



**International  
Institute for  
Environment and  
Development**

## Glossary of Climate Change for Parliamentarians

### A

- **Abatement:** Refers to reducing the degree or intensity of greenhouse-gas emissions.
- **Accession:** An act whereby a State becomes a Party to a treaty already negotiated and signed by other States; has the same legal effect as ratification.
- **Ad hoc Working Group on further commitments for Annex I Parties under the Kyoto Protocol (AWG-KP):** The AWG-KP was established by Parties to the Protocol in Montreal in 2005 to consider further commitments of industrialized countries under the Kyoto Protocol for the period beyond 2012, and is set to complete its work in Copenhagen in 2009.
- **Ad hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA):** The AWG-LCA was established in Bali in 2007 to conduct negotiations on a strengthened international deal on climate change, set to be concluded in Copenhagen in 2009.
- **Adaptation Fund:** The Adaptation Fund was established to finance concrete adaptation projects and programmes in developing countries that are Parties to the Kyoto Protocol. The Fund is to be financed with a share of proceeds from clean development mechanism (CDM) project activities and receive funds from other sources. For more information see: [http://unfccc.int/cooperation\\_and\\_support/financial\\_mechanism/items/3659.php](http://unfccc.int/cooperation_and_support/financial_mechanism/items/3659.php).
- **Adaptation:** Adaptation to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects.
- **Adaptive Capacity:** The ability of a system (e.g. ecosystem) to adapt to climate change or other environmental disturbances. This may mean moderating potential damages, taking advantage of opportunities or coping with the consequences. In discussions on global warming adaptive capacity often refers to a country. In this case it is currently much lower in developing countries, consequential to poverty.

- **Afforestation:** Planting of new forests on lands that historically have not contained forests.
- **Alliance of Small Island States (AOSIS):** An ad hoc coalition of low-lying and island countries. These nations are particularly vulnerable to rising sea levels and share common positions on climate change. The 43 members and observers are American Samoa, Antigua and Barbuda, Bahamas, Barbados, Belize, Cape Verde, Comoros, Cook Islands, Cuba, Cyprus, Dominica, Dominican Republic, Federated States of Micronesia, Fiji, Grenada, Guam, Guinea-Bissau, Guyana, Haiti, Jamaica, Kiribati, Maldives, Marshall Islands, Mauritius, Nauru, Netherlands Antilles, Niue, Palau, Papua New Guinea, Samoa, Sao Tome and Principe, Seychelles, Singapore, Solomon Islands, St. Kitts & Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Tonga, Trinidad and Tobago, Tuvalu, US Virgin Islands, and Vanuatu.
- **Alternative Energy:** Energy derived from nontraditional sources (e.g., compressed natural gas, solar, hydroelectric, wind).
- **Amendment:** A modification by the COP to the text of the Convention. If consensus cannot be reached, an amendment must win three-quarters of the votes of all Parties present and casting ballots.
- **Annex I Countries/Parties:** Group of countries included in Annex I (as amended in 1998) to the United Nations Framework Convention on Climate Change (UNFCCC), including all the developed countries in the Organization of Economic Co-operation and Development (OECD), and economies in transition.
- **Annex II Parties:** The countries listed in Annex II to the Convention which have a special obligation to provide financial resources and facilitate technology transfer to developing countries. Annex II Parties include the 24 original OECD members plus the European Union.
- **Anthropogenic:** Made by people or resulting from human activities. Usually used in the context of emissions that are produced as a result of human activities.

## B

- **Base Year:** Targets for reducing GHG emissions are often defined in relation to a base year. In the Kyoto Protocol, 1990 is the base year for most countries for the major GHGs; 1995 can be used as the base year for some of the minor GHGs.
- **Baselines:** The baseline estimates of population, GDP, energy use and hence resultant greenhouse gas emissions without climate policies, determine how big a reduction is required, and also what the impacts of climate change without policy will be.
- **Basket of Gases:** This refers to the group six of greenhouse gases regulated under the Kyoto Protocol. They are listed in Annex A of the Kyoto Protocol and include: carbon

dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF<sub>6</sub>).

