Bhopal: One Year On

The tragic disaster at Bhopal last year raised some important questions about the role of transnational corporations in developing countries. While Union Carbide has attempted to cover up their responsibility, the local unions have launched a number of initiatives in association with the communities affected.

It is now one year since the industrial disaster at the Union Carbide pesticide plant in Bhopal, India, where, on the night of December 2/3, methyl isocyanate (MIC) gas erupted into the atmosphere, leaving thousands dead and countless others affected in numerous ways. Reports ranging from 1,500 to 2,500 deaths filled the newspapers, but by April this year, the union at the factory had estimated at least 8,000 deaths, and still rising.

What happened at Union Carbide's Bhopal factory?

Union Carbide have claimed that safety standards at Bhopal were the same as those in the US. This is untrue. The US plant has a computerised system which would detect even small rises in temperature or pressure. In their French and West German plants, effective safety back-up systems stop leaks. At Bhopal, however, there was no plant-wide warning system, no means of rapidly cooling the tanks, and none of the safety devices actually worked. (In any event, an accident at Carbide’s plant at Institute, West Virginia, which also manufactures MIC, further shattered Carbide’s credibility. One hundred and thirty-five people required medical attention after toxic gas leaked from the plant. Carbide have blamed this on “employee error”.)

Workers at Bhopal were not aware of the precautions to take in the event of a leak. For example, they were not advised to keep still to reduce hyperventilation and, therefore, intake of gas, or to wrap wet cloths around their nose and mouth to help neutralise the gas.

The diagram below shows each step in the “fail safe” safety system, which resulted in the escape of MIC gas into the surrounding area.

![Diagram of the fail-safe failure system](image-url)
MIC should not have been stored unless at least two of the fail-safe devices were working. If the refrigeration unit, scrubber and flare tower had been operating, 40 percent of the stored MIC would not have escaped. Water sprinklers intended to neutralise any toxic gas leakage were not capable of reaching the height at which the leak occurred. There was no gas detection system on site; operators were told to "use their noses" as detectors!

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Union Carbide's cost-cutting drive — profit before safety

As well as the deficiencies in the fail-safe devices, the Union Carbide plant at Bhopal has had a long history of malfunction. A gradual and sustained erosion of good maintenance practices had occurred, including:
- neglect of safety standards
- a decline in the quality of technical training of plant workers, especially supervisory staff
- a depletion in the supply of vital spare parts
- the implementation of an indiscriminate economy drive which starved the plant of capital replacement and produced general staff demoralisation
- the depletion in the number of experienced engineers and operators from the plant
- increased understaffing of important work stations in many areas.

Most of these practices can be traced back to the period 1981-82, when a new, large-scale project at Carbide's MIC factories resulted in failure, delivering a blow to expansion plans. This failure, coupled with a sagging market for Union Carbide's two pesticide products, Sevin and Sevinol, formed the basis for the ensuing rundown of the Bhopal plant.

The failure of the project, as well as driving away any hopes for profitable expansion at Bhopal, also brought about the onset of demoralisation among workers. It triggered the economy drive, whereby routine operations were increasingly sacrificed.

Union Carbide has, however, continually neglected many aspects of the plant's wellbeing over the seven years of its operations. Only one safety audit had been carried out during that period. The check, in 1982, exposed widespread hazardous conditions. However, the cost-cutting drive had increased since then.

The disaster was not the first accident with casualty at Bhopal.
- In October 1982, MIC escaped, seriously affecting four workers, and several people living nearby experienced burning eyes and breathing trouble.
- Two similar incidents were reported in 1983.
- In January 1984, a worker died of a "chemical allergy".

The drop in staff levels included a reduction of 25 percent in trained engineers with diplomas or science degrees. Operator strength was cut to one half of the original levels in many areas. In 1983, operators on three rotating shifts were reduced from eleven to six; maintenance staff was also drastically chopped. This resulted in workers not being able to fulfil completely the necessary tasks.

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Union Carbide has consistently shifted the blame for the failure of the safety devices onto Indian management, claiming that the report from the 1982 audit was passed to them. They say there have been no managers in India for years and that, therefore, the Indians must accept responsibility for the failure. However, as the parent company, Carbide holds over 50 percent of the shares of the Indian branch, retaining the power to bend the Indian management to its will. Union Carbide attached far more importance to production and profits than to maintenance and safety. Bud Holman, Carbide's lawyer, has even claimed that the Bhopal plant may have been sabotaged, possibly by Sikh terrorists!
Methyl Isocyanate (MIC) — its effects

As well as immediate deaths, many thousands more suffered and still suffer the consequences of exposure to MIC. Deaths are still occurring and the long-term effects on humans and the environment are not yet known.

