

# Ecology

“Ecology” is a term derived from Greek meaning *learning about (“logos”)* the ecosystems, where “eco” comes from the Greek word “*oikos*” meaning “household” (Odum and Barrett 2005). “Ecology” is the study of the environmental “house” including all the organisms in it and all the functional processes that make the house habitable.

Ecology is the branch of science that examines the relationships organisms have to each other and to their environment. There are three main types of ecology: landscape ecology, population ecology, and behavioral ecology.

Landscape ecology deals with spatial distribution, patterns, and behaviors across large geographical areas. Population ecology studies the rise and fall in the number of a species. Behavioral ecology studies the different ways organisms evolve and adapt to changes in their habitat.

## Vocabulary

**Green energy:** from renewable sources and with no harmful effects on the environment (either from producing greenhouse gas or other).

**Renewable energy:** from renewable sources, it doesn't produce greenhouse gas but could potentially have other harmful effects on the environment.

**Clean energy:** no greenhouse gas production but does have other harmful effects (usually refers to nuclear).

# IPCC 2023 report

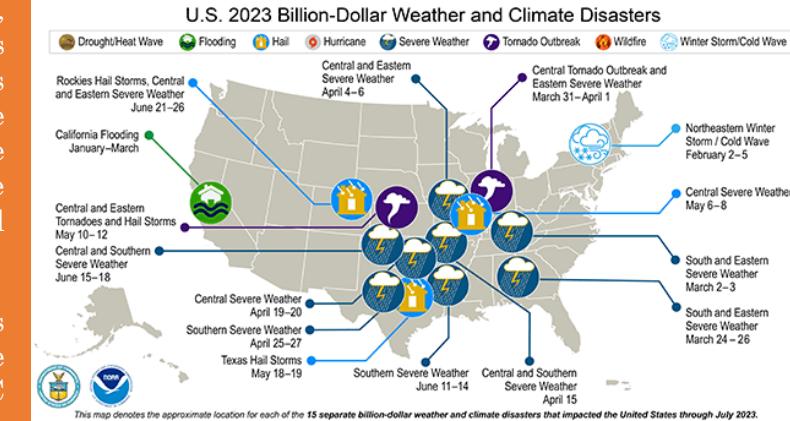
Global heating has already caused dangerous disruption in nature, human well-being, businesses and economies across all regions. In its latest report, Climate Change 2023: Synthesis Report, the Intergovernmental Panel on Climate Change (IPCC) has given its final warning, as the emissions curve is not bending yet. On the contrary, between 2010 and 2019 we experienced the highest levels of emissions in human history.

Immediate and deep emissions reductions across all sectors are needed urgently. According to the IPCC report, limiting global warming to 1.5°C requires a peak before 2025, reduce emissions by 43% by 2030, 60% by 2035 and reach net-zero in early 2050.

Near-term action is vital to prevent climate breakdown. We only have seven years left to keep 1.5°C within reach. Organizations with validated science-based targets have proven monumental reductions are possible. However, the rate at which the climate is changing means that every company needs to take action.

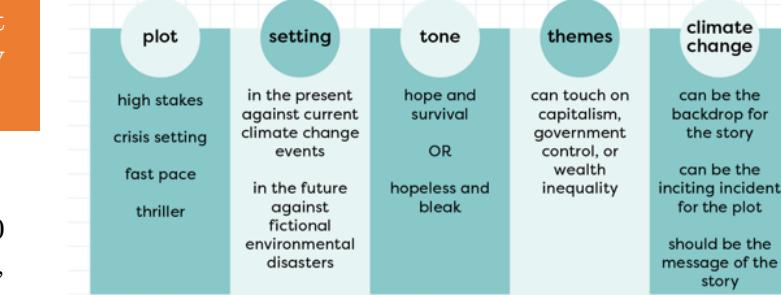
## Biden and Electric cars

As part of President Biden's goal of having 50 percent of all new vehicle sales be electric by 2030, the White House is announcing public and private commitments to support America's historic transition to electric vehicles (EV) under the *EV Acceleration Challenge*. These commitments are part of President Biden's *Investing in America* agenda to spur domestic manufacturing, strengthen supply chains, boost U.S. competitiveness and create good-paying jobs. President Biden's *Inflation Reduction Act* adds and expands tax credits for purchases of new and used EVs—helping bring the benefits of clean energy to communities across the nation.



