

Cloud of controversy

20 Dec 2004



The abandoned factory (centre) and the residential area surrounding it.

www.studentsforbhopal.org

Twenty years have passed since one of the greatest industrial tragedies of all time took place at the Union Carbide factory in Bhopal, India. The anniversary has stirred up fresh controversy over what originally happened, its continuing effects and who is responsible. For A-level geographers, Bhopal rightly serves as an important touchstone for all kinds of social, environmental and ethical issues tied up with economic development and globalisation.

On December 2 1984, a deadly cloud of poisonous gas was emitted from the pesticide plant owned by the American Transnational Corporation (TNC) Union Carbide. The lethal plume of methyl isocyanate (MIC) was a by-product of the pesticide manufacturing process. Within hours, thousands of Indians living close to the plant in Bhopal had died, while tens of thousands more began complaining of blindness, skin complaints and breathing difficulties. At least 3,000 people died on the night of the gas leak, while hundreds of thousands more fled Bhopal – a *forced migration*. Many of these migrants may have died shortly afterwards, leading Amnesty International to suggest that the true immediate death toll on the night was nearer 7,000.

This was not the end of the story. Twenty years on, some sources claim that at least one person still dies every day as part of the long-term harm done by the gas. According to campaigners, this brings the death toll closer to 20,000 people, with the numbers still growing (*The Guardian*, 29 November 2004). As many as half a million more may suffer from a range of minor and major illnesses related to the incident, with Bhopal authorities reporting:

- a miscarriage rate seven times the national average
- above-average incidence of respiratory illnesses
- above-average cancer rates - Bhopal has one of the highest lung cancer rates in men, while women show very high rates of breast and cervical cancer

Furthermore, children born in the aftermath of the incident often show signs of stunted growth. For instance, *The Guardian* (29 November 2004) tells the story of Deepika, who was born days after the disaster and still weighs just 33kg (73lb) and is a little more than 1.3 metres (4ft 6in) tall. Her family blames the escaped gas for this. Similar cases can be found throughout Bhopal, where at estimated half a million people were exposed to the toxic fumes.



Piles of Sevin, a pesticide, lie rotting at Union Carbide's abandoned plant in Bhopal. Here, the Sevin has corroded through its tank and now festers in the open air.

www.studentsforbhopal.org ©Tracey Easthope

Was this an inevitable consequence of rapid economic development?

Four key safety measures failed that night, including the plant's cooling system and its flare tower, which should have burned off the gas before it fell to earth. Could this have happened at a Union Carbide plant 'at home' in the US? Or was less attention paid to safety in Bhopal due to **(1)** the relative

lack of government legislation in India and **(2)** lack of care by Union Carbide compared to the running of its US factories?

As GCSE and A-level geography students will appreciate, the lack of 'red tape' in LEDCs and Newly Industrialised Countries is supposedly attractive to Transnational Corporations looking to cut their production costs. In comparison, successive rounds of new legislation for EU member states leave employers with very high operational costs. In the UK, firms must, by law, show a high level of respect for:

- *workers' rights* (honouring Minimum Wage requirements while frequently facing confrontation with Trade Unions)
- *health and safety* in the workplace (raising costs for plant construction and protective clothing)
- *environment* (the Environment Agency carefully monitors industrial impacts upon UK water quality, for instance)

No wonder LEDCs are an attractive prospect! For all of these reasons, poorly-regulated economic development is sometimes portrayed as, at best, a 'mixed blessing' and, at worst, a 'poison chalice' by its critics. The price paid for reaching economic *take-off* is often a high one when measured in terms of both its immediate social impacts and longer-term environmental concerns.

So was Union Carbide actually to blame? For the gas to have escaped, *four* key safety measures must have failed on the night of December 2nd. Was the firm perhaps more negligent than in running its branches 'at home' in the US? Apparently, it had been slowly running the Bhopal plant down, as profits from the pesticides produced there were turning out to be much lower than expected. Were Union Carbide becoming negligent as profits fell? Critics say that they were. The company, however, maintains that the disaster was due to sabotage.