- **Biodiversity:** The variety of organisms found within a specified geographic region.
- **Biomass fuels or biofuels:** A fuel produced from dry organic matter or combustible oils produced by plants. These fuels are considered renewable as long as the vegetation producing them is maintained or replanted, such as firewood, alcohol fermented from sugar, and combustible oils extracted from soy beans. Their use in place of fossil fuels cuts greenhouse gas emissions because the plants that are the fuel sources capture carbon dioxide from the atmosphere.
- **Biomass:** Total dry weight of all living organisms that can be supported at each trophic level in a food chain. Also, materials that are biological in origin, including organic material (both living and dead) from above and below ground, for example, trees, crops, grasses, tree litter, roots, and animals and animal waste.
- **Biosphere:** The part of the Earth system comprising all ecosystems and living organisms, in the atmosphere, on land (terrestrial biosphere) or in the oceans (marine biosphere), including derived dead organic matter, such as litter, soil organic matter and oceanic detritus.
- **Black Carbon Aerosols:** Particles of carbon in the atmosphere produced by inefficient combustion of fossil fuels or biomass. Black carbon aerosols absorb light from the sun, shading and cooling the Earth's surface, but contribute to significant warming of the atmosphere (see "radiative forcing").
- **Bunker fuels:** A term used to refer to fuels consumed for international marine and air transport.

## C

- **Capacity building:** In the context of climate change, the process of developing the technical skills and institutional capability in developing countries and economies in transition to enable them to address effectively the causes and results of climate change.
- **Carbon capture and storage (CCS):** The process of capturing greenhouse gas pollution from coal or gas power plants and storing it underground instead of releasing it into the atmosphere. Could reduce emissions by up to 70-80% from a power plant.
- **Carbon Dioxide Equivalent:** A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential (GWP).

- **Carbon credit:** Carbon credit is used in emission trading schemes (see emissions trading), where one credit gives the owner the right to emit one tonne of CO<sub>2</sub>.
- **Carbon Dioxide:** A naturally occurring gas, and also a by-product of burning fossil fuels and biomass, as well as land-use changes and other industrial processes. It is the principal anthropogenic greenhouse gas that affects the Earth's radiative balance. It is the reference gas against which other greenhouse gases are measured and therefore has a Global Warming Potential.
- **Carbon market:** A term for a trading system through which countries may buy or sell units of greenhouse-gas emissions in an effort to meet their national limits on emissions, either under the Kyoto Protocol or under other agreements, such as that among member states of the European Union.
- **Carbon Neutral:** where an individual or company's carbon emissions are effectively reduced to zero through a combination of reducing energy consumption, using renewable energy and offsetting the remainder by (for example) planting trees to absorb carbon dioxide from the atmosphere.
- **Carbon offsetting:** where an investment is made in a project that will lead to the prevention or removal of carbon dioxide from the atmosphere (for example, planting trees or building renewable energy power stations to avoid the construction of coal ones).
- **Carbon price:** Carbon price puts a price on greenhouse gas emissions to create a disincentive for their release (and incentive to capture or avoid them). A carbon price can be imposed through a carbon tax, an emissions trading scheme (which fixes emission level and allows price to vary) or a variety of other mechanisms.
- **Carbon sequestration:** The process of removing carbon from the atmosphere and depositing it in a reservoir.
- **Carbon Taxes:** A surcharge on the carbon content of oil, coal, and gas that discourages the use of fossil fuels and aims to reduce carbon dioxide emissions.
- **CBD:** Convention on Biological Diversity.
- **Certified emission reductions (CER):** A Kyoto Protocol unit equal to 1 metric tonne of CO<sub>2</sub> equivalent. CERs are issued for emission reductions from CDM project activities. Two special types of CERs called temporary certified emission reduction (tCERs) and long-term certified emission reductions (lCERs) are issued for emission removals from afforestation and reforestation CDM projects.
- **CH<sub>4</sub>:** Methane.

