



Climate Change: *A Glossary of Terms*

3rd Edition, January 2001



IPIECA

International Petroleum Industry
Environmental Conservation Association

Preface

The IPIECA glossary of climate change terms was first printed in June 1999. This third edition has been updated following the UNFCCC COP-6 in The Hague in November 2000. Some terms have been amended and the following terms or acronyms have been added:

Additionality (Environmental, Financial, Investment, Technological)	Eligibility
Adverse Effects	Executive Board
Ancillary Benefits	Forest Management
Anthropogenic Emissions	Fungibility
'Anyway' Tonnes	Inventories
Articles 5, 7 & 8	Kyoto Basket
CDM Reference Manual	Least Developed Countries
Climate Surprises	Liability
Co-benefits	The North/The South
Commitment Period Reserve	Operational Entities
Compliance	Public Participation
Contact Group	Positive & Negative lists
Contraction and Convergence	Rio+10
Dangerous GHG Concentration	Small Island Developing States
Demonstrable Progress	Summary for Policy Makers
Environmental Integrity Group	Technology Cooperation/ Transfer
	UN Regional Groups

Copyright ©IPIECA 2001

International Petroleum Industry Environmental Conservation Association
2nd Floor, Monmouth House,
87-93 Westbourne Grove, London W2 4UL
United Kingdom

IPIECA

Climate Change: a Glossary of Terms

Activities Implemented Jointly, or AIJ

The pilot phase for joint implementation (JI), as defined in Article 4.2(a) of the FCCC, that allows for project activity among developed countries (and their companies) and between developed and developing countries (and their companies). AIJ is intended to allow Parties to gain experience in jointly implemented project activities. There is no crediting for AIJ activity during the pilot phase. (See also ‘Joint Implementation’ and ‘Clean Development Mechanism’.) A decision remains to be taken on the future of AIJ projects and how they may relate to the Kyoto Mechanisms.

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.

Additionality

According to the Kyoto Protocol Articles on *Joint Implementation* and the *Clean Development Mechanism*, emissions reduction units (ERUs & CERs) will be awarded to project-based activities provided that the projects achieve reductions that are ‘*additional to those that otherwise would occur.*’ The issue is subject to further clarification by Parties. Some now make the distinction between different types of additionality criteria:

Environmental additionality—credits are allocated to projects purely on the level of greenhouse gas (GHG) reductions or limitations achieved;

Financial additionality—the funding for the project would need to be additional to existing ODA commitments from governments and GEF;

IPIECA

Climate Change: a Glossary of Terms

Investment additionality—in this approach to defining whether a project would qualify for credits, investors would need to demonstrate that the credits generated significantly improve the financial and/or commercial viability of the project activity;

Technological additionality—the technology used for the project activity shall be the best available for the circumstances of the host Party.

Ad Hoc Group on the Berlin Mandate, or AGBM

Working group established by the first meeting of the Conference of the Parties (COP-1) to develop a process aimed at strengthening developed countries' commitments to greenhouse gas reductions in the post-2000 period through the adoption of a protocol or other legal instrument. The AGBM convened for the last time at COP-3 in Kyoto.

Adverse Effects/Impacts

Adverse effects or impacts, refers to the potential negative effects of climate change as well as the impact of the implementation of response measures. Such effects or impacts include sea level rise, change in precipitation or other weather patterns, and reduced demand for fossil fuels or other energy intensive products. Impacts of climate change can be positive as well as negative. (See also 'Articles 4.8 & 4.9'.)

Afforestation

The act or process of establishing a forest on land that has not been forested in recent history.

AIJ

See 'Activities Implemented Jointly'.

Alliance of Small Island States, (AOSIS)

The Alliance of Small Island States is a coalition of small island and low-lying coastal countries that share similar development challenges and concerns about the environment, especially their vulnerability to the adverse effects of global climate change. It functions primarily as an ad hoc lobby and negotiating voice for Small Island Developing States (SIDS) within the United Nations system. AOSIS has a membership of 43 States and

observers, drawn from all oceans and regions of the world: Africa, Caribbean, Indian Ocean, Mediterranean, Pacific and South China Sea. AOSIS functions on the basis of consultation and consensus. The Alliance does not have a formal charter, and there is no regular budget, nor a secretariat. (AOSIS' own definition). AOSIS and other UN regional groupings are informally defined and their structure and definition can change.

Alternative Energy

Energy derived from non-fossil fuel sources.

Ancillary Benefits (*IPCC definition*)

The ancillary or side effects of policies aimed exclusively at climate change mitigation. Such policies have an impact not only on GHG emissions, but also on resource use efficiency (i.e. reduction in emissions of local and regional air pollutants associated with fossil fuel use) and on issues such as transportation, agriculture, land-use practices, employment and fuel security. Sometimes these benefits are referred to as 'ancillary impacts', to reflect the fact that in some cases the side effects may be negative. From the perspective of policies directed at abating local air pollution, GHG mitigation may in some cases also be considered to be an ancillary benefit, but these relationships are not considered in this assessment. (See also 'Co-benefits'.)

Annex I Countries

Annex I to the Climate Convention (UNFCCC) lists all the countries in the Organization of Economic Cooperation and Development (OECD) in 1990, plus countries with economies in transition, Central and Eastern Europe (excluding the former Yugoslavia and Albania). By default the other countries are referred to as Non-Annex I countries. Under Article 4.2 (a&b) of the Convention, Annex I countries commit themselves specifically to the aim of returning individually or jointly to their 1990 levels of GHG emissions by the year 2000.

Annex II Countries

Annex II to the Climate Convention lists all countries in the OECD in 1990. Under Article 4.2 (g) of the Convention, these countries are expected to provide

financial resources to assist developing countries comply with their obligations such as preparing national reports. Annex II countries are also expected to promote the transfer of environmentally sound technologies to developing countries.

Annex B Countries

Annex B in the Kyoto Protocol lists those developed countries that have agreed to a commitment to control their greenhouse gas emissions in the period 2008–12, including those in the OECD, Central and Eastern Europe and the Russian Federation. Not quite the same as Annex I, which also includes Turkey, and Belarus, while Annex B includes Croatia, Monaco, Liechtenstein and Slovenia.

Anthropogenic Emissions

Emissions of greenhouse gases associated with human activities. These include burning of fossil fuels for energy, deforestation, land-use changes and emissions of other GHGs.

'Anyway' Tonnes

The emissions reductions achieved from projects that would have occurred *anyway* (irrespective of a country's policies to control GHG emissions). Some have argued that projects which are profitable would have been implemented anyway and, therefore, are not additional and should not qualify for credits under the CDM or JI.

AOSIS

See 'Alliance of Small Island States.'

ARD Activities

Afforestation, Reforestation, Deforestation (see separate definitions). These are the three land-use change and forestry activities which are included in Article 3.3 of the Kyoto Protocol. Net changes resulting from these activities are allowed to be used by the Parties in meeting their GHG obligations under the Protocol in the first commitment period (they are required in the second commitment period). They are often referred to together as ARD. ARD Activities are the focus of Ch.4 of the IPCC Special Report on LULUCF.

