



terminology during a [recent study](#) colleagues and I conducted through the [USC Dornsife Public Exchange](#).

Climate reports are often written at a [scientific level](#). So we thought it would be helpful to clarify some of the most common terms.

To do that, we interviewed 20 people about common terms used by [climate scientists](#) and climate journalists. We then used their feedback to explain those terms in everyday language. With the help of the [United Nations Foundation](#), we chose eight terms from reports written by the Intergovernmental Panel on Climate Change.

Here's a guide that may help you to follow the news about climate change. The explanation of each term starts with the technical definition from the IPCC. The text that follows puts it into plain language.

## 1. Mitigation

IPCC definition: Mitigation (of climate change): a human intervention to reduce emissions or enhance the sinks of greenhouse gases.

Translation: Stopping climate change from getting worse.

When people talk about "mitigation" they often focus on [fossil fuels](#)—coal, oil and natural gas—used to make electricity and run cars, buses and planes. Fossil fuels produce greenhouse gases, including [carbon dioxide](#). When these gases are released, they linger in the atmosphere. [They then trap heat and warm the planet.](#)

Some ways to mitigate climate change include using solar and [wind power](#) instead of coal-fired [power plants](#); making buildings, appliances and vehicles more energy efficient so they use less electricity and fuel; and designing cities so people have to drive less. Protecting forests and

planting trees also help because trees [absorb greenhouse gases from the atmosphere](#) and lock them away.

## 2. Adaptation

IPCC definition: In [human systems](#), the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate and its effects.

Translation: Making changes to live with the impacts of climate change.

[Climate change is already happening](#). Heat waves, wildfires and floods are getting worse. People will have to find ways to live with these threats. Los Angeles, for example, is [planting trees](#) to help people stay cooler. Coastal cities like Miami may need sea walls to protect against floods. More "adaptation" actions will be needed as climate change gets worse.

## 3. Carbon dioxide removal

IPCC definition: Carbon [dioxide](#) removal methods refer to processes that remove CO<sub>2</sub> from the atmosphere by either increasing biological sinks of CO<sub>2</sub> or using chemical processes to directly bind CO<sub>2</sub>. CDR is classified as a special type of mitigation.

Translation: Taking carbon dioxide out of the air.

The amount of carbon dioxide in the air has been increasing for many years. In 2019, there was [50% more](#) of it than in the late 1700s. Planting trees and restoring grasslands can remove carbon dioxide from the air. There are also carbon dioxide removal technologies that store it

underground or in concrete, but these are new and not widely used.

## 4. Carbon neutral

IPCC definition: Carbon neutrality is achieved when anthropogenic CO<sub>2</sub> emissions are balanced globally by anthropogenic carbon dioxide removals over a specified period. Carbon neutrality is also referred to as net-zero carbon dioxide emission.

Translation: Adding no net carbon dioxide into the air. This does not have to mean that you can't add any carbon dioxide. It means that if you do add carbon dioxide into the air you take out the same amount.

The IPCC warns that the world needs to be [carbon neutral by 2050](#) to avoid a serious climate crisis. This means using both "mitigation" to reduce the amount of carbon dioxide added to the air and "carbon dioxide removal" to take carbon dioxide out of the air.