- **Chlorofluorocarbons (CFCs):** CFCs are synthetic industrial gases composed of chlorine, fluorine, and carbon. They have been used as refrigerants, aerosol propellants, cleaning solvents and in the manufacture of plastic foam. There are no natural sources of CFCs. CFCs have an atmospheric lifetime of decades to centuries, and they have 100-year "global warming potentials" thousands of times that of CO<sub>2</sub>, depending on the gas. In addition to being greenhouse gases, CFCs also contribute to ozone depletion in the stratosphere and are controlled under the Montreal Protocol.
- **Clean Development Mechanism (CDM):** A mechanism under the Kyoto Protocol through which developed countries may finance greenhouse-gas emission reduction or removal projects in developing countries, and receive credits for doing so which they may apply towards meeting mandatory limits on their own emissions.
- **Climate Change:** Climate change refers to any significant change in measures of climate (such as temperature, precipitation, or wind) lasting for an extended period.
- **Climate Sensitivity:** The average global air surface temperature change resulting from a doubling of pre-industrial atmospheric CO<sub>2</sub> concentrations. The IPCC estimates climate sensitivity at 1.5-4.5°C (2.7-8.1°F).
- **Climate Variability:** Refers to changes in patterns, such as precipitation patterns, in the weather and climate.
- **Climate:** Climate is usually defined as the "average weather". Climate in a wider sense is the state, including a statistical description, of the climate system.
- **CO<sub>2</sub>:** Carbon dioxide.
- **Co-Benefit:** The benefits of policies that are implemented for various reasons at the same time.
- **Commitment Period:** The period under the Kyoto Protocol during which Annex I Parties' GHG emissions, averaged over the period, must be within their emission targets. The first commitment period runs from January 1, 2008 to December 31, 2012.
- **Compliance Committee:** A committee that helps facilitate, promote and enforce on compliance with the provisions of the Kyoto Protocol. It has 20 members with representation spread among various regions, small-island developing states, Annex I and non-Annex I parties, and functions through a plenary, a bureau, a facilitative branch and an enforcement branch.
- **Compliance:** Fulfilment by countries/businesses/individuals of emission and reporting commitments under the UNFCCC and the Kyoto Protocol.

- **Concentration:** Amount of a chemical in a particular volume or weight of air, water, soil, or other medium.
- **Conference of the Parties (COP):** The supreme body of the Convention. It currently meets once a year to review the Convention's progress. The word "conference" is not used here in the sense of "meeting" but rather of "association". The first COP session was held in Berlin, Germany, in 1995 and it is expected to continue meeting on a yearly basis. The COP's role is to promote and review the implementation of the Convention and periodically review existing commitments in light of the Convention's objective, new scientific findings, and the effectiveness of national climate change programs.
- **Conference of the Parties serving as the Meeting of the Parties (CMP):** The Convention's supreme body is the COP, which serves as the meeting of the Parties to the Kyoto Protocol. The sessions of the COP and the CMP are held during the same period to reduce costs and improve coordination between the Convention and the Protocol.
- **Countries with Economies in Transition (EIT):** Those Central and East European countries and former republics of the Soviet Union in transition from state-controlled to market economies.
- **CSD:** United Nations Commission on Sustainable Development.

## D

- **Dangerous climate change:** A level of climate change that will have severe impacts on societies, economies and the natural world.
- **Decision:** A formal agreement that (unlike a resolution) leads to binding actions. It becomes part of the agreed body of decisions that direct the work of the COP.
- **Declaration:** A non-binding political statement made by ministers attending a major meeting (e.g. the Geneva Ministerial Declaration of COP-2).
- **Deforestation:** Those practices or processes that result in the conversion of forested lands for non-forest uses.
- **Desertification:** Land degradation in arid, semi-arid, and dry sub-humid areas resulting from various factors, including climatic variations and human activities.
- **Drought:** A period of abnormally dry weather long enough to cause serious shortages of water for agriculture and other needs in the affected area.