Articles 4.8 & 4.9

Adverse impacts of climate change, the impact of measures taken to respond to climate change, and compensation for these impacts is referred to in Articles 4.8 & 4.9 of the Convention. This issue is also addressed under Article 3.14 of the Kyoto Protocol. In the negotiations, discussion of article 4.8 is of particular concern to small island countries and those non-Annex I countries whose economies are highly dependent on exporting fossil fuels. Article 4.9 refers specifically to the special situations of least developed countries.

Articles 5, 7 & 8

Issues surrounding the preparation (methodologies), communication and review of national inventories are addressed in Articles 5, 7 & 8 respectively. The main aspects of the discussions of these articles include establishing appropriate methods (or consequences for not having methods), how to account for sinks (LULUCF), how adjustments would be made to national inventories and monitoring of a country's progress against its Kyoto commitment.

Assigned Amounts

Under the Kyoto Protocol, the total amount of greenhouse gas emissions that each developed country has agreed that its emissions will not exceed in the first commitment period (2008–12) is the assigned amount. This is calculated by multiplying its total greenhouse gas emissions in 1990 by 5 (for the five-year commitment period) and then by the percentage it agreed to as listed in Annex B of the Protocol (e.g., 92 per cent for the EU, 93 per cent for the USA). Units of the assigned amounts are referred to as either PAAs (Parts of the Assigned Amount) or AAUs (Assigned Amount Units).

Atmosphere

The envelope of gases surrounding the earth and bound to it by the earth's gravitational attraction. The atmosphere is divided into layers: the troposphere (from ground level to between 8–17 km); the stratosphere (up to 50km); the mesosphere (50–90 km); and the thermosphere which forms the transition zone to outer space. Mixing between layers is extremely slow.

Banking

Parties to the Kyoto Protocol may save excess emissions allowances or credits from the first commitment period for use in subsequent commitment periods (post-2012).

Baseline

A projected level of future emissions against which reductions by project activities could be determined, or the emissions that would occur without policy intervention.

Berlin Mandate

Decision of the Parties reached at the first session of the Conference of the Parties to the FCCC (COP-1) in 1995 in Berlin. Governments agreed that the commitments in the Convention were inadequate, and further agreed to begin a negotiating process to prepare a protocol or other legal instrument to strengthen these commitments in the post-2000 period.

Biofuel

A fuel produced from dry organic matter or combustible oils produced by plants. Examples of biofuel include alcohols (from fermented sugar), black liquor from the paper manufacturing process, wood and soybean oil.

Biomass

The total dry organic matter or stored energy content of living organisms. Biomass can be used for fuel directly by burning it (e.g., wood), indirectly by fermentation to an alcohol (e.g., sugar) or extraction of combustible oils (e.g., soybeans).

Borrowing

The Kyoto Protocol does not permit borrowing emissions credits or units from future commitment periods (i.e., from the periods after 2012) to satisfy obligations in the first commitment period (2008–12). On the other hand, carrying forward excess credits is allowed. (See also ‘Banking.’)

BTU Tax

Energy tax levied at a rate based on the BTU (British Thermal Unit) energy content of a fuel.

Bubble

Article 4 of the Kyoto Protocol allows a group of countries to meet their target listed in Annex B jointly by aggregating their total emissions under one 'bubble' and sharing the burden depending on each individual country's circumstances and agreement within the bubble. The 15 nations that comprise the EU have agreed to aggregate and share their emissions commitments under one bubble for the first commitment period. Some countries in the EU have taken on greater cuts than the 8 per cent in the Kyoto Protocol (e.g. UK -12.5 per cent and Germany -20 per cent), thus enabling others under the EU bubble to increase their emissions during the first commitment period.

Budget

See 'Assigned Amount'.

Budget Period

See 'Commitment Period'.

Buenos Aires Plan of Action

The Plan of Action agreed by governments at COP-4 held in Buenos Aires (November, 1998). The Plan of Action states the aim to resolve, by COP-6, a list of outstanding issues concerning the FCCC and the Kyoto Protocol, principally on the Kyoto Mechanisms and compliance. The development and transfer of technology, compensation for adverse effects (of climate change itself and mitigation policies), and the status of projects under the Activities Implemented Jointly (AIJ) pilot programme are also included in the Plan of Action and require resolution by COP-6. It is sometimes referred to as the BAPA.

Cap

See 'Emissions Cap'.

Capacity Building

A process of constructive interaction between developing countries and the private sector to help them develop the capability and skills needed to achieve environmentally sound forms of economic development. The process makes use of the private sector's modern

technologies and management systems, in combination with a competent workforce and appropriate laws and regulations. Under current negotiations, capacity building should assist developing countries to build, develop, strengthen, enhance and improve their capabilities to achieve the objective of the Convention and their participation in the Kyoto Protocol process.

Carbon Cycle

The natural processes that govern the exchange of carbon (in the form of CO₂, carbonates and organic compounds etc.) among the atmosphere, ocean and terrestrial systems. Major components include photosynthesis, respiration and decay between atmospheric and terrestrial systems (approximately 100 billion tonnes/year (gigatons); thermodynamic invasion and evasion between the ocean and atmosphere, operation of the carbon pump and mixing in the deep ocean (approx. 90 billion tonnes/year). Deforestation and fossil fuel burning releases approximately 7 Gt into the atmosphere annually. The total carbon in the reservoirs is approximately 2000 Gt in land biota, soil and detritus, 730 Gt in the atmosphere and 38,000 Gt in the oceans. (Figures from IPCC *Third Assessment Report* 2001.) Over still longer periods, the geological processes of outgassing, volcanism, sedimentation and weathering are also important.

Carbon Dioxide, or CO₂

A naturally occurring gas, it is 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 temperature. It is the reference gas against which other GHGs are indexed and therefore has a 'Global Warming Potential' (see below) of 1. Carbon dioxide constitutes approximately 0.036 per cent of the atmosphere. The mass ratio of carbon to carbon dioxide is 12/44.

Carbon Dioxide Fertilization

Enhancement of plant growth or yield as a result of an increase in the atmospheric concentration of CO₂. Depending on their mechanism of photosynthesis, only certain types of plants are sensitive to CO₂ fertilization.

Examples are all trees, nearly all plants of cold climates, and most agricultural crops, including wheat and rice, but excluding maize and sugar cane.

Carbon Intensity

Carbon dioxide emissions per unit of energy or economic output.

Carbon Sequestration

The long-term storage of carbon or carbon dioxide in the forests, soils, ocean, or underground in depleted oil and gas reservoirs, coal seams and saline aquifers. Examples include: the separation and disposal of CO₂ from flue gases or processing fossil fuels to produce H₂ and carbon rich fractions; and the direct removal of CO₂ from the atmosphere through land-use change, afforestation, reforestation, ocean fertilization, and agricultural practices to enhance soil carbon.

Carbon Sinks

Natural or man-made systems that absorb carbon dioxide from the atmosphere and store them. Trees, plants and the oceans all absorb CO₂ and, therefore, are carbon sinks.

Carbon Tax

A tax placed on carbon emissions. It is similar to a BTU tax, except that the tax rate is based on the fuel's carbon content.

