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## Reflections on Domestic and International Environmental Disasters and Their Influence on Environmental Law and Policy

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The relatively new area of law known as Environmental Law is a perfect example of how, as a human race, we tend to learn from our mistakes. Unfortunately however, these mistakes have been unpredictable and catastrophic, and we don't always learn from them. In recent history, these environmental disasters have had a global impact due to the aftermath of their destruction, their effects on the environment, and the laws that have formed in an attempt to mitigate and prevent future disasters. The most recent event, the Deepwater Horizon Oil Spill (BP oil spill), had major implications under environmental law and policy. This paper will reflect on several international incidents such as the BP Oil Spill and emphasize the need to regulate human interactions in order to preserve and protect the environment.

### Love Canal

The first major event that brought Environmental Law to the national spotlight was the tragic events that took place in Niagara Falls, New York. William T. Love envisioned building and developing a large city / industrial park along the Niagara River in the late 19<sup>th</sup> Century. New York State Department of Health: *Love Canal – Public Health Time Bomb, A Special Report to the Governor and Legislature* (Sept. 1978). Mr. Love would power this project through a man-made canal that would connect the upper and lower portions of the Niagara River. *Id.* The project was soon deserted as the great depression hit in the early twentieth century and the partially dug canal soon became a dumpsite for several chemical companies until it was covered with earth in 1953. *Id.* Hundreds of homes and an elementary school were soon built nearby, setting up the disaster that is now known as the Love Canal. *Id.* Prolonged heavy rains and a historic blizzard caused the once buried chemicals to surface, causing the nearby homes to be uninhabitable as they were contaminated with chemicals that were hazardous to human health. *Id.*

The tragic events of Love Canal drew national attention and highlighted the need for state and

federal regulation to prevent, control, compensate and deter similar chemical disposal activities in the future. "Described as an environmental time bomb gone off, Love Canal stands as testimony to the ignorance, lack of vision and proper laws of decades past which allowed the indiscriminate disposal of such toxic chemicals." New York State Department of Health: *Love Canal – Public Health Time Bomb*. It was these events that sparked serious congressional action for cleanup legislation. In response to Love Canal, Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Carole Switzer, *CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act (Superfund)* (ABA, 2002). CERCLA was enacted to address liability and provide compensation for injury to the environment resulting from releases of hazardous substances. *Id.*

Today, the EPA uses CERCLA to address chemical waste disposal sites with regard to compensation and cleanup. The EPA, through congress, has gone further by implementing a program that attempts to prevent such sites from occurring in the first place. Under the Resource Conservation and Recovery Act (RCRA), the EPA has made grants to States to help them establish programs to assure the safe handling and disposal of hazardous wastes. Eckardt Beck, *The Love Canal Tragedy*, EPA Journal, <http://www.epa.gov/history/topics/lovecanal/01.html> (Jan. 1979). Although Love Canal was a tragic environmental disaster, the EPA has taken the necessary action to prevent future events from happening through the implementation of these programs.

### **Valley of the Drums**

The Valley of the Drums provides another example of how the mishandling and dumping of toxic chemicals requires federal regulation in order to prevent harm to the environment and society. In 1979, the Valley of the Drums drew national attention as thousands of drums, filled with hazardous chemical waste, accumulated over a 10 year period in a 23-acre site located in Bullitt County, Kentucky. *EPA Schedules Emergency Cleanup at Valley of the Drums*, EPA Press Release, <http://www.epa.gov/history/topics/drums/01.html> (Sept. 1981). The drums at the site began to deteriorate from rain, causing them to overflow and leak into a nearby tributary of the Ohio River. *Id.* The cleanup required state and federal intervention to prevent further environmental damage. *Id.*

Occurring right around the same time as the Love Canal, the Valley of the Drums brought national attention and placed pressure on congress to enact CERCLA. Love Canal activist Lois Gibbs stated that Love Canal looked like a suburban community, while "Valley of the Drums became the visualization of the problem." *Toxic legacy revisited: Valley of the Drums, 30 years later*, Courier-Journal, <http://www.courier-journal.com/article/20081214/NEWS01/81214001/Toxic-legacy-revisited-Valley-Drums-30-years-later> (Dec. 2008). Since CERCLA's inception, the EPA has put 1600 sites on its

priority list. *Id.* More than 300 of these sites have been cleaned or contained enough to be removed from the list and about 60 more are proposed for listing. *Id.* Nationally, the EPA has identified some 47000 hazardous waste sites in the United States. *Id.*

### **Deepwater Horizon Oil Spill**

In 2010, an oil spill near the Gulf Coast of Mexico made international news and was soon recognized as one of the worst environmental disasters in history. In April 2010, a BP operated drilling rig exploded and caught fire, killing 11 while spilling thousands of gallons of oil into the Gulf of Mexico. Huffington Post: *Gulf Oil Spill Timeline And The Ensuing Legal Cases Against BP*, The Associated Press (Nov. 2012). By July of 2010, the incident broke records by reaching 140 million gallons of oil having spilled into the Gulf of Mexico. *Id.* The spill would end up causing severe damage to entire ecosystems, coastlines, fishing industries and more. The federal government quickly jumped into action, prompting massive cleanup efforts, while BP prepared for litigation and reached settlements with various stakeholders. *Id.* The spill eventually led to felony charges and the largest penalties in US history. *Id.*