## climate fiction (cli-fi)

a genre of literature and entertainment that focuses on environmental issues and climate change



### Examples of cli-fi

**Movies:** Don't look up, The day after tomorrow, Geostorm, Wall-E

**Books:** *Oryx and Crake* (Margaret Atwood), *The Drowned World* (J.G. Ballard)

**Series:** The Expanse, Snowpiercer, Incorporated

## Greenwashing

Greenwashing is the practice of marketing a company or organisation so they appear more environmentally friendly or more ecological (more natural, healthier, free of chemicals, recyclable, less wasteful of natural resources...) when in practice its activities pollute the environment.

Unlike greenwashing, green marketing is when companies sell environmentally and socially conscious products or services. Green marketing is generally practical, honest, and transparent. However, it's easy for green marketing to translate to greenwashing when an organization doesn't live up to the standards of sustainable business practices.

More and more cosmetics brands are positioning themselves as "all-natural" and "ecological" but their actual impact on the environment is often negative. Lush has been accused of greenwashing because its products contain toxic ingredients such as potential endocrine disruptors.

Some manufacturers, such as Volkswagen, have fraudulently cheated during technical tests aimed at measuring the emissions of diesel engines. This "*dieselgate*", involving Volkswagen, was first revealed in 2015 by the US Environmental Protection Agency and raised awareness of how polluting diesel engines actually are, despite claims that they might be cleaner than petrol engines.

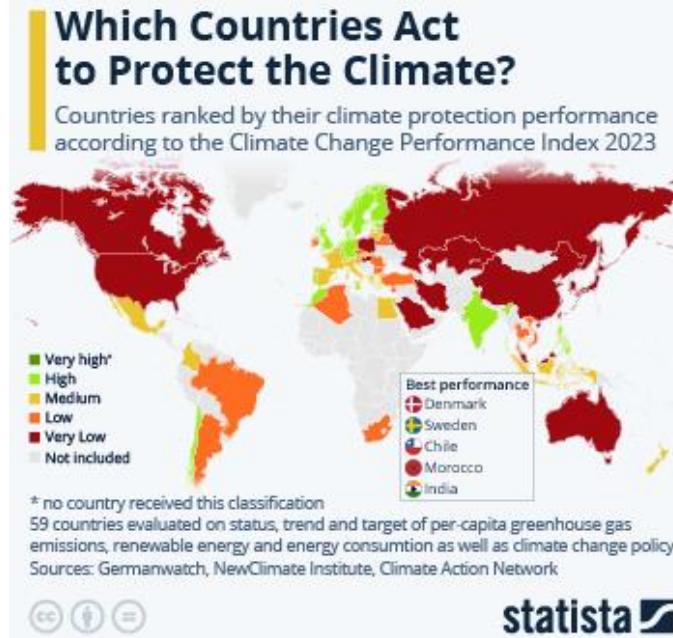
Labels are often used in an attempt to mislead consumers, as they can be difficult to verify. Some brands create their own labels which claim to be environmentally friendly. However, these labels have no legal standing.

## Organic food?

In general one would assume that the environmental impact of organic food should be lower due to the fact that synthetic pesticides (or chemicals in common parlance) are not used.

But organic agriculture does employ pesticides that are organic. As some experts have warned, natural pesticides are not necessarily less harmful than synthetic pesticides. And because they often have to be used in larger quantities, their environmental impact may be greater than that of conventional pesticides.

An organic label is not a straightforward guarantee of the most environmentally-friendly product. One of the factors that raise the environmental cost of organic product is that more land must be used to generate the same volume of food, due to the reduced use of fertilizers. This leads to deforestation, which reduces the storage capacity of carbon in soils. The final effect is an increase in greenhouse gas (GHG) emissions responsible for climate change.



"Greenwashing is designed to make people believe that your company is doing more to protect the environment than it really is." (Cambridge Dictionary)

## The Green New Deal (GND)

The GND proposals call for public policy to address climate change along with achieving other social aims like job creation, economic growth and reducing economic inequality:

- 100% Clean Energy
- Upgrading infrastructures
- Jobs and Economic Growth
- Social Justice
- Sustainable Agriculture
- Investment in R&D.

The name refers back to the New Deal, a set of reforms and public works projects undertaken by President Franklin D. Roosevelt in 1933-1935 in response to the Great Depression in the United States. The Green New Deal combines Roosevelt's economic approach with modern ideas such as renewable energy and resource efficiency.

A prominent 2019 attempt to get legislation passed for a Green New Deal was sponsored by Rep. Alexandria Ocasio-Cortez (D-NY) and Sen. Ed Markey (D-MA) during the 116th United States Congress, though it failed to advance in the Senate. In the European Union, a 2019 proposal from the European commission for a European Green Deal was supported by the European Council, and in January 2020, by the European Parliament as well.