CDM

See 'Clean Development Mechanism'.

CDM Reference Manual

The CDM Reference Manual is to be a compendium of information for all interested in participating in CDM projects. There are two main proposals for the Manual. The first is that it should provide detailed guidance on baseline methodologies, monitoring requirements, additionality criteria, approval processes, etc. The second is that it only lists decisions made by the Executive Board. Both proposals see the Reference Manual as a 'living document' revised and updated on a regular basis by the Executive Board.

Certified Emission Reduction Unit, or CER

A CER represents a specified amount of greenhouse gas emissions reduction achieved through a Clean Development Mechanism project.

CER

See ‘Certified Emission Reduction Unit’.

CFCs

See ‘Chlorofluorocarbons’.

CH₄

See ‘Methane’.

Chlorofluorocarbons (CFCs)

Greenhouse gases covered under the 1987 Montreal Protocol used for refrigeration, air conditioning, packaging, insulation, solvents or aerosol propellants. Because they are not destroyed in the lower atmosphere, CFCs mix into the upper atmosphere where, given suitable conditions, they break down ozone. These gases are being replaced by other compounds including hydrochlorofluorocarbons (HCFCs) which are not covered in the Kyoto Protocol (due to their inclusion in the Montreal Protocol 1992) and hydrofluorocarbons (HFCs), which are greenhouse gases covered under the Kyoto Protocol.

Clean Development Mechanism, or CDM

Defined in Article 12 of the Kyoto Protocol, CDM projects undertaken in developing countries are intended to meet two objectives: (1) to address the sustainable development needs of the host country; and (2) to generate emissions credits that can be used to satisfy commitments on Annex 1 Parties and thus increase flexibility in *where* government Parties meet their reduction commitments. Projects that limit or reduce greenhouse gas emissions can earn the investor (government or industry) credits if approved by the CDM Executive Board. A share of the proceeds from the project activities is to be used to cover administration costs, and to create an adaptation fund which will assist developing countries that are particularly vulnerable to the adverse effects from climate change to take action to adapt.

Climate

The average trend of weather, including its variability in a geographical region. The averaging period is typically several decades.

Climate Change (*UNFCCC definition*)

A change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability over comparable time periods.

Climate Convention

See 'UN Framework Convention on Climate Change,' or UNFCCC.

Climate Feedbacks

Interaction between greenhouse gases and important climate mechanisms, such as vegetation, water vapour, ice cover, clouds, and the ocean. Such interactions can increase, decrease, or neutralize the warming produced by increased concentrations of greenhouse gases.

Climate Models

Large and complex computer programmes used to mathematically simulate global climate. They are based on mathematical equations that seek to represent the physical processes that govern the earth-atmosphere system. (See 'General Circulation Models'.)

Climate Sensitivity

Theoretical change in earth's average surface air temperature for a given change in greenhouse gas concentration or other forcing mechanism. Does not refer to changes in any other climate properties.

Climate Surprises

Climate surprises, also referred to as rapid non-linear climate change, are supposedly large, unexpected and relatively sudden changes in the climate system. These could include events such as the shutting down of the North Atlantic Oscillation or the rapid release of sedimentary methane hydrates triggering even greater changes in climate. The IPCC concluded that it is very

unlikely that these events would occur in the next 100 years (IPCC *Third Assessment Report* 2001).

Climate System

The totality of the atmosphere, hydrosphere, biosphere and geosphere and their interactions.

Co-benefits (*IPCC definition*)

The benefits of policies that are implemented for various reasons at the same time—including climate change mitigation—acknowledging that most policies designed to address GHG mitigation also have other, often at least equally important rationales, e.g. related to objectives of development, sustainability and equity. The term co-impact is also used in a more generic sense to cover both positive and negative side of the benefits. (See also ‘Ancillary Benefits’.)

Cogeneration

The use of waste heat from steam and or electricity generation, such as exhaust from gas turbines, for either industrial purposes or district heating.

Combined Cycle

Electricity generation where the waste heat of a gas-turbine generator is used to heat water in a boiler to drive a steam-turbine generator, thereby increasing efficiency.

Commitment Period

To allow Parties some flexibility in when they meet their GHG emissions reduction obligations under the Kyoto Protocol, the reduction target is applied to a 5-year period, known as the commitment period. The first commitment period will be 2008–12. Terms governing the nature of the second and subsequent periods are subject to future negotiation. The Kyoto Protocol calls for negotiations concerning the second period to commence by 2005.

Commitment Period Reserve

To prevent Annex B Parties from overselling allocations from their Assigned Amount, some have proposed that a portion of the Assigned Amounts in their national registries should be kept in reserve during the commit-

ment period. Known as the Commitment Period Reserve, this portion could be a fixed percentage of the Assigned Amount or variable, depending on projected or recent emissions.

Compliance

Article 18 of the Kyoto Protocol relates to sanctions for non-compliance. Discussion of this article relates to the structure of a compliance committee, financial or other penalties for non-compliance, and whether non-compliance can only be assessed against Annex B emissions targets or other aspects of the Protocol or Convention. Any binding consequences for non-compliance can only be adopted by an amendment to the Protocol (amendments can be proposed by any Party to the Protocol, but require ratification by three-quarters of the Parties to the Protocol).

Conference of the Parties, or COP

The supreme body of the UNFCCC, comprised of countries that have ratified or acceded to the Framework Convention on Climate Change. The first session of the COP (COP-1) was held in Berlin in 1995; COP-2 in Geneva, 1996; COP-3 in Kyoto, 1997; and COP-4 in Buenos Aires. COP-5 will be held in Bonn. (See also 'COP/MOP' and 'Meeting of Parties'.)

Contact Group

SBI and SBSTA delegate the responsibility for negotiating draft text on specific issues, such as the Kyoto Mechanisms or compliance, to individual contact groups. Representatives of all Parties are able to participate in the contact group meetings. Such meetings are often closed to observers.

Contraction and Convergence

Some have promoted the idea of 'contraction and convergence' as a long-term strategy for managing global GHG emissions. Contraction refers to a global cap which would be set on worldwide emissions, together with an overall reduction trajectory for the century ahead. Emissions entitlements would be allocated on a per capita basis under the global cap and trading would be permitted. Emissions entitlements would

converge over time towards equal per capita emission rights for all countries, so that total emissions allowances to countries are proportional to population. Proponents of the system of contraction and convergence argue that it is equitable (being based on population) and that it would be truly global, involving the participation of all countries.

COP/MOP

The Conference of Parties of the FCCC will serve as the ‘MOP’ (Meeting Of Parties, the supreme body of the Kyoto Protocol) but only Parties to the Kyoto Protocol may participate in deliberations and make decisions. Until the Protocol enters into force, the MOP cannot meet.

CO₂

See ‘Carbon Dioxide’.

Credit for Early Action

Some governments have suggested giving credit for action taken before 2008. The intent would be to stimulate investment in GHG abatement projects in developed countries in the years prior to 2008. Under the Kyoto Protocol, Annex B governments cannot receive credits towards their emissions obligations for actions aimed at reducing GHG emissions prior to the first commitment period (2008–12), except under the Clean Development Mechanism (i.e. in developing countries only). Governments may choose to give domestic credits prior to the first commitment period.

