

reaches 1 billion.

World human population

In India, hundreds of Bishnois Hindus of Khejadali are killed trying to protect trees from the Maharaja of Jodhpur, who needed wood to fuel the construction of his palace. This event will come to be considered the origin of the 20th century Chipko movement.

1824

French scientist Jean Baptiste Joseph Fourier describes the atmosphere as the planet's insulating blanket. Fourier is the first to use the term "greenhouse effect" to describe how the gases maintain Earth's temperature despite being so far from the sun.



Jean Baptiste Joseph Fourier

1856

Though often attributed to Irish physicist John Tyndall, it was actually the female American scientist Eunice Newton Foote who first theorized that increases in carbon dioxide in the atmosphere could impact Earth's temperatures.





Drawing by Carlyn Iverson, NOAA Climate.gov.



The term "acid rain" is coined by Robert Angus Smith in the book "Air and Rain."

1876

The British River Pollution Control Act makes it illegal to dump sewage into a stream.

1896

Swedish scientist, Svante Arrhenius, claims that burning coal will cause a global warming effect due to an increase in carbon dioxide in the atmosphere.

The world's first national park, Yellowstone National Park, is established, signed into law by U.S. President Ulysses S. Grant on March 1, 1872.



"Yellowstone Falls" by Ansel Adams, 1933-1942; Records of the National Park Service; Record Group 79; National Archives.



John Muir, a Scottish-American naturalist, founds the Sierra Club.





U.S. President Theodore Roosevelt creates the first National Bird Preserve, which will serve as the beginning of the Wildlife Refuge System, on Pelican Island, Florida.



1909

U.S. President Theodore Roosevelt convenes the North American Conservation Conference, held in Washington, D.C., and attended by representatives of Canada, Newfoundland, Mexico and the United States.

Some 7300 hectares of land in the Lake District of the Andes foothills in Patagonia are donated by Francisco Moreno as the first park, Nahuel Huapi National Park, for what will eventually become the National Park System of Argentina.

1917

Alexander Graham Bell, a Scottish scientist best known as the inventor of the telephone, writes, "The unchecked burning of fossil fuels would have a sort of greenhouse effect." This statement used the terminology from Fourier from 1824, the claims of Foote in 1856 and Arrhenius in 1896, and now connects this effect to all fossil fuels.

1914

A group of Swiss scientists and conservationists convince the government of Switzerland to set aside 14,000 hectares (roughly 34,600 acres) of land in the Swiss Alps as Europe's first national park.



Francisco Moreno



https://www.flickr.com/photos/58869428@N05/18179255064



In New Zealand, the Native Bird Protection Society (later the Royal Forest and Bird Protection Society, or Forest & Bird) is created in response to the devastation of Kapiti Island by livestock.



1930

World human population reaches 2 billion.

1930-1940

Fueled by drought and poor land practices, the Dust Bowl brings widespread land degradation across the North American prairie.



Image by <u>WikiImages</u> from <u>Pixabay</u>

1933

The Convention Relative to the Preservation of Fauna and Flora in Their Natural State is signed by Belgium, Egypt, Italy, Anglo-Egyptian Sudan, Union of South Africa, the United Kingdom, British India, Tanganyika and Portugal.



In what is now the of KwaZulu-Natal province of South Africa, Southern white rhinoceros were tranquilized and transported across southern Africa to allow for safe breeding to save this species from extinction.



1964

Norman Borlaug takes a position as the director of the International Wheat Improvement Program in Texcoco, Mexico. The program leads to the Green Revolution.

1968

UNESCO hosts the Paris Biosphere Conference, which will result in the creation of the Man and the Biosphere Programme. After decades of industrial waste dumping, Ohio's Cuyahoga River catches fire. The image of this fire in TIME Magazine brings a new public awareness to the human impact of pollution on our environment.

Activists mobilize in France to preserve the Vanoise National Park in the Alps from a touristic project. The park is created three years later, in 1963, as the first French natural park.



1962

Rachel Carson publishes "Silent Spring," a seminal work that catapults the environmental dangers of indiscriminate pesticide use to a national stage.

1969

The Santa Barbara oil spill dumps millions of gallons of crude oil off the coast of California, causing a 35-mile oil spill.

April 22, 1970

World's first Earth Day:

Millions gather across the United States for the first Earth Day, organized by Gaylord Nelson, former senator of Wisconsin, and Denis Hayes, a Harvard graduate student.

> U.S. Environmental Protection Agency is established. President Richard Nixon proposes establishment of the EPA on July 9, 1970, and the agency began operation on December 2, 1970.



United Nations Ramsar Convention on Wetlands is signed in Ramsar, Iran. The international agreement to protect wetlands has 160 member-nations today and helps to protect nearly 2,000 wetland areas worldwide.

1972

The U.N. Conference on the Human Environment held in Stockholm, Sweden, in early June — is the first of a series of the world environmental conferences.



