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Diversity, Child Protection, Forced Labour and Modern Slavery: Making Progress with a Global Ally

Emily Hough

The second Bhopal disaster

The second Bhopal disaster occurred on 3 December 1984, the day after the first disaster. It was caused by the release of gas from a storage tank in the Union Carbide plant in Bhopal, India. The disaster killed an estimated 2,240 people and injured an estimated 110,000. The gas release was triggered by a series of accidents that led to the failure of the gas supply system. The gas was released into the air and caused a massive explosion, which destroyed the storage tank and surrounding buildings.

The disaster had a profound impact on the residents of Bhopal. Many people were left without shelter, food, or medical care. The air was filled with toxic gas, and thousands of people were hospitalized for respiratory problems. The disaster also had long-term effects on the environment, as the gas contaminated the water supply and soil. Today, the Bhopal disaster is remembered as one of the worst industrial accidents in history.

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Children on the frontline p8

Space threats p52

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Crisis and public order

Crisis has featured several articles on the UN World Conference, Civil Defence in the last two issues, but speaking to its volunteers face to face at that height of standing ground, and listening to the descriptions of their lives and the horrendous conditions they confront on a daily basis, was beyond humbling (p22). Not far from where we were taking thousands of refugees were massing at the border, desperate to escape the twin threats of ISIS and the Al-Assad regime. Our cover story (p18) deals with the odious problem of exploitation and forced criminality at their entry, possibilities for the future. This year has been characterised by tragedies in the Mediterranean, with dozens of overloaded migrant boats sinking or needing rescue. Meanwhile, the town of Calais in France struggles to cope with its overnight swelling influx of people taking unthinkably risky to try to reach the UK. Thousands of unaccompanied children fleeing violence in South American countries have been making their way into the US. These are just a few examples drawn from a global pool of misery. So, what is the common narrative that links these issues?

Exploitation and crime invariably stalk vulnerable people and communities. There is no shortage of criminals waiting to take advantage of the desperate, the dispossessed, those who have fled with nothing, or who have lost everything, people already on the limits of human endurance. Slavery, child soldiers, bonded labour, sexual exploitation, forced begging — some of these crimes are more overt than others — much of this activity goes unnoticed by most people in their daily lives. But aside from the unspeakable damage to the individuals involved, these crimes also have the potential to harm society, business and resilience in general.

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Meanwhile, the town of Calais in France struggles to cope with its overnight swelling influx of people taking unthinkably risky to try to reach the UK. Thousands of unaccompanied children fleeing violence in South American countries have been making their way into the US. These are just a few examples drawn from a global pool of misery. So, what is the common narrative that links these issues?

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10:2

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The second Bhopal disaster

In our Looking Back feature last issue, we recalled the Bhopal disaster and touched upon the incident’s deadly legacy. Here, Colin Toogood describes how chemicals leaching into the aquifer are causing further and prolonged misery for nearby communities.

Although the official toll from the cloud of methyl isocyanate that was released on the Union Carbide plant over Bhopal on December 2–3, 1984, is put at 2,259, many credible sources, including Amnesty International, estimate that 10,000 people died within the first three days. A further 15,000 have since succumbed to their injuries and another 150,000 remain chronically sick. Union Carbide has never apologised and only paid meagre compensation to settle a civil suit. More importantly, it has not cleaned up the toxic aftermath.

But today in Bhopal a second chronic disaster is ongoing, one which began before the 1984 incident. In fact, the “Second Disaster” significantly predates it and would have trumped with or without the events of December 1984. Union Carbide manufactured three different kinds of pesticides in Bhopal: Carbatyl (trade name Sevitol), Aldicarb (trade name Temik), and a formulation of Carbaryl and gamma-hexachlorocyclohexane (γ-HCH) sold under the trade name Sevin. Carbatyl and Aldicarb fell under the carbamate group of insecticides and are persistent, highly toxic, highly water soluble and mobile in soils. Sevin was extracted from technical grade γ-HCH, is a mix of several HCH isomers and is a highly persistent and toxic organochlorine (Union Carbide extracted the γ-HCH and dumped the remaining isomers as waste).

Heavy metals were in abundance and mercury was used as a solvent in the Sevin plant, while chromium was used as a coolant in the Union Carbide Ltd (UCL) factory’s cooling plant. In a 1999 affidavit, an ex-factory worker related how, between 1969 and 1984, huge quantities of pesticides, solvents, catalysts, by-products and other toxic waste were routinely dumped into and around the site. Thousands of tonnes were left in unlined pits on the factory site itself and, later, put into enormous solar evaporation ponds (SEPs) a few hundred metres north. In May 1972, engineers at Union Carbide’s Technical Centre in West Virginia were asked to design three enormous SEPs into which toxic waste would be pumped. But when they began to examine the specifications and the site report they expressed concern.

The engineers warned that the proposed design risked the: “Danger of polluting subsurface water supplies in the Bhopal area… New ponds will have to be constructed at one to two year intervals throughout the life of the project.” Only three ponds were ever built.

Efluent

In 1977 the SEPs were constructed and, it is alleged, were specified down to a low cost solution. The minutes of a meeting between the plant managers and the building contractors reveal that: “UCL emphasised the need for reduction for (sic) cost of the pond as much as possible… certain sewage effluent can be accepted.” Thus, these vast lakes, intended to hold enormous quantities of dangerous toxic waste, were constructed with filmy liners.