CSD

See ‘UN Commission on Sustainable Development’.

Dangerous GHG Concentration

The ultimate objective of the Climate Change Convention is the stabilization of atmospheric GHG concentrations at a level that would prevent *dangerous* human interference with the climate system. To date, *dangerous* remains undefined, and no official body has taken or been assigned responsibility to provide a definition. For now the IPCC has concluded that defining *dangerous* is a political decision. The *Third Assessment*

Report is evaluating the potential impacts of different GHG concentration scenarios ranging between 450 and 750 ppmv CO₂. For each CO₂ stabilization scenario, including different pathways to stabilization, the IPCC will evaluate the range of costs and benefits of climate change, in terms of sea level rise, water stress, biodiversity, social and economic impacts, possibilities for adaptation, technological change, policies and measures among others. Any political decision over what constitutes a dangerous GHG concentration would have major implications for the emissions control policies for all countries, as it would ultimately set an absolute level of emissions globally.

Deforestation

The removal of forest stands by cutting and burning to provide land for agricultural purposes, residential or industrial building sites, roads, etc., or by harvesting the trees for building materials or fuel.

Demand-side Management

Policies and programmes designed to reduce consumer demand for electricity and other energy sources. It helps to reduce the need for constructing new power facilities.

Demonstrable Progress

Paragraph 2 of Article 3 of the Kyoto Protocol states that 'Each Party included in Annex I shall, by 2005, have made demonstrable progress in achieving its commitments under this Protocol.' There is no consensus on the meaning of the term 'progress' (for example, is it an actual reduction in GHG emissions by 2005 or the adoption of policies and measures which will enable a Party to meet its Kyoto Commitment by 2012?), nor how it will be demonstrated.

Desertification

The progressive destruction or degradation of vegetative cover, especially in arid or semi-arid regions bordering existing deserts. Overgrazing of rangelands, large-scale cutting of forests and woodlands, drought, burning of extensive areas and climate changes all serve to destroy or degrade the vegetation cover.

Early Crediting

Article 12 on the Clean Development Mechanism indicates that early crediting will be given for CDM projects undertaken between 2000 and 2008. These credits can be used to assist in achieving compliance in the first commitment period.

Earth Summit, or UN Conference on Environment and Development (UNCED)

The Earth Summit was held in 1992 in Rio de Janeiro at which the climate treaty, or UN Framework Convention on Climate Change (UNFCCC), was signed by more than 150 countries. (See ‘Rio+10’)

Ecosystem

The interacting system of a biological community and its non-living environmental surroundings.

Eligibility

Discussion of eligibility relates firstly to the requirements for Annex I Parties to be eligible to participate in the use of the three Kyoto Mechanisms and secondly to whether a project would be eligible to qualify for credit under the CDM. In the first case, it has been proposed that Parties would only be eligible to participate in the Kyoto Mechanisms if they meet certain requirements. These could include: being in compliance with commitments under Articles 5 & 7 and submitting the last available national inventory report; having a national system for the estimation of GHG emissions; and having ratified the Protocol. In the second case, eligibility in the CDM refers to the type of technology or project that would qualify for credit. This may depend on the sustainable development criteria of the host country, the size of the project and the type of technology used e.g. nuclear, fossil fuel or renewable (see ‘Positive and Negative Lists’).

El Niño/La Niña/ENSO

At irregular intervals, but on average about every four years, widespread warming of the east-central equatorial Pacific sea surface temperature occurs. This warming, which typically lasts for about a year, is called an El Niño event. (The term has its origins in a seasonal

Christmas-time phenomenon off the South American coast that is prolonged and amplified when the pan-Pacific event occurs.) El Niño can be regarded as the warm phase of a major climate oscillation. During the cold phase, called La Niña, the equatorial Pacific sea surface temperature is cooler than normal. The sea surface temperatures are associated with widespread atmospheric shifts in winds, rainfall etc. Southern Oscillation is the term for the changes in tropical surface pressure that accompany the El Niño/La Niña cycle. The events involve strong interaction between the ocean and atmosphere, and the term ENSO (El Niño/Southern Oscillation) is often used to refer to the phenomenon as a whole. In the Pacific region the ENSO cycle produces large coherent changes in tropical ocean currents, temperature, trade winds, rainfall patterns, etc. Through atmospheric teleconnections, ENSO also influences seasonal climate in many other regions around the globe.

Emissions (*UNFCCC definition*)

The release of greenhouse gases and/or their precursors into the atmosphere over a specified area and period of time.

Emissions Cap

A mandated restraint, in a scheduled time frame, that puts a 'ceiling' on the total amount of anthropogenic greenhouse gas (GHG) emissions that can be released into the atmosphere. The Kyoto Protocol mandates caps on the GHG emissions released by Annex B, or developed, countries.

Emissions Reduction Unit, or ERU

The ERU represents a specified amount of greenhouse gas emissions reductions achieved through a Joint Implementation project or as the unit of trade in greenhouse gas emissions trading systems.

Emissions Trading

A market-based approach to achieving environmental objectives that allows those reducing GHG emissions below what is required to use or trade the excess reductions to offset emissions at another source inside or

outside the country. In general, trading can occur at the domestic, international and intra-company levels. Article 17 of the Kyoto Protocol, allows Annex B countries to exchange emissions obligations. Negotiations will determine the extent to which firms and others may be allowed to participate. International emissions trading constitutes one of the Kyoto Mechanisms, designed to provide Annex B countries cost-effective flexibility in reducing emissions to achieve their agreed commitments.

Environmental Integrity Group

A small negotiating bloc consisting of Switzerland, Mexico and South Korea. This group seeks to maintain 'environmental integrity' during the negotiations which, for them, means minimizing the trade of hot air and the use of sinks to meet Annex B commitments.

ERU

See 'Emission Reduction Unit'.

Executive Board (EB)

Article 12 of the Kyoto Protocol calls for the establishment of an Executive Board to supervise the CDM. The Executive Board could be subject to the authority and guidance of the COP/MOP. It could be responsible for the following: accrediting operational entities; maintaining the CDM Reference Manual; developing and maintaining information on CDM project activities which should be publicly available; reviewing the geographical distribution of CDM projects; recommending what types of projects should be included or excluded from the CDM; levying a share from the proceeds of CDM projects; and issuing the CERs generated by CDM projects. The composition of the EB is under negotiation. The President's Paper at COP-6 Part I, proposed that the CDM Executive Board would be comprised of 16 members—3 each from the 5 UN Regional Groups plus 1 from the SIDS. Decisions will be adopted by three-quarters of those present; if consensus cannot be achieved, this prevents either developed or developing countries alone from controlling the Executive Board.

FCCC

See 'UN Framework Convention on Climate Change (UNFCCC)'.

Flexibility Mechanisms

See 'Kyoto Mechanisms'.