## E

- **Ecosystem:** A community of organisms and its physical environment.
- **Emission Permit:** Tradable allocation of entitlements by a government to an individual firm to emit a specific amount of a substance.
- **Emissions trading:** One of the three Kyoto mechanisms, by which an Annex I Party may transfer Kyoto Protocol units to or acquire units from another Annex I Party. An Annex I Party must meet specific eligibility requirements to participate in emissions trading.
- **Emissions:** The release of substances (e.g., greenhouse gases) into the atmosphere.
- **Energy Efficiency:** using less energy to provide the same amount of heating, cooling or other energy service. Usually refers to cutting energy wastage (like turning off unused lights, plant and equipment).
- **Energy Intensity:** The ratio of energy consumption to a measure of the demand for services (e.g., number of buildings, total floorspace, floorspace-hours, number of employees, or constant dollar value of Gross Domestic Product for services).
- **Energy Resources:** The available supply and price of fossil and alternative resources will play a huge role in estimating how much a greenhouse gas constraint will cost. In the U.S. context, natural gas supply (and thus price) is particularly important, as it is expected to be a transition fuel to a lower carbon economy.
- **Enhanced Greenhouse Effect:** The concept that the natural greenhouse effect has been enhanced by anthropogenic emissions of greenhouse gases. Increased concentrations of carbon dioxide, methane, and nitrous oxide, chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>), nitrogen trifluoride (NF<sub>3</sub>), and other photochemically important gases caused by human activities such as fossil fuel consumption, trap more infra-red radiation, thereby exerting a warming influence on the climate.
- **Entry Into Force:** The point at which international climate change agreements become binding. The United Nations Framework Convention on Climate Change (UNFCCC) has entered into force. In order for the Kyoto Protocol to do so as well, 55 Parties to the Convention must ratify (approve, accept, or accede to) the Protocol, including Annex I Parties accounting for 55 percent of that group's carbon dioxide emissions in 1990. As of June 2003, 110 countries had ratified the Protocol, representing 43.9 percent of Annex I emissions.
- **European Community:** As a regional economic integration organization, the European Community can be and is a Party to the UNFCCC; however, it does not have a separate vote from its members (Austria, Belgium, Denmark, Finland, France,

Germany, Greece, Ireland, Italy, Luxemburg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom).

- **European Union (EU):** As a regional economic integration organization, the EU is a Party to both the Convention and the Kyoto Protocol. However, it does not have a separate vote from its member states. Because the EU signed the Convention when it was known as the EEC (European Economic Community), the EU retains this name for all formal Convention-related purposes. Members are Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.

## F

- **FAO:** Food and Agriculture Organization of the United Nations.
- **Financial Mechanism:** Developed country Parties (Annex II Parties) are required to provide financial resources to assist developing country Parties implement the Convention. To facilitate this, the Convention established a financial mechanism to provide funds to developing country Parties. The Parties to the Convention assigned operation of the financial mechanism to the Global Environment Facility (GEF) on an on-going basis, subject to review every four years. The financial mechanism is accountable to the COP.
- **Fluorocarbons:** Carbon-fluorine compounds that often contain other elements such as hydrogen, chlorine, or bromine. Common fluorocarbons include chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs).

## G

- **GATT:** General Agreement on Tariffs and Trade.
- **GCOS:** Global Climate Observing System.
- **GDP:** Gross Domestic Product, a measure of overall economic activity.
- **Geosphere:** The soils, sediments, and rock layers of the Earth's crust, both continental and beneath the ocean floors.
- **Glacier:** A multi-year surplus accumulation of snowfall in excess of snowmelt on land and resulting in a mass of ice at least 0.1 km<sup>2</sup> in area that shows some evidence of movement in response to gravity.
- **Global Environment Facility (GEF):** The GEF is an independent financial organization that provides grants to developing countries for projects that benefit the global environment and promote sustainable livelihoods in local communities. The Parties to the Convention assigned operation of the financial mechanism to the Global Environment Facility (GEF) on an on-going basis, subject to review every



four years. The financial mechanism is accountable to the COP. For more information see: <http://www.thegef.org/>.

- **Global warming potential (GWP):** An index representing the combined effect of the differing times greenhouse gases remain in the atmosphere and their relative effectiveness in absorbing outgoing infrared radiation.
- **Global Warming:** Global warming is an average increase in the temperature of the atmosphere near the Earth's surface and in the troposphere, which can contribute to changes in global climate patterns.
- **Greenhouse Effect:** Trapping and build-up of heat in the atmosphere (troposphere) near the Earth's surface. Some of the heat flowing back toward space from the Earth's surface is absorbed by water vapor, carbon dioxide, ozone, and several other gases in the atmosphere and then reradiated back toward the Earth's surface. If the atmospheric concentrations of these greenhouse gases rise, the average temperature of the lower atmosphere will gradually increase.
- **Greenhouse gases (GHGs):** The atmospheric gases responsible for causing global warming and climate change. The major GHGs are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O). Less prevalent --but very powerful -- greenhouse gases are hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF<sub>6</sub>).
- **Group of 77 (G-77) and China:** A large negotiating alliance of developing countries that focuses on numerous international topics, including climate change. The G-77 was founded in 1967 under the auspices of the United Nations Conference on Trade and Development (UNCTAD). It seeks to harmonize the negotiating positions of its 131 member states.
- **GRULAC:** Group of Latin American and Caribbean States.