Negative externalities and corporate auditing

(1) Some A-level specification prefer candidates to use the term 'externalities' to describe the range of **benefits** and **costs** generated by economic activity and economic development. These are consequences or costs that are not fully accounted for in the price-and-market system of economics and need to be accounted for separately. Pollution is a prime example of a **negative** externality and the seriousness of the Bhopal incident has made it a widely-used case study. Other types of externality include social impacts. Certain types of economic activity – such as a new landfill site for refuse – can lower house prices in an area, leading to social changes as more affluent families move away, changing the population structure of surrounding areas.

(2) Public concern over the externalities of large corporations has led to a new trend in recent years – the production of environmental and social **audits**. This is (usually) an annual publication that documents the environmental impact that a firm estimates its activities have generated, set against a statement of its good works – such as recycling or waste management. An excellent web site documenting the rise of these publications can be found at www.corporateregister.com.

What has happened in Bhopal since 1984?

Union Carbide have accepted some limited responsibility for what happened in Bhopal. In 1989, five years after the incident, they built a local hospital and paid a lump sum of \$470m in an out-of-court settlement with the Indian government. This saw 99% of victims receive about £300 in compensation and they should receive a second similar payment in the coming months. Although £300 can buy a lot more in India than in the US, it is still a small amount to cover a lifetime loss of earnings and medical bills for the worst-affected blind survivors. Would pay-outs have been higher if the leak had occurred at

a US plant and had harmed American citizens? Campaigners believe so and say that their fight for greater compensation is not yet over.



One of the several warehouses on the factory grounds, filled with Sevin and leaching more each year with the monsoon rains. www.studentsforbhopal.org @Tracey Easthope

However, the situation has become complicated by the fact that Union Carbide has merged with Dow, a giant TNC who claim that they cannot now be held responsible for what happened in Bhopal prior to the take-over. In particular, *Dow are denying responsibility for cleaning up the site in Bhopal which is still heavily polluted.* When Union Carbide finally abandoned the plant in 1999, it left behind dangerous amounts of toxic chemicals that that have infiltrated into the soil and contaminated groundwater supplies. Tests in nearby Bhopal slums have found levels of contamination in well supplies that are 500 times higher than the maximum recommended by the World Health Organisation! Could this be another legacy of Union Carbide? Campaigners believe so and point, once again, to behaviour that they believe would not be tolerated had all of this taken place within an MEDC, where 'polluter pays' legislation is much more easily enforced!

Footnote: A Bhopal court will soon judge whether Dow can still be held responsible for the Bhopal plant. If the judge rules against the company, Dow's Indian assets could be seized.

Writing about economic development at A-level

A-level Specifications require candidates to be able to sensibly debate the advantages and disadvantages of large-scale economic development for LEDCs. Within this much wider general context, the tragedy of Bhopal needs to be weighed realistically against the benefits that poorer countries have sometimes received from foreign investment. Infant mortality rates have plummeted in countries such as India and South Korea over recent decades as medical care has improved, paid for by rapid economic growth. The role of inward investment from foreign capital plays an important role here, often initially attracted by lower wages and less restrictive health, safety and labour laws. If greater controls are introduced by LEDC governments, driving up business operational costs, then TNCs may adopt a 'hit and run' strategy and move elsewhere. This then jeopardises long-term chances for growth in the countries that are attempting to introduce the controls.

But what happened in Bhopal was horrific, and should not be allowed to happen again: when MIC is inhaled, it produces an extremely acidic reaction, which attacks the internal organs, especially the lungs. This stops oxygen entering the blood, and victims suffocate. Faced with this kind of horror, the pros and cons of rapid, poorly-regulated economic development clearly need to be very carefully evaluated and sensitively debated. Tragedies such as Bhopal are very negative aspects of a much broader set of historical changes, not all of which are bad in the long-term. And just how common are they? Are they everyday occurrences, or more occasional incidents, linked with highly unusual sets of circumstances or perhaps with just one or two 'rogue' operators?

A-level examiners hope that A-level students will, more than anything, appreciate that there is no easy answer to the seemingly simple question 'is economic development a good thing?'