Forest

Key to the identification of Kyoto lands is a definition of forest that is consistent for all Parties. This definition is critical to the accounting of sources and sinks under the Kyoto Protocol (Articles 3.3 & 3.4). There are many definitions of forest, based on land-use status (administrative/cultural records) or a minimum threshold of canopy cover and/or tree height. None, however, were specifically designed for carbon accounting as required under the Protocol. This definition and the implications of using different definitions are addressed in detail in Chapter 3 of the IPCC *Special Report on LULUCF*.

Forest Management

Forest management is the application of biological, physical, quantitative, managerial, social and policy principles to the regeneration, tending, utilization and conversion of forests to meet specified goals and objectives while maintaining forest productivity. Management intensity spans the range from wilderness set-asides to short-rotation woody cropping systems. Forest management encompasses the full cycle of regeneration, tending, protection, harvest, utilization and access. (From IPCC *Special Report LULUCF*.)

Fossil Fuels

Carbon-based fuels formed in the ground over very long periods, including coal, oil and natural gas.

Fuel Cell

An electrochemical device, like a battery, that combines hydrogen and oxygen to produce electricity, heat and water. The source of hydrogen can be either pure hydrogen or a number of other fuels (such as methanol or other hydrocarbons) which are first converted to hydrogen and CO₂.

Fuel Switching

Supplying energy services using different fuels. Often used to refer to actions that reduce CO₂ emissions from electric utilities by switching from coal to natural gas.

Fungibility

Fungibility refers to the possibility that one unit/product, or a unit of a currency, can be exchanged for, or replaced by another. The negotiations on fungibility relate to whether emissions units are freely exchangeable i.e. whether an ERU is exactly equivalent to an AAU/PAA or CER.

GCMs

See 'General Circulation Models'.

GEF

See 'Global Environment Facility'.

General Circulation Models, or GCMs

Large and complex computer programmes that attempt to mathematically simulate global climate. They are based on mathematical equations that seek to represent the physical processes that govern the earth-atmosphere system. (See 'Climate Models'.)

GHGs

See 'Greenhouse Gases'.

Global Environment Facility, or GEF

A joint funding programme established by developed countries to meet their obligations under various international environmental treaties. GEF serves as the interim financial mechanism for the UNFCCC, in particular to cover the cost of reporting by non-Annex I countries. It provides funds to complement traditional development assistance by covering the additional or 'agreed incremental costs' incurred by non-Annex I countries, when a national, regional or global development project also targets global environmental objectives such as those which address biodiversity.

Global Warming

The view that the earth's temperature is being increased, in part due to emissions of greenhouse gases associated with human activities such as burning fossil fuels, biomass burning, cement manufacture, cow and sheep rearing, deforestation and other land-use changes.

Global Warming Potential, or GWP

A time dependent index used to compare the radiative forcing, on a mass basis, of an impulse of a specific greenhouse gas relative to that of CO₂. Gases included in the Kyoto Protocol are weighted in the first commitment period according to their GWP over a 100-year time horizon as published in the 1995 *Second Assessment Report* of the IPCC. In that report, a kilogram of methane, for example has a radiative force of about 21 times greater than that of a kilogram of CO₂. The GWP of CO₂ is defined as 1, thus methane has a GWP of 21 over the 100-year time horizon.

Grandfathering

A method used to allocate emissions credits to companies or other legal entities based on their emissions levels at a certain point in the past (such as 1990). Those companies which have reduced their emissions since that point in the past (e.g. through efficiency gains or by shutting down operations) could potentially be rewarded under this process of allocation. Companies established after the baseline date (and therefore having zero emissions at that time) would not receive any emissions credits if this method of allocation is used alone. Alternative emissions credit allocation methods include auctioning which would be similar to emissions taxation, and free allocation based on negotiation.

Greenhouse Effect

The trapping of heat by naturally occurring heat-retaining atmospheric gases (water vapour, carbon dioxide, nitrous oxide, methane and ozone) that keeps the earth about 30° C (60° F) warmer than if these gases did not exist.

Greenhouse Gases, or GHGs

Gases in the earth's atmosphere that absorb and re-emit infra-red radiation. These gases occur through both

IPIECA

Climate Change: a Glossary of Terms

natural and human-influenced processes. The major GHG is water vapour. Other primary GHGs include carbon dioxide, nitrous oxide, methane, ozone and CFCs.

Group of 77 and China (G77/China)

Originally 77, now more than 130 developing countries that act as a major negotiating bloc. The G77 and China are also referred to as non-Annex I countries in the context of the UNFCCC.

GWP

See 'Global Warming Potential'.

HFCs

See 'Hydrofluorocarbons'.

Heat-Island Effect

Localized warming produced in cities due to the density of infrastructure, such as pavement, buildings and roads that retain heat. This effect can influence temperature readings obtained from nearby weather stations.

Hot Air

A few countries, notably Russia and the Ukraine, have emissions allocations under the Kyoto Protocol that appear to be well in excess of their anticipated emissions in the first commitment period (as a result of economic downturn since the baseline year of 1990). The potentially excess allocation is referred to as hot air. Under the Kyoto Protocol it could be traded with other Parties.

Hydrofluorocarbons, or HFCs

Among the six greenhouse gases to be controlled in the Kyoto Protocol 'basket of gases'. They are produced commercially as a substitute for Chlorofluorocarbons (CFCs) and Hydrochlorofluorocarbons (HCFCs). HFCs are largely used in refrigeration and insulating foam. Their Global Warming Potentials range from 140 to 11,700 times that of CO₂, depending on the HFC. See Global Warming Potential.

IEA

See 'International Energy Agency'.

IGO

See 'Intergovernmental Organization'.

Impact Models

Computer programmes used to estimate the impact of a specific climate change on natural, social or economic systems.

Intergovernmental Organization, or IGO

Organizations constituted of governments. Examples include The World Bank, the Organization of Economic Cooperation and Development (OECD), the International Civil Aviation Organization (ICAO). The Convention allows accreditation of these IGOs to attend the negotiating sessions.

Intergovernmental Panel on Climate Change, or IPCC

Panel established in 1988 by governments under the auspices of the World Meteorological Organization and the UN Environment Programme. It prepares assessments, reports and guidelines on: the science of climate change and its potential environmental, economic and social impacts; technological developments; possible national and international responses to climate change; and cross-cutting issues. It provides advice to the UNFCCC's Conference of the Parties. It is currently organized into 3 Working Groups which address: I) Science; II) Impacts, Adaptation and Vulnerability; and III) Mitigation. There is also a Working Group to address GHG Inventories.

International Energy Agency, or IEA

Paris-based organization formed in 1973, it now has a membership of 25 countries (OECD members). The IEA's original purpose was to manage future oil supply shortfalls. They have also agreed to share energy information, to coordinate their energy policies and to cooperate in the development of energy programmes. Today the core mission of the IEA remains unchanged, but it has extended its activities to include providing energy statistics and other information and analysis worldwide, as well as reporting regularly on the energy policies of its Member States and those of selected non-Members.