## H

- **HFC:** Hydrofluorocarbons.
- **Hot Air:** A situation in which emissions (of a country, sector, company or facility) are well below a target due to the target being above emissions that materialized under the normal course of events (i.e. without deliberate emission reduction efforts). Hot air can result from over-optimistic projections of growth. Emissions are often projected to grow roughly in proportion to GDP, and GDP is often projected to grow at historic rates. If a recession occurs and fuel use declines, emissions may be well below targets since targets are generally set in relation to emission projections. If emission trading is allowed, an emitter could sell the difference between actual emissions and emission targets. Such emissions are considered hot air because they do not represent reductions from what would have occurred in the normal course of events.

- **Hydrofluorocarbons (HFCs):** HFCs are synthetic industrial gases, primarily used in refrigeration and semi-conductor manufacturing as commercial substitutes for chlorofluorocarbons (CFCs). There are no natural sources of HFCs. The atmospheric lifetime of HFCs is decades to centuries, and they have 100-year "global warming potentials" thousands of times that of CO<sub>2</sub>, depending on the gas. HFCs are among the six greenhouse gases to be curbed under the Kyoto Protocol.

## I

- **IEA:** International Energy Agency.
- **IGO:** Intergovernmental organization.
- **IMO:** International Maritime Organization.
- **Implementation:** Actions (legislation or regulations, judicial decrees, or other actions) that governments take to translate international accords into domestic law and policy.
- **INC:** Intergovernmental Negotiating Committee for the UNFCCC (1990-1995).
- **Incentive-based Regulation:** A regulation that uses the economic behavior of firms and households to attain desired environmental goals. Incentive-based programs involve taxes on emissions or tradable emission permits. The primary strength of incentive-based regulation is the flexibility it provides the polluter to find the least costly way to reduce emissions.
- **Intergenerational Equity:** The fairness of the distribution of the costs and benefits of a policy when costs and benefits are borne by different generations. In the case of a climate change policy the impacts of inaction in the present will be felt in future generations.
- **Intergovernmental Panel on Climate Change (IPCC):** Established in 1988 by the World Meteorological Organization and the UN Environment Programme, the IPCC surveys world-wide scientific and technical literature and publishes assessment reports that are widely recognized as the most credible existing sources of information on climate change. The IPCC also works on methodologies and responds to specific requests from the Convention's subsidiary bodies. The IPCC is independent of the UNFCCC Convention.

## J

- **Joint Implementation (JI):** One of the three market mechanisms established by the Kyoto Protocol. Joint Implementation occurs when an Annex B country invests in an emissions reduction or sink enhancement project in another Annex B country to earn emission reduction units (ERUs).

## K

- **Kyoto Mechanisms:** The Kyoto Protocol creates three market-based mechanisms that have the potential to help countries reduce the cost of meeting their emissions reduction targets. These mechanisms are Joint Implementation (Article 6), the Clean Development Mechanisms (Article 17).
- **Kyoto Protocol:** An international agreement standing on its own, and requiring separate ratification by governments, but linked to the UNFCCC. The Kyoto Protocol, among other things, sets binding targets for the reduction of greenhouse-gas emissions by industrialized countries.

## L

- **Land Use, Land-Use Change and Forestry (LULUCF):** Land uses and land-use changes can act either as sinks or as emission sources. It is estimated that approximately one-fifth of global emissions result from LULUCF activities. The Kyoto Protocol allows Parties to receive emissions credit for certain LULUCF activities that reduce net emissions.
- **Landfill:** Land waste disposal site in which waste is generally spread in thin layers, compacted, and covered with a fresh layer of soil each day.
- **Least Developed Countries (LDCs):** The World's poorest countries. The criteria currently used by the Economic and Social Council (ECOSOC) for designation as an LDC include low income, human resource weakness and economic vulnerability. Currently 50 countries have been designated by the UN General Assembly as LDCs.
- **Least Developed Country Fund (LDCF):** The LDCF is a fund established to support a work programme to assist Least Developed Country Parties to carry out, inter alia, the preparation and implementation of national adaptation programmes of action (NAPAs). The Global Environment Facility, as the entity that operates the financial mechanism of the Convention, has been entrusted to operate this fund. For more information see:  
[http://unfccc.int/cooperation\\_and\\_support/financial\\_mechanism/least\\_developed\\_country\\_fund/items/3660.php](http://unfccc.int/cooperation_and_support/financial_mechanism/least_developed_country_fund/items/3660.php) .

