Glossary of key terms

Alternative fuels
Fuels not derived from petroleum. Examples include ethanol, natural gas, hydrogen, coal-derived liquid fuels, biodiesel, propane and electricity (coal, nuclear, wind, solar etc.).

Adaptation
Adjustment in natural or human systems to a new or changing environment. Adaptation to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

Anthropogenic
Made by people or resulting from human activities.

Biomass
An energy resource derived from organic matter. These include wood, agricultural waste and other living-cell material that can be burned to produce heat energy. They also include algae, sewage and other organic substances that may be used to make energy through chemical processes.

Cap and trade
A regulation mechanism that sets an overall limit on the emission of a certain pollutant, but allows companies that can easily reduce emissions to sell credits to other companies for which such reduction would be difficult. The cap ensures that emissions will not exceed an overall desired amount.

Carbon dioxide (CO_2)
A naturally occurring gas, and also a by-product of burning fossil fuels and biomass, as well as land-use changes such as deforestation and other industrial processes. It is the principal anthropogenic greenhouse gas.

Carbon footprint
A measure of the impact human activities have on the environment in terms of the amount of greenhouse gases produced, measured in units of carbon dioxide.

Climate
Weather patterns and conditions (temperature, precipitation, wind, etc.) in a particular region averaged over a long time period, typically 30 years.

Climate change
A statistically significant variation in either the average state of the climate or in its variability, persisting for an extended period of time (decades or longer).

Climate model
A quantitative way of representing the interactions of the atmosphere, oceans, land surface, and ice. Models can range from relatively simple to extremely complex and comprehensive.

Emissions
Gases, particles and materials released or emitted into the environment, often due to combustion or burning of a fuel.

Fossil fuels
Natural fuels such as oil, coal, and natural gas that took millions of years to form in the earth. They are rich in the elements carbon and hydrogen and come from the remains of ancient living things.

Global warming
An increase in the average overall temperature of the atmosphere near the Earth's surface, which can contribute to changes in global climate patterns. Global warming can occur from a variety of causes, both natural and human induced.

Greenhouse effect
Trapping and build-up of heat in the atmosphere near the Earth's surface. Some of the heat flowing toward space from the Earth's surface is absorbed by certain gases in the atmosphere and then re-radiated back toward the Earth's surface. If the atmospheric concentrations of these greenhouse gases rise, the average temperature of the lower atmosphere gradually increases.

Greenhouse gas (GHG)
Gases in our atmosphere that absorb heat energy (infrared radiation) that is given off by the Earth. The gases heat up, and re-radiate some of that heat energy back to the Earth. Carbon dioxide is the principal GHG. Other examples include water vapor, methane and nitrous oxide.

Intergovernmental Panel on Climate Change (IPCC)
The United Nations Environment Programme and the World Meteorological Organization jointly established the IPCC in 1988. The purpose of the IPCC is to assess information in the scientific and technical literature related to the issue of climate change. The IPCC draws hundreds of the world's expert scientists as authors and thousands as expert reviewers from some 60 nations. They have helped the IPCC to prepare periodic assessments of the scientific underpinnings for understanding global climate change and its consequences.

Mitigation
A human intervention to reduce the sources or enhance the sinks of greenhouse gases.

Renewable
A resource that renews or replenishes itself on a short time scale. Examples of renewable energy include solar, wind, geothermal, hydropower, and biomass.

Sequestration
Opportunities to remove atmospheric carbon dioxide, either through biological processes (e.g. plants and trees), or geological processes through storage of carbon dioxide in underground reservoirs.

Sink
Any process, activity or mechanism which removes a greenhouse gas, an aerosol or their precursors, from the atmosphere.

Sustainability
Although there is no commonly accepted definition of sustainability, one of the most frequently cited is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Many definitions also reference environmental, social and economic considerations.

Sources

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