The Deepwater Horizon Oil Spill, which was much more recent and devastating than either the Love Canal or the Valley of the Drums, highlighted flaws in current environmental policy and regulation. In response to the spill, two funds were created in an effort to compensate losses and resolve claims; The Deepwater Horizon Oil Spill Trust, and the Gulf Coast Claims Facility. Alfred R. Light, *The Deepwater Horizon Oil Spill Trust and the Gulf Coast Claims Facility: The "Superfund" Myth and the Law of Unintended Consequences*, 5 Golden Gate U. Envtl. L.J. (2011). These funds, created in emergency response to pay claims, are aimed "to address claims by individuals and businesses but do not cover governmental claims for cleanup costs, lost revenues, or natural resource damages." *Id.* In short, even with current regulation, prevention and compensation efforts, there will always be potential for insufficient remedial action due to unpredictable events that lead to astronomical damages. These funds intend to compensate, but in the end, they have their limits and the loss is felt more by those affected than by those that are liable.

### **Bhopal Disaster**

Although notable US environmental disasters have been very tragic, several foreign events have resulted in the horrifying deaths of thousands. The Bhopal disaster is known to be the worst industrial accident in history. Edward Broughton, *The Bhopal disaster and its aftermath: a review* (May 2005). In December 1984, 40 tons of a hazardous gas leaked from a pesticide plant in Bhopal India due to poor

safety measures and inadequate. *Id.* The result, approximately 3,800 immediate deaths, 10,000 in a few days, and 15,000-20,000 premature deaths over two decades due to this gas leak that affected roughly half a million people in India. *Id.* The Indian government created a fund similar to those discussed above, which only paid out a final settlement of \$470 million, an approximate \$2,200 average to the families of the dead. *Id.* Had this case been settled in the US, the estimated liability would have been greater than \$10 billion. *Id.* The site has not been fully cleaned and toxic chemicals continue to leak into local aquifers, leaving a legacy that includes dangerously contaminated water for the people of Bhopal. Broughton, *The Bhopal disaster and its aftermath: a review*.

This horrific disaster exemplifies a new problem created by domestic regulations and the opportunity to outsource operations to foreign countries. Environmental laws and policies are limited by jurisdictional boundaries. Any multinational company can avoid regulations by moving pollution creating activities to foreign countries with primitive or non-existent environmental laws in order to avoid regulations that otherwise increase the cost of operations domestically. There may be a need for international environmental regulations, however, developing countries do not have a strong enough economy or infrastructure to implement such regulations. The Bhopal disaster should influence the international community to prioritize the need for uniform international environmental regulations over economic growth but in a competitive, ever-increasing, global industrial economy, this is not feasible.

In response to the Bhopal incident, congress created a federal law called the Emergency Planning and Community Right to Know Act of 1986 (EPCRA) which established the Toxic Release Inventory (TRI). EPA: *What is the Toxic Release Inventory Program?* <http://www.epa.gov/tri/triprogram/whatis.htm>. EPCRA's primary purpose is to inform citizens of toxic chemical releases in their areas by requiring the EPA and the States to collect data annually on releases and transfers of certain toxic chemicals from industrial facilities and make the data available through the TRI. *Id.* EPCRA was later expanded in 1990 by the Pollution Prevention Act which requires facilities to report additional data on waste management and source reduction activities to EPA under TRI. *Id.*

### **Fukushima Nuclear Disaster**

On March 11, 2011, a massive earthquake and powerful tsunami knocked out power to Japanese nuclear plants, resulting in radioactive particles contaminating the atmosphere and the evacuation of 140,000 residents. Hiroshi Fukurai, *The Fukushima Dai-ichi Nuclear Disaster and the Future of Nuclear Energy Programs in Japan and East Asia*. The accident assessment level was raised to 7, the worst rating on an international disaster scale. *Id.* In response, the Japanese government allowed the dumping of more than 10,000 tons of radiation-contained effluent from the nuclear power

plant into the Pacific Ocean. *Id.* As a result, radioactive particles have been detected in tap water as well as in agricultural products, by neighboring countries. *Id.* Many of the affected residents are still displaced from their homes. *Id.*

Currently, 30 US nuclear reactors have designs similar to the crippled reactors in Japan. The New York Times: *Japan's Multiple Calamities* (Mar. 2011). The Fukushima incident has called for a review of safety measures in a time where alternative sources of energy are needed in an effort to slow the growing problem of global warming. Although nuclear energy is an excellent and viable alternative energy, an incident such as this has highlighted the need for additional research and safety mechanisms in the production and use of nuclear energy. *Id.*

The events outlined above highlight the importance of environmental laws, policies, and regulations. Although steps have been taken through environmental regulations to prevent such disasters, there will undoubtedly be more. These disasters should provide governments, businesses, industries and individuals an incentive to proceed with caution with activities that may affect the sustainability of our fragile, global environment.