## M

- **Market Benefits:** Benefits of a climate policy that can be measured in terms of avoided market impacts such as changes in resource productivity (e.g., lower agricultural yields, scarcer water resources) and damages to human-built environment (e.g., coastal flooding due to sea-level rise).
- **Methane (CH<sub>4</sub>):** A hydrocarbon that is a greenhouse gas with a global warming potential most recently estimated at 23 times that of carbon dioxide (CO<sub>2</sub>). Methane is produced through anaerobic (without oxygen) decomposition of waste in landfills,

animal digestion, decomposition of animal wastes, production and distribution of natural gas and petroleum, coal production, and incomplete fossil fuel combustion.

- **Mitigation:** In the context of climate change, a human intervention to reduce the sources or enhance the sinks of greenhouse gases. Examples include using fossil fuels more efficiently for industrial processes or electricity generation, switching to solar energy or wind power, improving the insulation of buildings, and expanding forests and other "sinks" to remove greater amounts of carbon dioxide from the atmosphere.
- **Montreal Protocol:** (on Substances that Deplete the Ozone Layer) An international agreement that entered into force in January 1989 to phase out the use of ozone-depleting compounds such as methyl chloroform, carbon tetrachloride, and CFCs. CFCs are potent greenhouse gases which are not regulated by the Kyoto Protocol since they are covered by the Montreal Protocol.

## N

- **National Action Plans:** Plans submitted to the Conference of the Parties (COP) by all Parties outlining the steps that they have adopted to limit their anthropogenic GHG emissions. Countries must submit these plans as a condition of participating in the UN Framework Convention on Climate Change and, subsequently, must communicate their progress to the COP regularly.
- **National adaptation programmes of action (NAPAs):** Documents prepared by least developed countries (LDCs) identifying urgent and immediate needs for adapting to climate change. The NAPAs are then presented to the international donor community for support.
- **National communication:** A document submitted in accordance with the Convention (and the Protocol) by which a Party informs other Parties of activities undertaken to address climate change. Most developed countries have now submitted their fourth national communications; most developing countries have completed their first national communication and are in the process of preparing their second.
- **National delegation:** One or more officials empowered to represent and negotiate on behalf of a government.
- **Natural Gas:** Underground deposits of gases consisting of 50 to 90 percent methane (CH<sub>4</sub>) and small amounts of heavier gaseous hydrocarbon compounds such as propane (C<sub>3</sub>H<sub>8</sub>) and butane (C<sub>4</sub>H<sub>10</sub>).
- **Nitrous Oxide (N<sub>2</sub>O):** N<sub>2</sub>O is among the six greenhouse gases to be curbed under the Kyoto Protocol. N<sub>2</sub>O is produced by natural processes, but there are also substantial emissions from human activities such as agriculture and fossil fuel combustion. The atmospheric lifetime of N<sub>2</sub>O is approximately 100 years, and its 100-year GWP is currently estimated to be 296 times that of CO<sub>2</sub>.

- **Non-Annex I Parties:** Refers to countries that have ratified or acceded to the United Nations Framework Convention on Climate Change that are not included in Annex I of the Convention.
- **Non-governmental organizations (NGOs):** Organizations that are not part of a governmental structure. They include environmental groups, research institutions, business groups, and associations of urban and local governments. Many NGOs attend climate talks as observers. To be accredited to attend meetings under the Convention, NGOs must be non-profit.
- **Non-Party:** A state that has not ratified the Convention but attends meetings as an observer.

## O

- **Observers:** Agencies, non-governmental organizations, and Governments not Parties to the Convention which are permitted to attend, but not vote, at meetings of the COP and its subsidiary bodies. Observers may include the United Nations and its specialized agencies; other intergovernmental organizations such as the International Atomic Energy Agency; and accredited non-governmental organizations (NGOs).
- **OECD: Organisation for Economic Co-operation and Development.**
- **OPEC:** Organization of Petroleum Exporting Countries.
- **Ozone Depleting Substance (ODS):** A family of man-made compounds that includes, but are not limited to, chlorofluorocarbons (CFCs), bromofluorocarbons (halons), methyl chloroform, carbon tetrachloride, methyl bromide, and hydrochlorofluorocarbons (HCFCs). These compounds have been shown to deplete stratospheric ozone, and therefore are typically referred to as ODSs.
- **Ozone Layer:** The layer of ozone that begins approximately 15 km above Earth and thins to an almost negligible amount at about 50 km, shields the Earth from harmful ultraviolet radiation from the sun. The highest natural concentration of ozone (approximately 10 parts per million by volume) occurs in the stratosphere at approximately 25 km above Earth.