1973

World Conservation Union (IUCN) meeting drafts the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITIES).

> Endangered Species Preservation Act passes in U.S. Congress with a House vote of 390–12. The act broadens and strengthens protections for plant and animal species listed as threatened or endangered in the U.S. The legislation becomes one of the most effective tools to protect at-risk species and their habitats across the country.

1970 Caspian Tiger goes extinct.

1971

International environmental organization Greenpeace is founded in Vancouver, Canada. The organization will go on to develop national and regional offices in 41 countries worldwide. United Nations Environment Programme is founded as a result of the Conference on the Human Environment.

The Organization of the Petroleum Exporting Countries (OPEC) announces oil embargo against United States.



Image credit: Greenpeace https://www.greenpeace.org/philippines/history-and-victories/



The environmental group Environmental Action distributes a poster of the "Dirty Dozen" which depicts 12 members of the US Congress who supported corporate interests over environmental and human health. This tactic has been imitated many times over to encourage voters to oust politicians who do not protect the environment.



1978

in 2004.

Photo of the Three Mile Island plant site Image credit <u>https://www.flickr.com/photos/nrcgov/</u>

Brominated flame retardants replace PCBs as the major chemical flame retardant. Swedish scientists will notice these substances accumulating in human breast milk in 1998.

with the first ban on use in the European Union

1979

Three Mile Island accident, the most significant U.S. commercial nuclear disaster to date, occurs near Harrisburg, Pennsylvania.

1977

Through the Tbilisi Declaration, the world's first intergovernmental conference on environmental education was organized by the United Nations Education, Scientific and Cultural Organization (UNESCO) in cooperation with the U.N. Environment Programme in Tbilisi, Georgia. Love Canal contamination is revealed.



Image by bullfrogcommunities

Attempts to build a PCB landfill in an African American neighborhood in Warren County, N.C. result in demonstrations and trigger a nationwide movement for environmental justice. Environmental Justice activists protest polychlorinated biphenyl (PCB) landfill in Warren County, NC. Here, Dr. Benjamin Chavis coins the term "environmental racism."



Image courtesy of Ricky Stillely and NC DNCR

1984

US President Ronald Reagan says in his State of the Union Address, "Preservation of our environment is not a liberal or conservative challenge, it's common sense."

1983

Australia is hit by extreme weather phenomena and devastation: The Melbourne dust storm hits the capital of Victoria, Australia, with a dust cloud more than 1,000 feet high, stripping about 50,000 tons of topsoil from drought-afflicted areas of eastern Australia. A week later, the Ash Wednesday bushfires became the deadliest bushfire in Australian history to date, killing 47 in Victoria and 28 in South Australia.



Photo of Dust Storm Mungerannie South Australia Image credit <u>https://www.flickr.com/photos/57768042@N00/4400643804</u>

Bhopal disaster. Union Carbide Co. (Dow Chemical) fertilizer plant leaks methyl ico-cyanide in Indian town of Bhopal. The death toll: over 3,700 dead immediately, another 8,000 die within a few weeks and yet another 8,000 die of chronic effects.



Antarctic ozone hole is discovered.



April 26, 1986, The Chernobyl disaster Image credit https://www.flickr.com/photos/iaea_imagebank/5613115146

1986

The Chernobyl disaster, the world's worst nuclear power accident, occurs at a plant in the Ukraine.

1988

The Intergovernmental Panel on Climate Change (IPCC) is established by two U.N. organizations, the World Meteorological Organization (WMO) and the United Nations Environment Programme to assess the "risk of human-induced climate change."

1989

The Montreal Protocol on Substances that Deplete the Ozone Layer enters into force on January 1, 1989. The international treaty phased out the many substances responsible for ozone depletion. Since 1987, the protocol has undergone five revisions in 1990 (London), 1992 (Copenhagen), 1995 (Vienna), 1997 (Montreal), and 1999 (Beijing). Exxon Valdez disaster spills 11 million gallons of crude oil into Alaska's Price William Sound, covering 1,300 miles of coastline in March 1989. The Exxon Valdez oil spill was the worst in U.S. history until the Deepwater Horizon oil spill in 2010.

A team of Russian scientists at the Vostok Station in Antarctica drill an ice core about 2 kilometers deep. For the first time, scientists could explore nearly 150,000 years of climate history.

1987

World human population reaches 5 billion. Environmentalist Chico Mendes was assassinated. Mendes worked for decades to protect the people and ecosystems of the Amazon Rainforest and was constantly under threat from logging industry supporters.

The Goldman Environmental Prize is created by civic leaders and philanthropists Richard N. Goldman and Rhoda H. Goldman.



1990 Earth Day goes global, with events organized in more than 140 nations.

> The IPCC First Assessment Report is released. The landmark report emphasized the importance of climate change as a global challenge requiring a cooperative global solution. The report played a major role in the creation of the United Nations Framework Convention on Climate Change (UNFCCC), the key international body to address climate change and compel international climate action.