Inventories

Countries are required to submit regularly an inventory of their GHG emissions. The IPCC has provided guidance on how to estimate and report on anthropogenic GHG emissions and removals, using a standardized tabular reporting format for six major sectors: energy; industrial processes; solvents and other product use; agriculture; land-use change and forestry; and waste. In addition to a sector-by-sector approach of summing carbon dioxide emissions from fossil fuel combustion, the IPCC requires that, as a check, a top-down approach be used to calculate emissions based on national fuel consumption data. A range of companies and associations are also preparing GHG inventories and the methodologies to calculate them. A number of factors need to be considered when designing a corporate GHG inventory including: emissions factors versus direct measurements; boundary definition around operations; the inclusion of emissions from contractors; and materiality. Certain sources of emissions, such as bunker fuels, are intentionally excluded from inventories for now.

Joint Implementation, or JI

Jointly implemented projects that limit or reduce emissions or enhance sinks are permitted among developed countries under Article 6 of the Kyoto Protocol. JI activity is also permitted in Article 4.2(a) of the FCCC, between all Parties. As defined in the Kyoto Protocol JI would allow developed countries, or companies from those countries, to cooperate on projects to reduce greenhouse gas emissions and share the emissions reduction units (ERUs). As JI occurs between Annex B countries (who have emissions caps), no new emissions units are generated (unlike the case with projects under the Clean Development Mechanism). JI can be viewed as an investment for ERUs swap. See also 'Activities Implemented Jointly'.

Kyoto Basket

Under the Kyoto Protocol, Parties have committed to control emissions of a 'basket' of six GHGs. This 'basket' includes carbon dioxide, methane, nitrous oxide, HFCs, PFCs and SF₆. The arrangement gives the flexibility which would enable a Party to increase emissions

of any gas in the ‘basket’ provided commensurate reductions were made in another gas in the ‘basket’.

Kyoto Lands

The Kyoto Protocol describes land use, land-use change and forestry activities that require or allow the net GHG emissions from sinks to be accounted for by Parties in meeting their emission reduction commitments. The lands on which these activities take place are designated as Kyoto lands (as defined in the IPCC draft report on LULUCF).

Kyoto Mechanisms

(formerly known as Flexibility Mechanisms)

Procedures that allow Annex 1 Parties to meet their commitments under the Kyoto Protocol based on actions outside their own borders. As potentially market-based mechanisms they have the potential to reduce the economic impacts of greenhouse gas emission-reduction requirements. They include *Joint Implementation* (Article 6), the *Clean Development Mechanisms* (Article 12) and *Emissions Trading* (Article 17).

Kyoto Protocol

The Protocol, drafted during the Berlin Mandate process, that, on entry into force, would require countries listed in its Annex B (developed nations) to meet differentiated reduction targets for their emissions of a ‘basket’ of greenhouse gases (see ‘Kyoto Basket’) relative to 1990 levels by 2008–12. It was adopted by all Parties to the Climate Convention in Kyoto, Japan, in December 1997.

LDCs

See ‘Least Developed Countries’.

Least Developed Countries, or LDCs

An informal group of countries defined using a number of parameters including per capita GDP. Under current proposals, Least Developed Countries and Small Island Developing States would gain special consideration for adaptation and Convention funding, technology transfer, capacity building and the CDM.

Liability

Liability relates to the consequences falling on parties involved in a transaction that were the result of over-selling of some party's Assigned Amount. A number of options have been proposed, for example: the (over) seller is liable and would pay the penalty for non-compliance; the buyer is liable and the trade would be unwound, returning the AAUs to the overseller; or other hybrid options where liability is shared.

LULUCF

Land Use, Land-Use Change and Forestry—see 'ARD Activities' and 'Kyoto Lands'.

Methane, or CH₄

One of the basket of six greenhouse gases to be controlled under the Kyoto Protocol, it has a relatively short atmospheric lifetime of 10 ±2 years. Primary sources of methane are landfills, coal mines, paddy fields, natural gas systems and livestock. The SAR (1995) estimate of the Global Warming Potential of methane is 21, over a 100-year time horizon. See 'Global Warming Potential'.

Methane Recovery

Method by which methane emissions from, for example, coal mines or waste sites, are captured and then re-used either through cost-effective management methods or through power generation.

Meeting Of the Parties (to the Kyoto Protocol) or MOP

Supreme body of the Kyoto Protocol, which can only convene after the Protocol enters into force. Only the MOP can make amendments to the Protocol.

Montreal Protocol

International agreement under UNEP which entered into force in January 1989 to phase out the use of ozone-depleting compounds such as CFCs, halons, methyl chloroform, carbon tetrachloride, HCFCs and methyl bromide.

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. The National Action Plans form part of the National Communications which include the national inventory of greenhouse gas (GHG) sources and sinks.

NGO

See 'Non-Governmental Organization'.

Nitrous Oxide, or N₂O

One of the basket of six greenhouse gases to be controlled under the Kyoto Protocol, it is generated by burning fossil fuels and the manufacture of fertilizer. It has a Global Warming Potential of 310 over a 100-year time horizon. (See 'Global Warming Potential'.)

Non-Annex I Parties

The countries that have ratified or acceded to the UNFCCC that are not included in Annex I of the Convention.

Non-Annex B Parties

The countries that are not included in the Annex B list of developed nations in the Kyoto Protocol.

Non-Governmental Organization Observer, or NGO

NGOs can include registered non-profit organizations and associations from business and industry, environmental groups, cities and municipalities, academics, and social and activist organizations. Under the UN, NGOs must be accredited to observe its activities and, to do so, they must meet certain qualifications. IPIECA has UN ECOSOC Category II Non-Governmental Organization consultative status.

No Regrets

Actions which result in greenhouse gas limitations and abatement, and which also make good environmental and economic sense in their own right.

North/South

Following the end of the cold war, it has been suggested that the most important geopolitical axis is now between the North, or developed countries, and the South, or developing countries. At the UNFCCC negotiations developing countries coordinate under the banner of the G77 + China, which includes a number of sub-groups such as AOSIS, the African Group and the group of Latin American countries.

Operational Entities

Article 12 of the Kyoto Protocol calls for the creation of operational entities that would be responsible for validating proposed CDM project activity as well as verifying and certifying the emissions reductions or removals achieved. They would be accountable to the Executive Board and ultimately the COP/MOP.

Ozone

Ozone (O₃) is a greenhouse gas. In the troposphere, or lower part of the atmosphere, O₃ can be a constituent of smogs. It is created naturally and also by reactions in the atmosphere involving gases resulting from human activities, including NO_x, or nitrogen oxides, from motor vehicles and power plants. The Montreal Protocol seeks to control chemicals which destroy ozone in the stratosphere (upper part of the atmosphere) where ozone absorbs ultra-violet radiation.

PAMs

See 'Policies and Measures'.

Perfluorocarbons, or PFCs

One of the basket of the six greenhouse gases to be controlled under the Kyoto Protocol. They are a by-product of aluminum smelting. They also are the replacement for CFCs in manufacturing semiconductors. The Global Warming Potential of PFCs ranges from 6,500–9,200 over a 100-year time horizon. See 'Global Warming Potential'.

PFCs

See ‘Perfluorocarbons’.