## P

- **Parts Per Billion (ppb):** Number of parts of a chemical found in one billion parts of a particular gas, liquid, or solid mixture.
- **Parts Per Million (ppm):** Number of parts of a chemical found in one million parts of a particular gas, liquid, or solid.

- **Party:** A state (or regional economic integration organization such as the European Union) that agrees to be bound by a treaty and for which the treaty has entered into force.
- **Photosynthesis:** The process by which plants take CO<sub>2</sub> from the air (or bicarbonate in water) to build carbohydrates, releasing O<sub>2</sub> in the process. There are several pathways of photosynthesis with different responses to atmospheric CO<sub>2</sub> concentrations.
- **Policies and measures (PAMs):** A frequently used phrase -- sometimes abbreviated as PAMs -- referring to the steps taken or to be taken by countries to reduce greenhouse-gas emissions under the UNFCCC and the Kyoto Protocol. Some possible policies and measures are listed in the Protocol and could offer opportunities for intergovernmental cooperation.
- **Polluter Pays Principle (PPP):** The principle that countries should in some way compensate others for the effects of pollution that they (or their citizens) generate or have generated.
- **Protocol:** An international agreement linked to an existing convention, but as a separate and additional agreement which must be signed and ratified by the Parties to the convention concerned. Protocols typically strengthen a convention by adding new, more detailed commitments.

## Q

- **Quantified Emissions Limitation and Reduction Commitments (QELROs):** Legally binding targets and timetables under the Kyoto Protocol for the limitation or reduction of greenhouse-gas emissions by developed countries.

## R

- **Ratification:** After signing the UNFCCC or the Kyoto Protocol, a country must ratify it, often with the approval of its parliament or other legislature. In the case of the Kyoto Protocol, a Party must deposit its instrument of ratification with the UN Secretary General in New York.
- **Recycling:** Collecting and reprocessing a resource so it can be used again. An example is collecting aluminum cans, melting them down, and using the aluminum to make new cans or other aluminum products.
- **Reforestation:** Replanting of forests on lands that have previously contained forests but that have been converted to some other use.
- **Regional Groups:** The five regional groups meet privately to discuss issues and nominate bureau members and other officials. They are Africa, Asia, Central and

Eastern Europe (CEE), Latin America and the Caribbean (GRULAC), and the Western Europe and Others Group (WEOG).

- **Renewable Energy:** Energy obtained from sources such as geothermal, wind, photovoltaic, solar, and biomass.
- **Rio Conventions:** Three environmental conventions, two of which were adopted at the 1992 "Earth Summit" in Rio de Janeiro: the United Nations Framework Convention on Climate Change (UNFCCC), and the Convention on Biodiversity (CBD), while the third, the United Nations Convention to Combat Desertification (UNCCD), was adopted in 1994. The issues addressed by the three treaties are related -- in particular, climate change can have adverse effects on desertification and biodiversity -- and through a Joint Liaison Group, the secretariats of the three conventions take steps to coordinate activities to achieve common progress.

## S

- **Secretariat of the UN Framework Convention:** The United Nations staff assigned the responsibility of conducting the affairs of the UNFCCC. In 1996 the Secretariat moved from Geneva, Switzerland, to Bonn, Germany.
- **Sequestration:** Opportunities to remove atmospheric CO<sub>2</sub>, either through biological processes (e.g. plants and trees), or geological processes through storage of CO<sub>2</sub> in underground reservoirs.
- **Sink:** Any process, activity or mechanism which removes a greenhouse gas, an aerosol or a precursor of a greenhouse gas or aerosol from the atmosphere.
- **Soil Carbon:** A major component of the terrestrial biosphere pool in the carbon cycle. The amount of carbon in the soil is a function of the historical vegetative cover and productivity, which in turn is dependent in part upon climatic variables.
- **Source:** Any process or activity that results in the net release of greenhouse gases, aerosols, or precursors of greenhouse gases into the atmosphere.
- **Special Climate Change Fund (SCCF):** The SCCF was established to finance projects relating to adaptation; technology transfer and capacity building; energy, transport, industry, agriculture, forestry and waste management; and economic diversification. This fund should complement other funding mechanisms for the implementation of the Convention.
- **"Spill-over effects":** Reverberations in developing countries caused by actions taken by developed countries to cut greenhouse-gas emissions. For example, emissions reductions in developed countries could lower demand for oil and thus international oil prices, leading to more use of oil and greater emissions in



developing nations, partially off-setting the original cuts. Current estimates are that full-scale implementation of the Kyoto Protocol may cause 5 to 20 per cent of emissions reductions in industrialized countries to "leak" into developing countries.

