.5%) was utilised. Of the fly ash utilised, a majority, 26.8%, was used for cement manufacturing, 13.5% for reclamation of low-lying areas, 9.96% was used for bricks, blocks and tiles manufacturing, 9.94% for ash dyke raising, 4.48% was used in highways and flyovers and 4.65% in mine filling.

Suggested utilisation of fly ash for filling low lying areas or converting them into bricks etc raises several concerns about the fate of toxins in fly ash

once encapsulated into these products. It has so far been a controversial topic without a conclusive scientific consensus. Data in the report also reveals that more than a billion tons of legacy ash remains unutilised in ponds and mounds all over the country.

Fix accountability

The report suggests India should make power plants accountable for safe management and the environmental health impacts emerging out of its utilization, disposal and reuse.

A robust monitoring mechanism that includes participation of communities residing next to power plants, to ensure that all ash generated is accounted for. In an event that there is ash discharged in the environment or unaccounted for then there are further defined mechanisms for remediation and paying up for health and environmental damages under polluter pays principle.

Singrauli in Madhya Pradesh is among the worst-hit regions in recent times when it comes to breached fly ash dykes. Just over the past year, the region has suffered ash dyke breaches by plants maintained by power producers like Essar, NTPC and Reliance Power. “These accidents have been recurring due to negligence of the companies,” said Jagat Narayan Vishwakarma, one of the petitioners seeking a remedy to Singrauli’s ash dyke problem at National Green Tribunal. Vishwakarma added that region has experienced years of air, water and soil pollution which has burdened communities living here with extensive long-lasting damage to health and property.

India urgently requires regulations to contain pond ash including retrofitting existing ash ponds with impermeable HDPE liners and linking the scientific landfilling of ash with environmental clearances, the report warns. This would also entail a rigorous environmental monitoring protocol around the fly ash dumps to check contamination of groundwater.

Polluters should be held accountable and made to pay for environmental and health damage and remediation of all ash contaminated sites should be carried out as per the guidance document developed by the MoEFCC under the National Program for Rehabilitation of Polluted Sites (NPRPS).

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