Policies and Measures, or PAMs

In UNFCCC parlance, **policies** are actions that can be taken and/or mandated by a government—often in conjunction with business and industry within its own country, as well as with other countries—to accelerate the application and use of successful measures to curb greenhouse gas (GHG) emissions. **Measures** are technologies, processes and practices used to implement policies, which, if employed, would reduce GHG emissions below anticipated future levels. Examples might include carbon or other energy taxes, standardized fuel efficiency standards for automobiles, etc. ‘Common and coordinated’ or ‘harmonized’ policies would refer to those adopted jointly by Parties. (This could be by region, such as the EU, or by countries comprising a given classification, for example, all Annex I nations.)

Positive & Negative Lists

Some countries have argued that listing the types of projects that would qualify for CDM credit would simplify the decision making process for potential project participants and could facilitate a prompt start to the CDM. It has been proposed that the lists of projects could either be negative i.e., exclude specific technologies (e.g. nuclear or large scale hydro) or be positive i.e. include specific technologies or activities such as renewable energy or energy efficiency projects.

Precautionary Principle

From the UN Framework Convention on Climate Change (Article 3): *Parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures taking into account that policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost.*

'Primary Market' & 'Secondary Market' Trading

In commodities and financial exchanges, buyers and sellers who trade directly with each other constitute the 'primary market', while buying and selling through the exchange facilities represent the 'secondary market.'

Public Participation

Article 12 of the Kyoto Protocol does not mention public (or NGO) participation in the CDM project approval process, but many countries have proposed that it be part of the process. The criteria for, and the timing of, public participation (i.e. whether public consultation should occur prior to project approval and then again prior to the issuance of credits) is a concern for some governments. Some have argued that while public participation is necessary, there are existing structures for this process during project planning such as the EIA procedures, and that the CDM should operate within these existing structures.

QELROs, or Quantified Emissions Limitations and Reductions Objectives

The greenhouse gas emissions reduction commitments made by developed countries listed in Annex B of the Protocol. (See also 'Targets and Timetables'.)

Radiative Forcing

A change in the balance between incoming solar radiation and outgoing infra-red and short-wave radiation. Without any radiative forcing, solar radiation absorbed by the earth would continue to be approximately equal to the infra-red radiation emitted from the earth. The addition of greenhouse gases absorbs an increased fraction of the infra-red radiation in the atmosphere, re-radiating it and creating a warming influence.

Reforestation

The act or process of re-establishing a forest on land that had been deforested in relatively recent history.

Renewables

Energy sources that are constantly renewed by natural process. These include non-carbon technologies such as solar energy, hydropower and wind as well as technolo-

gies based on biomass. Life cycle analyses are required to assess the extent to which such biomass-based technologies may limit net carbon emissions.

Reservoir

A component or components of the climate system where a greenhouse gas or a precursor of a greenhouse gas is stored (UNFCCC definition). The oceans, soils and forests are all carbon reservoirs.

Rio+10

Rio+10 will be a special meeting of the UN General Assembly in 2002 to highlight the tenth anniversary of the Rio Summit. The agenda for this meeting is under development. Unlike the Rio Summit, it is unlikely that the Governments will negotiate new conventions. The meeting will be held in South Africa.

Rio Summit

See 'UN Conference on Environment and Development'.

SAR

See '*Second Assessment Report*'.

SBI

See 'Subsidiary Body for Implementation'.

SBSTA

See 'Subsidiary Body for Science and Technological Advice'.

SF₆

See 'Sulphur Hexafluoride'.

Second Assessment Report, or SAR

Published by the IPCC in 1995 the SAR provided a comprehensive overview of the state of knowledge on climate change at that time. It contains the widely cited statement '*the balance of evidence suggests that there is a discernible human influence on global climate*'. The IPCC's *Third Assessment Report* is expected to be finalized in 2001.

Secretariat of the UN Framework Convention on Climate Change

United Nations administrative and clerical staff assigned the responsibility of conducting the affairs of the UNFCCC. In 1996 the Secretariat moved from Geneva, Switzerland to Bonn, Germany.

SIDS

See ‘Small Island Developing States’.

Sinks (*UNFCCC definition*)

Any process or activity or mechanism which removes a greenhouse gas or a precursor from the atmosphere.

Small Island Developing States, or SIDS

Small Island Developing States is a subset of AOSIS in that it includes only developing country islands (AOSIS also includes some low-lying countries). This group is considered to be especially vulnerable to the impacts of climate change. Under current proposals, Small Island Developing States and LDCs would gain special consideration for adaptation/convention funding, technology transfer, capacity building and the CDM. SIDS, and other UN regional groupings, are informally defined and their structure and definition can change.

Source (*UNFCCC definition*)

Any process or activity which releases a greenhouse gas or a precursor GHG to the atmosphere.

SO₂ Trading

See ‘Sulphur Dioxide Trading’.

SPM

See ‘Summary for Policy Makers’.

Subsidiary Body for Implementation, or SBI

Established as a permanent standing body of the UN Framework Convention on Climate Change, the SBI develops recommendations to assist the Conference of the Parties in assessing and reviewing the implementation of the Climate Convention.

Subsidiary Body for Scientific and Technological Advice, or SBSTA

Established as a permanent standing body of the UNFCCC, SBSTA serves as the link between the policy-oriented needs of the COP and the scientific, technical and technological assessments and information provided by various external groups, such as the Intergovernmental Panel on Climate Change.

Sulphur Dioxide (or SO₂) Trading

To mitigate the US acid rain problem in a cost-efficient manner, the US government, under its Clean Air Act, mandated an SO₂ emissions trading programme. This trading system is often cited as the model for an international Emissions Trading Programme proposed under the Kyoto Protocol to curb the world's anthropogenic greenhouse gas emissions.

Sulphur Hexafluoride, or SF₆

One of the six greenhouse gases to be curbed under the Kyoto Protocol. It is largely used in heavy industry to insulate high-voltage equipment and to assist in the manufacturing of cable-cooling systems. Its Global Warming Potential is 23,900 times that of CO₂. (See 'Global Warming Potential'.)

Summary for Policy Makers, or SPM

The IPCC *Special Reports*, and each of the four main sections of the *Assessment Reports* (Working Groups I, II, III and the *Synthesis Report*), include a short *Summary for Policy Makers* as well as Technical Summaries. The SPM for the *Synthesis Report* is expected to be approximately 10 pages long. (See '*Third Assessment Report*'.)

Supplementarity

The Kyoto Protocol states that Emissions Trading and Joint Implementation activities are to be *supplemental* to domestic actions (e.g., energy taxes, fuel efficiency standards, etc.) taken by developed countries to reduce their greenhouse gas emissions. Under some proposed definitions of supplementarity, e.g., a concrete ceiling on level of use, developed countries could be restricted in their use of the Kyoto Mechanisms to achieve their

reduction targets. This is a subject for further negotiation and clarification by the Parties.

TAR

See '*Third Assessment Report*'.

