Appendix

# Chapter 9: Event trends and issues

*Table 9.1: Milestones of Environmental Change*

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| ***1960s***Minemata / Pelican Island / Torrey CanyonSilent Spring’ Rachel Carson | **Minemata**These were a group of man-made [diseases](https://en.wikipedia.org/wiki/Disease) all caused by [environmental pollution](https://en.wikipedia.org/wiki/Environmental_pollution), due to improper handling of [industrial waste](https://en.wikipedia.org/wiki/Industrial_waste) by [Japanese](https://en.wikipedia.org/wiki/Japan) [corporations](https://en.wikipedia.org/wiki/Corporation). The first occurred in 1912, the other three occurred in the 1950s and the 1960s.**Pelican Island**The Native “Ais” Indians occupied the area that has now been their refuge for thousands of years. The arrival of American settlers increased in the mid-1800’s, as a result of improved steamboat and rail transportation. Settlement also brought greater attention to the thriving bird rookeries in and around the lagoon. By the late 19th Century, an expanding market for bird feathers for the fashion industry resulted in the slaughter of beautiful herons, egrets, spoonbills and pelicans. At one point, plume feathers were worth more than gold. In 1858, Dr. Henry Bryant witnessed the slaughter of sixty spoonbills a day on Pelican Island. But the last of Pelican Island’s birds were saved by the arrival of a concerned German immigrant.**Torrey Canyon**The Torrey Canyon oil spill on the southwest coast of the United Kingdom in the spring of 1967 is one of the world’s most serious oil spills.**Silent Spring**Silent Spring is an environmental science book written by Rachel Carson and published in 1962. The book documented the detrimental effects on the environment. Rachel Carson’s Silent Spring alerted a large audience to the environmental and human dangers of indiscriminate use of pesticides, spurring a huge global reaction. |
| ***1970s***Love Canal / Amoco Cadiz / Three Mile Island‘Limits to Growth’ / Anti-Nuclear protests | **Love Canal**Originally set up in the early twentieth century to distribute fuel cheaply to industry and homes, by the 1920’s the canal had become a dumping site for industrial chemicals. In 1953 the Hooker Chemical Company bought and built houses and schools on the disused land, which resulted in chemicals leaking into the backyards and basements of these homes and schools. This resulted in an increase in birth defects and burns to children’s hands and faces and the subsequent evacuation of the site.**Amoco Cadiz**The [oil tanker](https://en.wikipedia.org/wiki/Oil_tanker) [Amoco Cadiz](https://en.wikipedia.org/wiki/Amoco_Cadiz) ran aground on [Portsall Rocks](https://en.wikipedia.org/wiki/Portsall), 5 km (3.1 miles) from the coast of [Brittany](https://en.wikipedia.org/wiki/Brittany), [France](https://en.wikipedia.org/wiki/France), on 16th March 1978. It ultimately split in three and sank, resulting in the [largest oil spill](https://en.wikipedia.org/wiki/Largest_oil_spill) of its kind in history.**Three Mile Island**The Three Mile Island accident was a partial [nuclear meltdown](https://en.wikipedia.org/wiki/Nuclear_meltdown) that occurred on March 28, 1979, in one of the two [Three Mile Island](https://en.wikipedia.org/wiki/Three_Mile_Island_Nuclear_Generating_Station) nuclear reactors in [Dauphin County, Pennsylvania](https://en.wikipedia.org/wiki/Dauphin_County%2C_Pennsylvania), United States. It was the worst accident in U.S. commercial nuclear power plant history. The incident was rated a five on the seven-point [International Nuclear Event Scale](https://en.wikipedia.org/wiki/International_Nuclear_Event_Scale): Accident With Wider Consequences**Limits to Growth’ / Anti-Nuclear protests**The 1972 study ‘Limits to Growth’ was an environmental movement that linked to the timing of the first UN Conference of the Human Environment in Stockholm in 1972. Anti-nuclear protests and the demand for energy transition were the principle causes at the forefront of this movement. |