- **Subsidiary Body for Implementation (SBI):** The SBI makes recommendations on policy and implementation issues to the COP and, if requested, to other bodies.
- **Subsidiary Body for Scientific and Technological Advice (SBSTA):** The SBSTA serves as a link between information and assessments provided by expert sources (such as the IPCC) and the COP, which focuses on setting policy.
- **Substitution:** The economic process of trading off inputs and consumption due to changes in prices arising from a constraint on greenhouse gas emissions. How the extremely flexible U.S. economy adapts to available substitutes and/or finds new methods of production under a greenhouse gas constraint will be critical in minimizing overall costs of reducing emissions.
- **Sustainable development:** Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

## T

- **Targets and Timetables:** Targets refer to the emission levels or emission rates set as goals for countries, sectors, companies, or facilities. When these goals are to be reached by specified years, the years at which goals are to be met are referred to as the timetables. In the Kyoto Protocol, a target is the percent reduction from the 1990 emissions baseline that the country has agreed to. On average, developed countries agreed to reduce emissions by 5.2% below 1990 emissions during the period 2008-2012, the first commitment period.
- **Technological Change:** How much technological change will be additionally induced by climate policies is a crucial, but not well quantified, factor in assessing the costs of long-term mitigation of greenhouse.
- **Technology transfer:** A broad set of processes covering the flows of know-how, experience and equipment for mitigating and adapting to climate change among different stakeholders:
- **Troposphere:** The lowest part of the atmosphere from the surface to about 10 km in altitude in mid-latitudes (ranging from 9 km in high latitudes to 16 km in the tropics on average) where clouds and "weather" phenomena occur. In the troposphere temperatures generally decrease with height.

## U

- **Umbrella group:** A loose coalition of non-European Union developed countries formed following the adoption of the Kyoto Protocol. Although there is no formal



membership list, the group usually includes Australia, Canada, Iceland, Japan, New Zealand, Norway, the Russian Federation, Ukraine, and the United States.

- **UN:** United Nations.
- **UNCCD:** United Nations Convention to Combat Desertification.
- **UNCTAD:** United Nations Conference on Trade and Development.
- **UNDP:** United Nations Development Programme.
- **UNECE:** United Nations Economic Commission for Europe.
- **UNEP:** United Nations Environment Programme.
- **United Nations Framework Convention on Climate Change (UNFCCC)**  
The Convention on Climate Change sets an overall framework for intergovernmental efforts to tackle the challenge posed by climate change. It recognizes that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases. The Convention enjoys near universal membership, with 194 countries having ratified.

## V

- **Vector-borne disease:** Disease that results from an infection transmitted to humans and other animals by blood-feeding arthropods, such as mosquitoes, ticks, and fleas. Examples of vector-borne diseases include Dengue fever, viral encephalitis, Lyme disease, and malaria.
- **Voluntary commitments:** A draft article considered during the negotiation of the Kyoto Protocol that would have permitted developing countries to voluntarily adhere to legally binding emissions targets. The proposed language was dropped in the final phase of the negotiations. The issue remains important for some delegations and may be discussed at upcoming sessions of the Conference of the Parties.
- **Vulnerability:** The degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate variation to which a system is exposed, its sensitivity, and its adaptive capacity.

## W

- **Wastewater:** Water that has been used and contains dissolved or suspended waste materials.

- **Water Vapor (H<sub>2</sub>O):** Water vapor is the primary gas responsible for the greenhouse effect. It is believed that increases in temperature caused by anthropogenic emissions of greenhouse gases will increase the amount of water vapor in the atmosphere, resulting in additional warming.
- **Weather:** Describes the short-term (i.e., hourly and daily) state of the atmosphere. Weather is not the same as climate.

#### **Sources**

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