



Dow Chemical

Overview

Dow Chemical is responsible for producing some of the most infamous chemicals, from Agent Orange and napalm for use in the Vietnam War, to ozone-depleting chlorofluorocarbons (CFCs) and the widely used insecticide Dursban. Dow has a history of unethical behavior, including testing its chemicals on humans and withholding information from the U.S. Environmental Protection Agency (EPA). Union Carbide, acquired by Dow in 1999, owned the chemical plant in Bhopal, India that released methyl isocyanate and other chemicals, causing one of the worst environmental disasters in history in 1984. World Bank guidelines for private sector partnerships¹ indicate that a company with a such a poor record of corporate social responsibility should not be eligible for a partnership with the Bank.

Damaging developing countries

Pesticide causes infertility

Dow and three other companies continued to produce and export the extremely hazardous pesticide DBCP to developing countries after it was banned in the continental U.S. in 1979. The U.S. ban occurred after DBCP, one of Pesticide Action Network's Dirty Dozen pesticides, was linked to human sterility in California.

- **Information concealed.** The companies knew at least since the 1960s that the product caused male sterility in rats, but concealed this information.² They also neglected to report findings of reduced sperm and atrophied testicles of rabbits and monkeys when they submitted information for registration and labeling.³ When DBCP was first marketed in developing countries, it had no labels warning that it was extremely toxic and no instructions on the use of safety equipment.
- **Workers sterilized.** Widespread use of DBCP on banana plantations around the world has caused the permanent sterility of thousands of workers. One study found that approximately 20-25% of the male working population in banana plantations on Costa Rica's Atlantic coast, where workers had mixed DBCP by hand, were sterilized.⁴ In a 1997 out-of-court settlement, the four companies that produce the chemical agreed to pay US\$45 million to 26,000 banana workers in 11 countries.⁵

Bhopal disaster

In August 1999, Dow merged with Union Carbide, the company responsible for the Bhopal chemical disaster.⁶ Union Carbide became infamous for the 1984 gas leak from its plant in Bhopal, India, that killed thousands and injured 140,000. Union Carbide refused to release information about the composition of the chemicals that leaked from the plant, and with-

held information on the effects on animals of one of the chemicals released (methyl isocyanate), claiming it was confidential business information.⁷

- **Fugitive CEO.** Additional lawsuits related to the incidents are still pending in U.S. and Indian courts. The Indian lawsuit charges Warren Anderson, chairman of Union Carbide at the time of the accident, with "culpable homicide," the legal equivalent of manslaughter. Despite the ruling of a U.S. District Court judge that Union Carbide must submit to the jurisdiction of the Indian courts, company officials and Mr. Anderson have failed to appear. The Indian government issued a warrant for Mr. Anderson's arrest and notified Interpol that he is a fugitive.⁸ The U.S. case, a civil suit filed in New York, charges Union Carbide with violating international law and fundamental human rights of the victims and survivors.⁹

Agent Orange impacts

Dow was one of the major producers of Agent Orange (2,4,5-T and 2,4-D), a defoliant used by the U.S. in the Vietnam War. Dow agreed to pay US\$180 million to 4,000 U.S. veterans suffering from the effects of exposure to Agent Orange.¹⁰ In Vietnam, the impacts of Agent Orange and dioxin, present as a contaminant in Agent Orange, are overwhelming. Some estimates have put the number of dioxin-related deformities of Vietnamese children related to spraying of Agent Orange at 500,000.¹¹

Company Profile

When it merged with **Union Carbide** in 1999, **Dow Chemical** became the world's second largest chemical company, following Dupont.¹ **Dow Chemical** produces pesticides and chemicals used in dry cleaning, paint and antifreeze and is a leading maker of caustic soda, chlorine, ethylene, polyethylene, polystyrene, polyvinyl chloride (PVC), and chlorinated solvents. These chemicals are created by combining chlorine with other chemicals at high temperatures, releasing dioxins, which are highly toxic to the endocrine and immune systems, even at extremely low doses.² **Dow** was widely criticized in the 1960s as the sole manufacturer of one of the ingredients used to make napalm, a jellied gasoline used by the U.S. military to burn people, villages and forests in the Vietnam War.