| ***1980s***Chernobyl / **Bhopal (Union** Carbide) / Exxon Valdez / Ozone depletion / Acid Rain / Global warmingThe Montreal Protocol / The Bruntland Report | **Chernobyl**On April 26, 1986, Unit Four of the Chernobyl nuclear reactor exploded in the then Soviet Ukraine. More than 3.5 million people in Ukraine alone, not to mention many citizens of surrounding countries, are still suffering the effects of the incident.**Bhopal**Researchers have reviewed studies of human health effects that resulted from exposure to methyl isocyanate gas that leaked from the Union Carbide plant in Bhopal, India, in 1984.**Exxon Valdez**The ecosystem response to the 1989 spill of oil from the Exxon Valdez into Prince William Sound, Alaska. In the past several years trace-gas-induced global warming has evolved from a relatively obscure environmental concern to a major international environmental issue. International meetings such as the Toronto Conference on the Changing Atmosphere (June 1988).**The Montreal Protocol**An international treaty that was established in 1989 on Substances that Deplete the Ozone Layer (a protocol to the Vienna Convention for the Protection of the Ozone Layer), designed to protect the ozone layer by phasing out the production of numerous substances that are responsible for ozone depletion.**The Brundtland Report**In 1987 Brundtland based her report on the five pillars of sustainability: -* Essential ecological processes should be preserved
* The need to protect biodiversity
* Intergenerational equality
* Holistic planning
* Fairness and opportunity
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| ***1990s***BSE & CJD / MV Braer / Brent Spar (Shell) / Erika oil spillAnimal liberation / Anti-roads / Anti-globalisationRio Earth Summit – UN Framework Convention on Climate Change | **BSE and CJD**A special BSE Inquiry was set up in 1998 to investigate the public health scandal of “mad cow disease” or BSE which was as first identified in cattle, but then the disease had jumped the species barrier to humans. The government admitted that the strange new brain disease CJD was probably linked to BSE. It seemed possible that victims had caught the disease by eating meat from BSE infected cattle.**MV Braer**In early January 1993, MV Braer, carrying a cargo of approximately 85,000 tonnes of crude oil from the Norwegian North Sea Gullfaks field, grounded off the southern tip of the Shetland mainland.**Brent Spar**When Shell decided in the 1990s that it had no longer any use for the Brent Spar, 14,500 tonne oil platform it had been operating in the North Sea, the company applied to the UK government to be allowed to dump the entire installation in the Atlantic Ocean. The government had no objections to this and announced its full support.**Rio Earth Summit**The United Nations Framework Convention on Climate Change (UNFCCC) is an [international](https://en.wikipedia.org/wiki/International_law) [environmental treaty](https://en.wikipedia.org/wiki/Environmental_protocol) negotiated at the [Earth Summit](https://en.wikipedia.org/wiki/Earth_Summit) in [Rio de Janeiro](https://en.wikipedia.org/wiki/Rio_de_Janeiro) from 3 to 14 June 1992, then entered into force on 21 March 1994. The UNFCCC objective is to ‘stabilize [greenhouse gas](https://en.wikipedia.org/wiki/Greenhouse_gas) concentrations in the atmosphere at a level that would prevent dangerous [interference](https://en.wikipedia.org/wiki/Human_impact_on_the_environment) with the [climate system](https://en.wikipedia.org/wiki/Climate_system)’. |
| ***2000s***Prestige oil spillThe Kyoto Protocol | **Prestige oil spill**16 Aug 2000 The Prestige oil spill was an oil spill in Galicia caused by the sinking of an oil tanker in 2002. The spill polluted thousands of kilometres of coastline, off Brittany, causing one of the worst oil spills Europe has ever witnessed.**The Kyoto Protocol**The Kyoto Protocol was adopted in Kyoto, Japan, on 11 December 1997 and entered into force on 16 February 2005. The detailed rules for the implementation of the Protocol were adopted at COP 7 in Marrakesh, Morocco, in 2001, and are referred to as the “Marrakesh Accords.” Its first commitment period started in 2008 and ended in 2012. This international agreement linked to the United Nations Framework Convention on Climate Change, which commits its parties by setting internationally binding emission reduction targets. It recognises that developed countries are principally responsible for the current high levels of emissions in the atmosphere as a result of more than 150 years of industrial activity; the Protocol places a heavier burden on developed nations under the principle of “common but differentiated responsibilities.” This has been under discussion since Donald Trump became President of the United States, as he has not committed to the Climate Change agenda. |