



The Triple Tragedies

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Background

While India is busy in tackling Covid-19 and enjoying the news of 'healing nature', people have received shocking news of incidents in three of its states, one after the other, within a span of 24 hours on 7th May 2020. What a terrible day it was! In the early morning, a poisonous gas named Styrene leaked from LG Polymers factory situated on the outskirts of Visakhapatnam, Andhra Pradesh. Later, in the afternoon of the same day, gas leakage in the Shakti paper mill industry in Raigarh district of Chhattisgarh was reported, and in the evening sudden news came about a fire accident in Neyveli thermal power station II in Tamil Nadu.

Reasons for tragedy and its possible impacts

Through the systematic review and meta-analysis of all the online sources of information, we have discovered some of the main grounds and influence of these tragedies, which are as follows:

1. LG Polymer:

The events unfolding in Vizag as we speak and the mounting numbers of those who have departed and have been hospitalized have brought back to life the spectre of the Bhopal Gas Tragedy. So, what exactly happened? Roughly 3 tonnes of poisonous gas leaked at around 2.30 AM on May 7 2020 from a Vizag (in the state of Andhra Pradesh in India)-based factory called LG Polymers India Pvt Ltd. The gas that leaked from the plant was styrene, a colorless, organic, and hazardous chemical which is used to manufacture polystyrene; the marshmallow-like material used to make foamed products like disposable single-use drinking cups and fast-food containers. What's more deadly is when styrene reacts with air: upon reacting with oxygen it turns into monoxides and dioxides that are far more lethal than derivative of benzene, a well-established cancer-causing chemical. What are the effects to its exposure? The effects of styrene exposure depends on the parts per million (ppm) present in air and duration of exposure. Sunita Narain, Director General at the Centre for Science and Environment, said " If styrene level goes beyond 800 ppm then the person can go into a coma". Short-term exposure to styrene results in eye irritation and gastrointestinal effects and long-term exposure results in impacts on the central nervous system, leading to headaches, fatigue, weakness, depression, dysfunction of the central nervous system and hearing loss. Samples of water from the water bodies surrounding the plant have been collected and only the results will give us an understanding of true devastation of leak on the



overall environment in the surroundings. Adding to that, people with Covid-19 infection are at a greater risk because of the inflammatory effects of styrene on the lungs.

The questions that need to be answered immediately are: How much of the toxin escaped into the environment? Are there other toxins that are also released? What is the area of spread of the gas? Did the toxin seep into the soil and water? And how many people were at risk of exposure to this toxic gas?

Who is liable for this? The LG Polymers, a unit of South Korea's biggest petrochemical maker LG Chem was established in 1961, originally as Hindustan polymer and it was later merged with MC Dowell and Co of the UB group in 1978, then it was taken over in 1978 by South Korea based company LG Chem, which renamed it as LG Polymers. LG Polymers has operated between the period 1997 and 2019 without the requisite environment clearance and the company, in its affidavit, stated that it had expanded production beyond the limit of environmental clearance without obtaining prior environmental clearance as mandated under the Environment Impact Assessment (EIA) Notification, 2006. Environmental clearance is the process that involves the assessment of a project on the environment and people around it. To its defence the company stated that it has received two permits from the state, one to start a new business and another to run it. Why the state kept issuing and renewing the plant's permits despite not having the federal environmental clearance is the question that can only be answered by the A.P. Pollution Control Board (APPCB). It is to be noted that LG Polymers being a category A project, has to obtain clearance from the centre and not from the APPCB. While the state permits only look for pollution, the federal clearance looks at how hazardous materials are being handled and stored, what plans are there to prevent and deal with disasters. The example from Vizag shows us how casually certain industries treat the environmental guidelines and violate norms and how the government, state agencies and the civic body have been turning a blind-eye to these irregularities, resulting in such major disasters. To further worsen this, the Ministry of Environment, Forests and Climate Change (MoEFCC) has put out the draft EIA 2020 that further dilutes the EIA 2006, specifically the clause concerning reporting of environmental violations only by the project proponent or the regulatory authority. This allows companies like LG Polymers to continue to operate and leaves scope of not reporting violations that possibly resulted in an accident like this one, very well knowing they can get away by paying some fine and regularise the violations via ex post facto clearance mechanism.



2. Shakti Paper mills:

The paper mill industry has released a poisonous gas while cleaning work in the plant was going on. Victims involved seven labourers who were cleaning an open tank (recycling chamber) filled with paper waste. All seven labourers were rushed to hospital where three of them were declared to be in critical condition. All this happened when work was going on to resume operations of the [Shakti pulp and papers Limited](#), which was closed ever since the lockdown was declared in India (24th March). Shakti paper mill is located in Tetla village of Raigarh which is about 250 km from Raipur (capital city of Chattisgarh).

According to MK Shrivastav, who is a Deputy Director of the Industrial Health and Safety department in Raigarh, workers had no safety equipment to wear and cleaning of the chamber was processed without any expert's supervision. According to a [case study](#), non-condensable, malodorous and toxic gases like methyl mercaptan, dimethyl sulphide, dimethyl disulphide and methanol are generally released by big paper mills in India. WHO has [reported](#) that the release of hydrogen sulphide due to accident or improper disposal of materials resulting from processes like kraft pulp and paper manufacturing, is lethal for the plant workers as well as residents in that area. This report has also mentioned that single exposure to Hydrogen Sulphide has majorly affected respiratory and nervous systems during toxicity studies on laboratory mammals.