With every monsoon, rain had already been leaching through the toxic waste buried on the factory site but now these SEPs became overfilling lakes, spewing toxins into the surrounding soil while, over the years, their liners began to fail. A March 1982 telex, from Union Carbide’s Technical Centre in Connecticut, revealed that: “Evaporation pond areas where wastes had been mixed with fresh water. Every sample was found to be highly contaminated and all of the fish died instantly as they were added to the water.”

Despite sloshing surroundings the factory site and residents are likely to have been slowly poisoned since before the 1986 tests. The chemicals involved attack the body’s organs, are carcinogenic, and cause birth defects. People remained largely in the dark about this ongoing disaster until 1999 when Greenpeace ran an extensive series of tests and declared the defunct factory site is “Global toxic hotspot.”

The fact of Bhopal’s second disaster is that innocent people, mostly living in extreme poverty, have found themselves poisoned not once, but twice. In total, the survey conducted by Greenpeace International has demonstrated substantial and, in some locations, severe contamination of land and drinking water supplies with heavy metals and persistent organic contaminants both within and surrounding the former UCIL pesticide formulation plant. There is an urgent need for a more detailed and extensive survey if the full extent of ongoing contamination from the plant is to be determined.”

“While it may be appropriate to insert physical barriers to prevent further migration of contaminants into the aquifer, this alone will not be sufficient. Water should be pumped from the wells and treated.”

In 2009, a round of tests performed by Delhi-based Centre for Science and Environment (CSE) showed the greatest pesticide contamination (in ground water sampled at Shi Naga) was at a distance of 3.4km (2.1 miles) to the North East of the UCL site.

“People remain largely in the dark about this ongoing disaster until 1999 when Greenpeace ran an extensive series of tests and declared the defunct factory site is ‘Global toxic hotspot’. The fact of Bhopal’s second disaster is that innocent people, mostly living in extreme poverty, have found themselves poisoned not once, but twice.”

“The sample collected from the hand pump near Chaurasia Samay Mandir in Shi Naga was the most contaminated. It had the highest concentration of carbaryl (0.011 ppm or 110 times the standard), lindane (0.004 ppm or 40 times the standard) and mercury (0.012 ppm; 24 times the standard).”

Further tests, any greater distance away from the factory site, are yet to be performed. In August 2000 a campaign for safe water to be supplied to the affected communities began and by September the local government, the Bhopal Municipal Corporation (BMC), had installed six 10,000 litre tanks to be filled, daily, by tanker truck, in one of the closest and apparently worst-affected areas. By 2011 the campaign for safe water supplies had been petitioned the Supreme Court which, in turn, ordered the state government to supply safe water to the affected areas. By August that year, Bhopal’s Gas Relief Minister announced that all affected areas would receive clean drinking water within three months, but this did not materialise. In 2009, a group of over 4000 people walked from Bhopal to Delhi to present a list of demands to the Prime Minister but they were given no real commitment to the plan that had endured a beating from the police, savage enough to hospitalise some of the group, including elderly women, and others who had put their lives at risk with...
In the absence of any official response, these survivor groups have undertaken a major epidemiological study of their own and the results are expected within months of the 30th anniversary of the gas disaster this December.

By 2009, the Bhopal Municipal Corporation (BMC), under constant pressure from the campaign, had installed a rudimentary piping system to augment the tankers and help get safe, if not clean, water into the communities.

But, a report published by the Bhopal Medical Appeal, including a detailed survey carried out on the water supply, explains that: “The clean drinking water supply system, installed by the BMC, does not supply sufficient drinking water and that many of the residents, in the areas surveyed, must resort to drinking the toxic groundwater to meet their needs. The water supply system, where it has been installed, is in poor shape.”

In 2010, after the conviction of UCIL on criminal charges, for its part in the 1984 disaster, the Government of India was anxious to be seen to act. It assembled a “Group of Ministers” (GoM) to examine various legacy issues – not least that of the contaminated water and the GoM-commissioned reports from the National Environmental Engineering Institute Research (NEERI) and National Geophysical Research Institute (NGRI).

A group of experts was requested, by Bhopal survivor organisations, to comment on their behalf during a period of consultation with an oversight committee chaired by the Indian Environment and Forests Minister.

They concluded that the NEERI report failed to produce an accurate site model, accounting for concerns over the spread of contaminants, and based conclusions on incomplete and/or inaccurate hydrogeological information and that, furthermore, the NGRI report did not support certain hypothesis put forward by NEERI.

“The sampling programme employed by NEERI, was not systematic and was limited in scope. Evidence has accumulated to show that contamination issues related to UCIL are still prevalent and that this is a direct cause of morbidity in the local community. The NEERI and NGRI investigations have not sufficiently accounted for the fate of the contaminants identified in their own desk study and by other investigators.”

In the years since this activity, sporadic testing has revealed further communities to be affected by the contaminated water, but a full contamination survey, performed to acceptable, international standards has not been carried out.

Affected communities

Since August this year, 22 affected communities have been getting water through pipelines. However, many communities north of the factory still consume poisonous groundwater as they have no access to pipeline water,” said Satinath Sarangi of Bhopal Group for Information and Action.

The 22 communities receiving a piped supply are those now officially acknowledged as affected by the contaminated groundwater; but the unfortunate truth is that nobody knows how far the contamination has spread in to the aquifer and, thus, how many communities are actually affected.

This information – and the true figure of how many people are still being poisoned in Bhopal’s second disaster – will not be known until a full contamination survey is performed.

Author

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