Notes

- 1 "Dow Chemical, Union Carbide and Bhopal," Pesticide Action Network Updates Service (PANUPS), August 25, 1999.
- 2 "Dioxin Reassessed—Part 1," Rachel's Environment and Health Weekly #390, Environmental Research Foundation, Annapolis, MD, May 19, 1994.

Harming health and the environment

Dursban (chlorpyrifos) withdrawn

Chlorpyrifos is a nerve toxin and suspected endocrine disruptor that has been widely used in U.S. homes and has resulted in 7,000 reported accidents every year.¹² In June 2000, as a result of pressure from environmental and public health organizations, Dow withdrew registration of chlorpyrifos for use in homes and other places where children could be exposed,¹³ and severely restricted its use on crops.¹⁴ In earlier attempts to show that the chemical was “safe” and hide its ill effects, Dow engaged in many unethical acts.

- **Human testing.**¹⁵ Dow tested Dursban on 60 paid recruits at a lab in Lincoln, Nebraska in 1998. Dow also fed Dursban to inmates at Clinton Correctional Institute in New York State in 1972 to assess its effects, a type of study that is now illegal in the United States.
- **Withholding poisoning information.** Dow was fined \$732,000 in August 1995 for not sending the EPA its reports on 249 Dursban poisoning incidents that it had received.¹⁶

DDT and birds

Dow was one of the companies that produced DDT, the carcinogenic, endocrine disrupting pesticide banned in the U.S. in 1972 after it was made famous by Rachel Carson's *Silent Spring*. DDE, a breakdown product of DDT, causes the thinning of the bird eggshells, and was associated with population declines of peregrine falcons and other birds.¹⁷

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Notes

- 1 Partnerships with the Private Sector: Assessment and Approval, Business Partnership & Outreach Group, The World Bank Group, Washington, DC. World Bank Web site <http://www.worldbank.org/business/03assessment.html#guidance>.
- 2 “DBCP Out-of-Court Settlement,” *Global Pesticide Campaigner*, March 1998.
- 3 Thrupp, L. “Direct Damage: DBCP Poisoning in Costa Rica,” *Dirty Dozen Campaigner*, May 1989. PANNA.
- 4 “DBCP Out-of-Court Settlement,” *op. cit.*
- 5 Ibid.
- 6 “Dow Chemical, Union Carbide and Bhopal,” Pesticide Action Network Updates Service (PANUPS), August 25, 1999.
- 7 Ibid.
- 8 Hedges, C., “A Key Figure Proves Elusive in a U.S. Suit Over Bhopal,” *The New York Times*, March 5, 2000, p. 4.
- 9 Ibid.
- 10 Kleiner, A., “The Three Faces of Dow,” *GARBAGE Magazine*, July/August 1991.
- 11 “A Corporate Giant,” *News in Review*, Canadian Broadcasting Corporation, <http://www.cbc.ca/insidecbc/newsinreview/mar99/milk/corp.htm>; testimony before EPA dioxin reassessment panel, December 1994, by Liane C. Casten, Environmental Task Force Chair, Chicago Media Watch, <http://www.greens.org/s-t/078/07-47.html>; memorandum to the EPA from William Sanjour (policy analyst), July 1994, <http://pwp.lincolns.net/sanjour/monsanto.htm>.
- 12 Environmental Working Group, BanDursban.org, <http://www.bandursban.org/basics/>
- 13 “Notice To Retailers On Pesticide Products Containing Chlorpyrifos,” U.S. Environmental Protection Agency Web site, http://www.epa.gov/oppead1/cb/csb_page/updates/noticedursb.htm
- 14 Environmental Working Group, BanDursban.org, <http://www.bandursban.org/latest/>
- 15 Environmental Working Group, BanDursban.org, <http://www.bandursban.org/dow/humantesting.shtml>
- 16 Environmental Working Group, BanDursban.org, <http://www.bandursban.org/dow/studies.shtml>
- 17 “Effects of DDT on Birds: Does Dixy Know Something the Experts Do Not?” *Environmental Review Newsletter*, Vol. One No. Seven, July 1994. <http://www.igc.org/envreview/anderson.html>



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