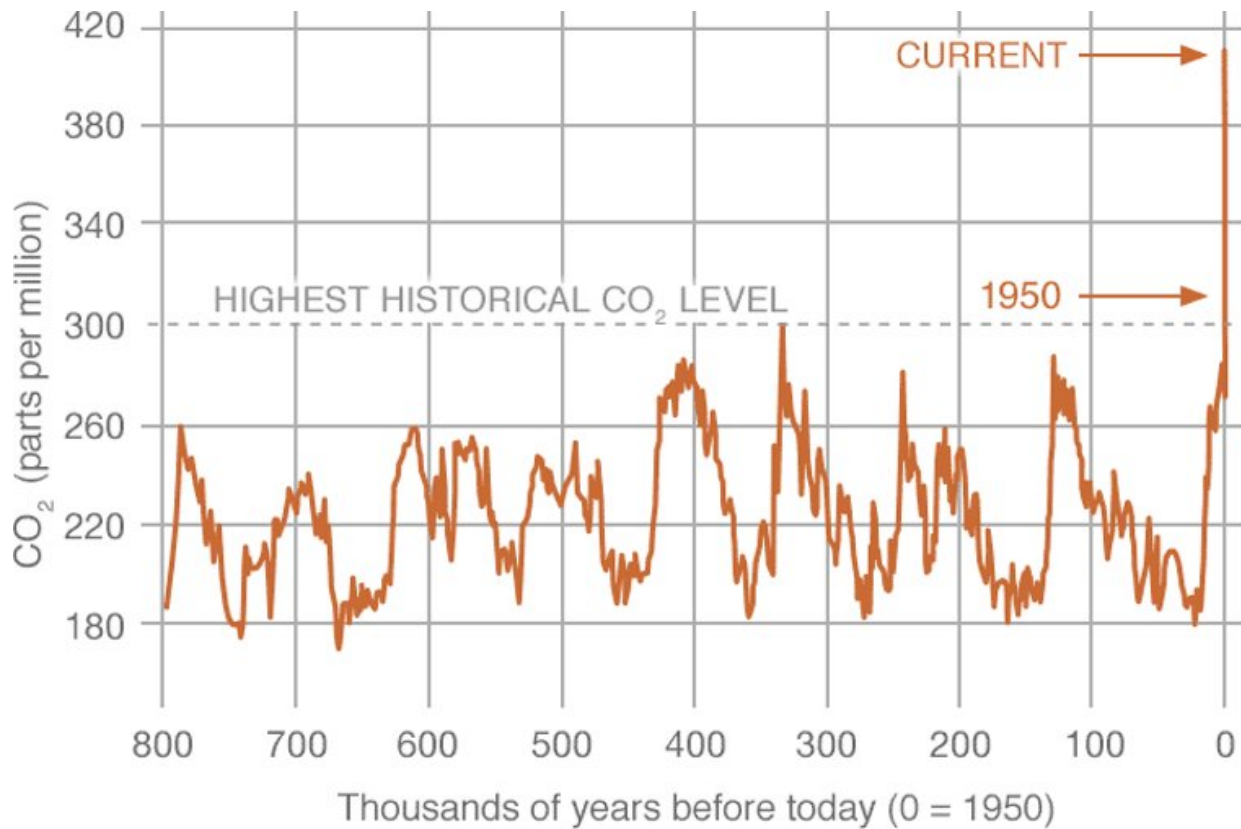
## 5. Tipping point

IPCC definition: A level of change in system properties beyond which a system reorganizes, often abruptly, and does not return to the initial state even if the drivers of the change are abated. For the climate system, it refers to a critical threshold when global or regional climate changes from one stable state to another stable state.

Translation: When it is too late to stop effects of climate change.

One of the most talked-about tipping points involves the collapse of the West Antarctic ice sheet. Some research suggests it [may have already started happening](#). West Antarctica alone holds enough ice to raise sea levels worldwide by [about 11 feet](#) (3.3 meters). If all glaciers and ice

caps melt, sea levels will end up rising about [230 feet](#) (70 meters).



Levels of carbon dioxide in the air have risen quickly over the past 70 years.  
Credit: NOAA

## 6. Unprecedented transition

IPCC definition for "transition": The process of changing from one state or condition to another in a given period of time. Transition can be in individuals, firms, cities, regions and nations and can be based on incremental or transformative change.

Translation: Making big changes together to stop climate change—in a

way that has not been seen before.

In 2015, [countries around the world agreed](#) to try to keep the planet from warming more than 1.5 degrees Celsius (2.7 F). Among the [biggest sources of global warming](#) are coal-fired power plants. Quickly shifting the world to renewable energy, such as wind and solar power, would be an unprecedented transition. Without big changes, climate change could make the world unlivable.

## 7. Sustainable development

IPCC definition: Development that meets the needs of the present without compromising the ability of future generations to meet their own needs and balances social, economic and environmental concerns.

Translation: Living in a way that is good for people alive today and for people in the future.

The United Nations has shared "[sustainable development goals.](#)" These goals aim to help countries grow in ways that are healthy for both people and the environment. Producing more [carbon](#) dioxide than the planet can manage is an example of unsustainable development that's [causing climate change](#).

## 8. Abrupt change

IPCC definition: Abrupt climate change refers to a large-scale change in the climate system that takes place over a few decades or less, persists (or is anticipated to persist) for at least a few decades and causes substantial disruptions in human and natural systems.

Translation: A change in climate that happens much faster than it

normally would.

Our world is changing quickly as a result of climate change. Wildfires are raging in parts of the Western U.S. [that were once too wet to burn](#). Coral reefs are [dying as the ocean is getting warmer](#). These changes would not have happened so quickly—or at all—were it not for [climate change](#).

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