

## APES Key People, Events Organizations

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| <b>Aldo Leopold</b>                                 | An environmentalist famous for his <i>Land Ethic</i> essay who advocated for a strong relationship between humans and the environment.   |
| <b>E. O. Wilson</b>                                 | The “father of biodiversity” is a forerunner in the study of ants and sociobiology and is noted for his environmental advocacy.  |
| <b>Garrett Hardin</b>                               | Warned about dangers of human overpopulation on Earth’s natural resources and the welfare state through his essay “The Tragedy of the Commons”   |
| <b>Gaylord Nelson</b>                               | He was a US Senator in the Democratic Party and the founder of Earth Day.  |
| <b>Gifford Pinchot</b>                              | He was the first Chief of the US Forest Service. He advocated for conservation of resources.   |
| <b>Henry David Thoreau</b>                          | He authored <i>Walden</i> , which describes his most famous exploit—leaving civilization to live in solitude on the banks of nearby Walden Pond. Thoreau was an environmentalist who could see the consequences of unrestrained and irresponsible consumption of resources.  |
| <b>Jane Goodall</b>                                 | She worked on conservation and animal welfare issues (particularly apes and chimpanzees), and she created the Jane Goodall Institute in order to analyze human impacts on conservation.  |
| <b>John Muir</b>                                    | He was the founder of the Sierra Club and is known as the “father of the national parks.”  |
| <b>Norman Borlaug</b>                               | He helped launch the Green Revolution; he received the Nobel Peace Prize in 1970 for his role in humanitarian science.   |
| <b>Paul Ehrlich</b>                                 | American biologist who warned about the effects of overpopulation and the effects of limited resources; wrote "The Population Bomb"  |
| <b>Rachel Carson</b>                                | Defended natural world against pollution and is most known for her book <i>Silent Spring</i> which concerned the use of pesticides (DDT) and its effects on the natural world.   |
| <b>Sherwood Rowland &amp; Mario Molina</b>          | Discovered that CFCs contribute to ozone depletion and discovered the thinning of the ozone above Antarctica   |
| <b>Theodore Roosevelt</b>                           | Created the United States Forest Service and established many national forests, federal bird reserves, national game preserves, and national parks.  |
| <b>Thomas Malthus</b>                               | Wrote “An Essay on the Principle of Population.” This places emphasis on birth rates and marriage rates. Discusses distress of resources as population increases. Spoke upon positive and preventative checks as solutions.  |
| <b>Wangari Maathai</b>                              | Founded the Green Belt Movement, which focuses on the planting of trees, environmental conservation, and women’s rights.   |
| <b>Aral Sea</b>                                     | Formerly one of the four largest lakes in the world, it has been steadily shrinking since the 1960s after the rivers that fed it were diverted by Soviet irrigation projects; now it is disappearing.  |
| <b>Asian Brown Cloud</b>                            | A large area of air pollution the covers south Asia periodically, and is thought to be the cause of over 2 million deaths a year.  |
| <b>Bhopal, India</b>                                | Considered the world’s worst industrial disaster, Bhopal (1984) involves the gas leakage of a pesticides and other toxic chemicals in the Indian city affecting those living nearby in the shanty towns.   |
| <b>Chernobyl, Ukraine</b>                           | The explosion and subsequent meltdown of one reactor was a catastrophic event that directly affected hundreds of thousands of people. Due to the radiation, birth defects among people living in the area have increased dramatically.   |
| <b>Colony Collapse Disorder</b>                     | Caused by a combination of factors including pesticides and the invasive varroa mite, a pest. When a majority of worker bees of a colony of bees disappear. Queen, immature bees, and nurse bees are left behind with food.  |
| <b>Cuyahoga River Fire</b>                          | A fire, in Ohio, that occurred 1969 that helped create support for the Clean Water Act.  |
| <b>Dead Zones (Gulf of Mexico / Chesapeake Bay)</b> | Dead zones are hypoxic (low-oxygen) areas in the world’s oceans and large lakes, caused by excessive nutrients entering waters, resulting in blooms of algae. The dead zone in the Gulf of Mexico is at the mouth of the Mississippi River, can cover up to 6,000-7,000 square miles, and threatens the commercial and recreational fisheries in the area. |
| <b>Deep Water Horizon</b>                           | An offshore drilling rig that erupted and exploded in 2010 when the blowout preventer failed. The resulting oil spill that BP was ultimately charged for harmed wildlife.  |