1992

Ireland's Environmental Protection Agency is established.

World Oceans Day begins at the Earth Summit in Rio de Janeiro. Today, World Oceans Day is marked every year on June 8. The metaphor "ecological footprint" is coined by Canadian professor William Rees to measure humanity's ecological impact on the environment.

European Environment Agency is established by EEC Regulation 1210/1990. The agency, which is headquartered in Copenhagen, Denmark, becomes operational in 1994.



The Earth Summit, held in Rio de Janeiro, results in the adoption of three major Rio Conventions: The United Nations Framework Convention on Climate Change, the U.N. Convention on Biological Diversity, and the U.N. Convention to Combat Desertification.

National Environmental Education Act is established in the U.S. The act provides resources to local education institutions and educational organizations to support and improve environmental study and training. The Canadian government closes all eastern seaboard fishing grounds due to insufficient recovery of the stock.



Ice cores from Greenland show that past climate changes have occurred in as little as 10 years. The finding debunked previous hypotheses that climate changes only happened on very slow, long timeframes.

After it was discovered to be dangerous to wildlife and the environment, DDT (dicholorodiphenyltrichloroethane) is banned as a pesticide worldwide under the Stockholm Convention.



The U.S. Federal Bureau of Investigations (FBI) initiates Operation Backfire, an anti-terrorist law enforcement operation against "Eco Radicals."

2004

Wangari Maathai wins Nobel Peace Prize for her work planting trees around Kenya, the first African woman to receive this distinction. Maathai was also the first female scholar from East and Central Africa to take a doctorate (in biology) and the first female professor ever in her home country of Kenya.



The 2004 Indian Ocean earthquake and tsunami kills nearly a quarter of a million people.

The Kyoto Protocol enters into force on February 16, following ratification by Russia in November 2004.



2007

The IPCC releases its Fourth Assessment Report.

Power Shift 2007, the first National Youth Climate Conference, is held in Maryland and Washington, D.C. The event saw more than 5,000 youth converge in Washington, D.C., to build the movement, lobby Congress and deliver a statement on youth perspectives on global warming.



Scientists report that Arctic sea ice is melting far faster than originally predicted.

Hurricanes Katrina, Rita and Wilma cause widespread destruction and environmental harm to coastal communities in the U.S. Gulf Coast region.

trade" program.

emissions through a "cap and

The 2007 Nobel Peace Prize is awarded jointly to the IPCC and U.S. Vice President Al Gore "for their efforts to build up and disseminate greater knowledge about man-made climate change, and to lay the foundations for the measures that are needed to counteract such change." The UNFCCC develops an initiative called REDD+ which focuses on mitigation solutions for reducing carbon emissions for countries experiencing rapid deforestation.





Image credit Neil Palmer (CIAT) / Flickr https://www.flickr.com/photos/ciat/5740350168/in/photostream/

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Black Rhino calf - Kufara Taronga Western Plains Zoo - Dubbo - NSW https://www.flickr.com/photos/bfra07/4641824922 2013

Sea winds bring massive air pollution from mainland China to Japan demonstrating that major national polluters are not the only ones who incur the damaging impacts.

United Nations designates October 31, 2011, The Day of Seven Billion to mark the day that world human population reached 7 billion people.



2014

IPCC releases its Fifth Assessment Report on the state of the climate, its impacts and the global solutions for climate mitigation and adaptation.



At COP 21 on December 12,2015 195 countries adopt the Paris Agreement, the world's first international agreement to keep total anthropogenic global warming to "well below" 2 degrees Celsius.



State Department photo https://www.flickr.com/photos/statephotos/23076185424

The Paris Agreement enters into legal force in November 2016, just 11 months from its adoption.

2018

The Intergovernmental Panel on Climate Change releases its Special Report on 1.5 Degrees of Global Warming, which warns that the world has just twelve years to halve its emissions to avoid the worst impacts of climate change.

2016

The Paris Agreement is signed by 174 countries and the European Union in a ceremony at United Nations headquarters on Earth Day.



State Department photo https://www.flickr.com/photos/statephotos/26307463260

2017

U.S. President Donald Trump announces his intent to withdraw the United States — the world's second-largest emitter — from the Paris Agreement.



Photo Credit: Anders Hellberg/Anderspangpang via Wikimedia Commons

2019

The IPCC releases two landmark reports on climate impacts on land and agriculture, and oceans and the cryosphere.

16-year-old Greta Thunberg strikes outside of Swedish Parliament to protest political inaction on climate change. Thunberg's strikes further the growing youth climate movement through the Fridays for Future youth strikes worldwide



You can determine the future — add your events for the future of our planet!

Add your own events in the boxes above as we work together to build a cleaner, safer and more just world for all.

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