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There is a range of health risks associated with exposure to MIC, including:
- Irritation of the lungs, coughing, shortness of breath and tightness in the chest. Some people become allergic and experience severe asthma attacks from exposure to a small amount. Massive exposure to MIC causes severe irritation of the lung tissue, leading to fluid on the lungs and severe asthma-type illness. Many deaths at Bhopal were caused by "drowning".
- Dermatitis, irritation of the eyes and peeling off of the front layer of the eye cells (corneal ulceration), which has led to scarring and blindness. Some people have regained their sight, but others are still blind and will remain so.
- Massive exposure can lead to brain damage, kidney and liver complaints due to lack of oxygen from the lungs.
- There is evidence that isocyanates are potential carcinogens.
- Long-term exposure can lead to headaches and nausea, as well as asthma.

Many people have experienced these symptoms but the long-term implications are unknown. As well, the number of birth problems and defects, such as miscarriages and stillbirths, has been recorded in women victims of the MIC leak.

Worker and Community response at Bhopal

Prior to the disaster, the workers had not been silent about the worsening situation at the plant, especially in regard to the cost-cutting measures which violated operating procedures. When workers protested, however, they were threatened with pay cuts and charge sheets. Their demands for the implementation of the safety procedures outlined in the 1982 report were unsuccessful.

Since the disaster, the factory union has acted strongly in regard to the closure notice issued by Union Carbide, believing that this would allow Carbide to get out of the situation with a minimum of loss and embarrassment to themselves. The union's plan for alternative production of non-hazardous, cheap and useful products includes production of nutritional soya bean products (milk, oil, biscuits), respirators for lung damage, and safety and pollution control equipment to help prevent future disasters elsewhere.

They have pointed to Union Carbide as having caused the disaster, and the Indian government for having allowed it to happen, and have demanded compensation from Carbide to help begin alternative production."
Carbide to help begin alternative production. This includes a lump sum payment and the premises, as well as payment of wages until the settlement is reached. The government has been asked for technical assistance and help with marketing, as well as financial support for welfare services in the form of community kitchens, creches, nutrition schemes and community health schemes.

Although the Bhopal disaster has taken an enormous toll on the lives of the people working in and living around the plant, the workers have seen a great deal of positive activity stemming from it. Perhaps the best way to sum this up is by looking at a statement released by the Centre for Relief and Production:

_The Bhopal MIC disaster began in tragedy but it need not end in tragedy. Even today, there are many positive features in the situation — for example, the way in which people of all communities are helping one another and working hand-in-hand to build a better future. With communal violence and bloodshed going on all around us, we feel this is something to be proud of. We, workers and gas victims, are united._

**Lessons from Bhopal**

The incident raises a number of questions regarding the use of technology and its long-term consequences. Firstly, there is the link between technology and (supposed) development. Lawrence Surendra of the Asian Regional Exchange for New Alternative states:

_The blind belief in technology and the unholy haste on the part of decision makers in developing countries to 'modernise' their countries leads to the importation of quite often useless and obsolete technology. This was the case of the Union Carbide pesticide plant at Bhopal.... The people of Bhopal have of course paid very dearly and will perhaps suffer the consequences for a long time to come._

Secondly, it is obvious that transnational corporations (TNCs) have different attitudes towards their use of technology in developing countries and, more particularly, their use and codes of conduct in rich and poor countries. TNCs all over the world are shifting ecologically harmful forms of production which pollute the environment to third world countries. They plunder resources from developing countries without giving any thought to environmental and conservation issues. This, of course, is partly due to the strength of unions and environment movements in countries like the US, UK and Australia. Companies move to the third world to escape environmental restrictions in much the same way that they move to escape hard fought for wages and conditions.

Thirdly, knowledge about the health effects of chemicals and machinery used in factories is rarely disseminated among workers (and not only in the third world). Workers are, therefore, generally unable to formulate safety demands for their use and are easily out-manoeuvred by the companies when accidents, large- and small-scale, occur. Communities often do not link specific health problems to the pollution from factories close by.

These trends involving TNCs world-wide force us to question our strategies for dealing with them. The workers at Union Carbide have clearly developed an orientation which has both short-term and long-term benefits for practical relief and political development. However, it is necessary for unions and community organisations to form international solidarity links to exchange information and resources on common issues (car workers, for example, often hold international trade union conferences among specific companies, such as Ford, discussing common problems and international organisation).

Although Australia has been sadly (and embarrassingly) lacking in its solidarity with the Bhopal workers, other international actions have taken place, providing support in terms of publicity, fundraising, and moral support for the people of Bhopal, and have ensured that the issue of the disaster has remained on the international political agenda.

**Footnote**


**Further reading:**

A large number of reports, letters, books and pamphlets from India and other parts of Asia are available in photocopy form for those interested in further reading on Bhopal. For information, write, enclosing a stamped addressed envelope, to Sheril Berkovitch, PO Box 334, Fitzroy, Victoria 3065.

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