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| <b>Dust Bowl</b>  | “Dirty Thirties” Wind erosion and drought lead to severe dust storms. Damaged ecology and agriculture in prairies in North America   |
| <b>Exxon Valdez</b>   | Resulted from an Exxon oil tanker hitting a reef while shipping oil from Alaska to California; it is the second largest American oil spill in open waters resulting in the death of thousands of sea otters, seals, and seabirds, and the company was forced to pay millions of dollars.   |
| <b>Flint Water Crisis</b>                                       | The Flint River has been contaminated because of fecal coliform bacteria, low dissolved oxygen, and toxic substances. The water was not properly treated when the city tapped into the river as a water source leading to lead from pipes also entering the supply. Exposure has led to impaired cognition, behavioral disorders, hearing problems, delayed puberty, reduced fetal growth, and impact to the hearts, kidneys and nerves of the citizens. |
| <b>Fukushima Daiichi</b>  | A 2011 nuclear power plant disaster caused by a tsunami that led to nuclear meltdowns and explosions. While there were no immediate fatalities, an estimated 2,000 will suffer from cancer and other radiative exposure effects within the next 50 years.  |
| <b>Great Pacific Garbage Patch</b>                              | The Great Pacific Garbage Patch is a large collection of marine debris, mostly plastic, in the North Pacific Ocean that disturbs marine food webs.   |
| <b>Love Canal Housing Development</b>                           | Love Canal was a neighborhood in Niagara Falls, NY whose residents began experiencing health effects in the 1970s from an abandoned canal site that polluted groundwater. It led to the creation of CERCLA, which governs the management of hazardous waste.   |
| <b>Minamata, Japan</b>  | Minamata disease is a neurological disorder caused by severe methyl mercury poisoning that was first described in the inhabitants of Minamata Bay, Japan and resulted from their eating of fish contaminated with mercury industrial waste. Some symptoms are numbness in the hands and feet, general muscle weakness, and damage to hearing and speech.   |
| <b>Three Gorges Dam</b>   | The world’s largest hydroelectric dam provides power to nearby areas but displaced millions of people, flooded cities, and has been plagued by corruption, high costs, environmental impacts, human rights violations, and resettlement difficulties.  |
| <b>Three-Mile Island</b>  | This is a partial nuclear meltdown that occurred on March 28, 1979. Only some radioactive gas was released days after the accident, but there were no injuries or deaths as a result of the meltdown.  |
| <b>Yucca Mountain</b>   | The nation’s nuclear waste depository in Nevada that was de-funded in 2010.  |
| <b>Organization of the Petroleum Exporting Countries (OPEC)</b> | Intergovernmental agency of 13 oil exporting countries that ensure the economic stability of the oil markets; negative impact on the environment due to the negative impacts of oil drilling and oil usage   |
| <b>International Whaling Commission (IWC)</b>                   | This Commission placed restrictions on whaling in order to maintain whale stocks. However, Japan, Russia, and other nations reject these restrictions.   |
| <b>International Union for Conservation of Nature (IUCN)</b>    | It is an international organization working to for nature conservation and the sustainable use of natural resources through data gathering, analysis, research, field projects, advocacy, lobbying, and education.   |
| <b>UN Intergovernmental Panel on Climate Change (UN IPCC)</b>   | Established in 1988 to provide the world with a clear scientific view on the current state of knowledge in climate change and its potential environmental and socio-economic impacts.  |
| <b>World Wildlife Fund (WWF)</b>                                | An international non-governmental organization founded in 1961, working in the field of the wilderness preservation and the reduction of humanity’s footprint on the environment; it is the world’s largest conservation organization, concentrating on the conservation of oceans and coasts, forests, and freshwater ecosystems.   |
| <b>National Resources Defense Council (NRDC)</b>                | The NRDC Goes to court to stop environmentally harmful practices. It also informs and organizes environmental activists.   |
| <b>Sierra Club</b>  | Environmental organization founded by John Muir whose purpose is to promote responsible use of earth’s ecosystems and resources.   |