Targets and Timetables

A target is the reduction of a specific percentage of greenhouse gas (GHG) emissions (e.g., 6 per cent, 7 per cent) from a base year (e.g., 'below 1990 levels') to be achieved by a set date, or timetable (e.g., 2008–12). For example, under the Kyoto Protocol's formula, the EU has agreed to reduce its GHG emissions to 8 per cent below 1990 levels by the 2008–12 commitment period. These targets and timetables are, in effect, a cap on the total amount of GHG emissions that can be emitted by a country or region in a given time period. (See also 'QELROS'.)

Technology Cooperation/Technology Transfer

A process of constructive interaction with local, national and international partners to select and apply appropriate technology systems to achieve economic development. It includes both 'hard' (equipment and technology) and 'soft' technology (software, management assistance, training). The current negotiations focus on Article 4.5 of the Convention in which developed country Parties (in particular those in the OECD) commit to take steps to promote, facilitate and finance as appropriate, access to environmentally sound technologies in developing countries to enable them to implement the provisions of the Convention. While recognizing the important role of the private sector in technology transfer and the need to enhance the enabling environment for investment in developing countries, much of the emphasis in the discussion is on the role that developed country governments should play in providing financial resources and technology to developing countries.

Trace Gas

A minor constituent of the atmosphere. The most important trace gases contributing to the greenhouse effect are carbon dioxide, ozone, methane, nitrous

oxide, ammonia, nitric acid, ethylene, sulphur dioxide, nitric oxide, CFCs, HFCs HCFCs, SF₆, methyl chloride, carbon monoxide and carbon tetrachloride.

Third Assessment Report, or TAR

The third in a series of *Assessment Reports* prepared by the Intergovernmental Panel on Climate Change which review the existing scientific literature on the subject. Due to be finalized in 2001, it will contain three main sections: Science; Impacts, Adaptation and Vulnerability; and Mitigation. It will also include a 50–80 page *Synthesis Report*, which will draw upon the three main sections and other IPCC *Special Reports* to answer a number of policy-relevant scientific and technical questions (asked by UNFCCC SBSTA and refined by the IPCC Plenary). Each of the three main sections and the *Synthesis Report* will have a short *Summary for Policymakers*. The information in the TAR will be considered by governments during UNFCCC negotiations.

Umbrella Group

A set of largely non-European developed countries who occasionally act as a negotiating bloc on specific issues.

UNCED

See 'Earth Summit'.

UNCTAD

See 'UN Conference on Trade and Development'.

UNDP

'See UN Development Programme'.

UNEP

See 'UN Environment Programme'.

UN Conference on Trade and Development, or UNCTAD

Established in 1964 by the UN General Assembly, UNCTAD is the principal organ of the UN General Assembly in the field of trade and development. Its main goals are to maximize trade, investment and development opportunities of developing countries. UNCTAD pursues its goals through research, policy analysis, IGO

deliberations, technical cooperation and interaction with the business sector. UNCTAD has had a long-standing programme that is examining international emissions trading. Since 1991 it has produced publications on key parameters such as cost-efficiency, equity, monitoring certification and enforcement, and legal and institutional aspects.

UN Commission on Sustainable Development, or CSD

The Commission oversees the implementation of Agenda 21, the action plan adopted at the Rio Summit which is a blueprint for environmentally sustainable development for the 21st century. The CSD consists of representatives from more than 50 nations. It also monitors progress made by governments and UN agencies in reaching their commitments to the UNFCCC.

UN Development Programme, or UNDP

The purpose of UNDP is to assist countries (particularly those with a low per capita income) to achieve sustainable development. UNDP focuses on poverty elimination, environmental regeneration, job creation and the advancement of women. It also assists in promoting sound governance and market development. Its work is achieved with a core budget of about US\$800M used to fund projects in developing countries. UNDP is a managing partner of the Global Environment Facility, along with UNEP and the World Bank.

UN Environment Programme, or UNEP

The UN agency, established in 1972, to coordinate the environmental activities of the UN. It aims to help reinforce and integrate the large number of separate environmental efforts by intergovernmental, non-governmental, national and regional bodies. UNEP has fostered the development of the UNFCCC and the Convention on Biological Diversity.

UN Framework Convention on Climate Change, or UNFCCC

A treaty signed at the 1992 Earth Summit in Rio de Janeiro by more than 150 countries. Its ultimate objec-

tive is the ‘stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic [human-induced] interference with the climate system’. While no legally binding level of emissions is set, the treaty states an aim by Annex I countries to return these emissions to 1990 levels by the year 2000. The treaty took effect in March 1994 upon the ratification of more than 50 countries; a total of over 180 nations have now ratified. In March 1995, the UNFCCC held the first session of the Conference of the Parties (COP) the supreme body of the Convention in Berlin. Its Secretariat is based in Bonn, Germany. In the biennium 2000–01, its approved budget and staffing level are approximately US\$12M annually with approximately 80 personnel.

UN Regional Groups

Under the UN system, countries are divided into five informally defined Groups: Africa; Latin America; Asia; Russia and Central & Eastern Europe; and the Western Europe and Others Group (WEOG—including the USA, Japan, Australia, New Zealand and Canada). Under current proposals, both the Compliance Committee and the CDM Executive Board would have equal representation from the five UN Regional Groups (plus one SIDS representative) therefore neither the developed countries nor the developing countries alone could control the bodies if a three-quarters majority is required.

IPIECA

Climate Change: a Glossary of Terms

Additional terms

(Record below any new definitions established since the publication of this *Glossary*.)

IPIECA

Climate Change: a Glossary of Terms

IPIECA

Climate Change: a Glossary of Terms

IPIECA

A Glossary of Climate Change Terms

Acknowledgements

This *Glossary of Climate Change Terms* has been prepared by the International Petroleum Industry Environmental Conservation Association (IPIECA).

The base text was prepared by Jonathan Grant (IPIECA). Valuable comments on drafts have been received from:

Lenny Bernstein
Nick Campbell (TotalFinaElf)
Haroon Kheshgi (ExxonMobil)
Horacio Peluffo (UNFCCC)
Brian Flannery (ExxonMobil)

Disclaimer

Whilst every effort has been made to ensure the accuracy of the information contained in this publication, neither IPIECA nor any of its members will assume liability for any use made thereof.

Updated January 2001

This publication is printed on chlorine-free paper manufactured from recycled waste, sawmill residues, forest thinnings and fibre from sustainable forests.

The International Petroleum Industry Environmental Conservation Association (IPIECA) was founded in 1974 following the establishment of the United Nations Environment Programme (UNEP) at the Stockholm Conference of the United Nations in 1972. IPIECA is the petroleum industry's principal channel of communication with the United Nations.

IPIECA is involved in global and international environmental and health issues related to the petroleum industry, including global climate change, oil spill response, urban air quality management, emerging issues, biodiversity and Agenda 21.

IPIECA's programme takes full account of international developments in these global issues, including those developments within the United Nations and within intergovernmental institutions and industry groups.



International Petroleum Industry
Environmental Conservation Association

2nd Floor, Monmouth House
87-93 Westbourne Grove
London W2 4UL, United Kingdom

Tel: +44 (0)20 7221 2026
Fax: +44 (0)20 7229 4948
E-mail: info@ipieca.org
Internet: www.ipieca.org