Shakti paper mill was incorporated in 2004, and it is a category B project, but no EC and ToR are available for this plant on the PARIVESH website of MoEF&CC. This incident has not only affected the lives of workers, but it has also generated fear and anxiety among 60 poor families living nearby to the Shakti paper mill. However, the factory owner did not consider it as his bounded duty to tell the administration about this incident until the hospital authorities took the initiative to inform the police. Now, the mill management is under the legal custody of police administration and a team of forensics is doing further investigations about the cause of this incident.

3. Neyveli Thermal Station II:

Boiler explosion in the sixth unit of NLC Thermal Power Station (TPS) phase II led to a fire in which two regular and six contract employees were injured, of which two [later](#) died and one is in critical condition. Of the seven units in NLC TPS - II with a combined installed capacity of 1,470 MW (210 MW x 7 units), only 450 MW was being generated as on the date of the accident. Of the adjacent units, unit IV was under annual maintenance and units V and VII tripped due to the fire accident in unit VI. The company has set up a committee to probe the accident under the leadership of Mr. A S Bakshi, retired chairman of Central Electricity Authority (CEA).



Compensation of Rs. 15,00,000 each to the family and regular job in the company to the kin of the deceased has been promised. Apart from this, senior management of the company has pledged to contribute a day's salary to the family of the deceased, while the company has said it will bear all medical costs for the treatment of the injured.

Earlier, the company was [found](#) not to comply with the conditions given in environment clearance, like not - setting up of continuous air monitoring stations, submitting workable fly ash utilisation plan, half-yearly environmental compliance reports, and approval letter for groundwater withdrawal and use for power plant. These conditions were met after a delay and no penalty was charged for this delay, due to lack of such provision under the EIA 2006 notification. Draft EIA 2020 aims to further dilute provisions of even noting such delays or violations by the project proponents.

What if these tragedies are actually showing a red card to Draft EIA 2020?

The news of these three tragedies come at a time when companies are aggressively lobbying with the governments in the name of COVID-19 pandemic to relax regulations and to grant legal immunity for disasters their companies could cause. The Union Ministry of Environment, Forest and Climate Change (MoEF&CC) is granting these companies' wishes with its latest draft on EIA. Lax regimes could become a haven for hazardous industries. The three tragedies also highlight that for any industry, it is most important to have a comprehensive approach to regulating, monitoring, and enforcing strict safety codes, even during a pandemic.

Covid-19 is a very challenging period for people of India, especially for poorer communities of the country. Nevertheless, MoEF&CC is interested in asking for online public comments for the draft EIA 2020 notification and giving clearances to industrial proposals through video conference, which is a tip of the iceberg for the problems to come.

The significance of these three incidents lies in the fact that it has revealed the level of inadequacy and non-compliance of the existing [EIA notification of 2006](#), at a time when MoEF&CC has come up with a [draft EIA notification of 2020](#) which instead of addressing the fallacies to existing notification further dilutes and degrades its provisions. The draft EIA 2020 proposes to give a free hand to industries to go ahead with their projects without getting EC (Environmental Clearance), they may obtain it later by paying a petty amount as fine. The draft also weakens the process of Public Consultation which is mandatory for almost all projects that require EC as per the current provisions of EIA 2006. Along with assessing the environmental impacts of any project in its surroundings, the public consultation also gives an opportunity to the people living in the vicinity of these projects to participate in the



decision making. As per the draft EIA 2020, projects of various industries have been excluded from the process of public consultation including various hazardous industries which produce soda ash, chemical fertilizer, acid, pesticides, fiber, petroleum and petrochemicals, dyes, synthetic rubber, Paint, biomedical waste treatment plants etc. Further, draft EIA 2020 weakens the process of monitoring of projects with regard to their environmental compliance after they receive EC. The worst part is, it proposes for the public to rely on self-certification by industries on their compliance with environmental laws.

By enacting the draft EIA Notification of 2020, the MoEF&CC, encourage and make way for polluting industries to defend themselves, knowing well that even if they violate the environmental laws of India, they will get protection due to widened loopholes in this draft. For instance, Draft EIA 2020 is allowing post-facto clearance to projects, considering only self-declaration of violation by project proponent and permits categorisation of some projects as 'strategic' by the central government to hide them from public domain. Such dilutions in the environment clearance procedures is extremely dangerous as it will lead to a spree of such cases across India in which lakhs of innocent common people will lose their lives. In light of the current tragedies, if the proposed amendments in Draft EIA 2020 are enacted, it will make a perfect recipe for the next big environmental and public health disaster in India.

Do victims ever get any justice?

The *prima facie* of these accidents reflects that the Environment and Health Safety (EHS), Pre Safety Startup Review (PSSRI) and Management of Change (MOC) protocols have been violated by the factory administration. For the good health of local residents in the industrial area where there is a constant release of pollutants and chances of occurrence of such life-threatening accidents, as well as, to enhance safety for factory workers, we need to strengthen the EC procedure. Until the public raise their voices against issues like inadequacies in policies, breach of environmental laws, and delayed environmental justice, unfortunately our government bodies do not take responsibility to decommission life threatening old industries or replace old technologies with more efficient ones. Our current policies and laws ignore ecological concerns, suppress public participation in decision making and are governed by profit-making rather than inclusive growth and the proposed ones look at diluting the laws even further.

As a way forward, in addition to the immediate treatment to understand the possible medium and long-term impacts on those living in the immediate vicinity of the leak, all industries should continuously be monitored for safe operation. Comprehensive studies must be undertaken to identify the population that are potentially exposed to risk of industrial accidents, and if any industry is found to



violate industrial and environmental laws, immediate, stringent action should be initiated according to appropriate laws and the industry should be shut down until proper remedial actions are taken to correct the irregularities, and complete justice is meted out to the industrial workers and local communities that are affected by the violations.