

Module 1: An Introduction to Climate Change



Lesson 3: Policy and Regulation

UNEP Finance Initiative (UNEP FI) e-Learning Course on
Climate Change: Risks and Opportunities for the Finance Sector

in collaboration with



unitar
United Nations Institute for Training and Research



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Objectives

- Introduce the main inter-governmental treaty at present: the UN Framework Convention on Climate Change and its Kyoto Protocol;
- Provide a brief history of this process, to provide context for the current international talks on the next round of agreements 'post-2012' and the 'Bali Roadmap';
- Cover the key elements of the treaties, highlighting the significant issues for financial services [cross reference to lessons on CDM/JI];
- Briefly describe how the process works, makes decisions, and how governments and 'observers' (including business) interact;
- Briefly introduce the 'post-2012' debate [cross reference to lesson 11];
- Highlight other international processes, such as the G8, Major Economies process, UNGA etc, briefly setting in context.

1. Introduction

As human-caused changes to the composition of the atmosphere, and linked climatic and sea-level changes, are a global phenomenon, it is only concerted *international* action that can provide an effective response. The UN Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol are the only formally recognised process for determining inter-governmental agreement on climate change. The Framework Convention was signed in 1992, and established a shared global objective – to 'avoid dangerous climate change' - as well as a set of important principles and commitments. The Kyoto Protocol was negotiated in 1997, as a part of the UNFCCC, and contains binding emissions commitments on industrialised countries; with the first round of commitments from 2008-2012. The Protocol also created a set of 'flexibility mechanisms' that can be used for compliance: the Clean Development Mechanism (CDM), Joint Implementation (JI), and government to government emissions trading; these underpin the market in carbon commodity trading today.



The current round of talks is focused on the Copenhagen Ministerial meeting in December 2009, the deadline for reaching a 'global deal' for the 'post-2012' period containing new commitments under the Convention and its Kyoto Protocol.

Two important factors in the development of the international regulatory regime are useful to highlight. Firstly, the critical role of climate science, and the establishment of the Intergovernmental Panel on Climate Change (IPCC) producing its first overarching report in 1990 [See Lesson 1]. Secondly, the dynamic between domestic (or regional) and international policymaking. The 'negotiating mandate' of a country at international talks, will be based on its perceived national interests, including the feasibility (or existence) of a domestic policy package that can deliver emissions reductions. This relationship is key to

understanding the nature and pace of both the formal UN talks, and the series of other intergovernmental agreements, or partnerships, that seek to tackle this issue.

Box 1. Chronology of UNFCCC, and key multilateral meetings and reports

1988 - The Intergovernmental Panel on Climate Change (IPCC) is established by UN bodies; this remains the pre-eminent body analysing and reporting on the state of knowledge on global climate change.



1988 June - Toronto Conference, 'This Changing Atmosphere', the first major ministerial level conference on climate change. It gives rise to the 'Toronto target' calling for a 20% cut in CO₂ emissions by 2005. Later that year the UN General Assembly adopts a resolution on the protection of the global climate, for the first time.

1990 - The IPCC publishes its 'First Assessment Report', confirming the scientific evidence of climate change. This report states that for the long-lived greenhouse gases such as carbon dioxide (CO₂) '*immediate reductions in emissions from human activities of over 60 per cent*' would be required to stabilize their atmospheric concentrations at [1990] levels.

1990 the IPCC report is presented to the U.N. General Assembly; and UNGA initiates formal negotiations on a framework treaty, to be completed by the 1992 'Earth Summit' in Rio de Janeiro (UN Conference on Environment and Development).

1992 UN Framework Convention on Climate Change (UNFCCC) is signed by governments including then US President George Bush at the Earth Summit, in Rio. In it, industrialised countries adopt a non-binding 'aim' to return emissions to 1990 levels, by 2000.

1994 Entry into Force of the UNFCCC, i.e. binding on countries that have ratified it.

1995 The IPCC 'Second Assessment Report' is produced. On the still uncertain matter of whether humans are causing climate change, vs natural fluctuation, it states that "the balance of evidence suggests that there is a discernible human influence on global climate."

1995 First Ministerial level meeting ('COP1') in Berlin, Germany – chaired by then Environment Minister, Angela Merkel. This gives rise to the so-called 'Berlin Mandate' for a two-year round of talks to negotiate a Protocol or other legal instrument to cut emissions.

1997 The Kyoto Protocol was agreed in Kyoto ('COP3'), containing binding emissions reductions on industrialised countries to be met 2008-2012.

2000 Negotiations in The Hague ('COP6') collapse around key items of the 'rule book' for implementing the KP; at same time as US election is hung over voting re-counts. A special session is held mid-2000 to overcome the logjam.

2001 The IPCC's 'Third Assessment Report' is produced. This time it states that:

“There is new and stronger evidence that most of the observed warming over the last 50 years is attributable to human activities. ...”

2001 The ‘Marrakech Accords’ are finally agreed (at ‘COP7’), forming the ‘rulebook’ for the Kyoto Protocol mechanisms such as CDM, JI.

2005, Feb, Entry into Force of the Kyoto Protocol, following Russian ratification, late the previous year.

2005 First formal talks under the Kyoto Protocol (‘COP/MOP1’ in parallel with ‘COP11’ of the UNFCCC), agrees to negotiate further commitments under the Protocol, such that there is ‘no gap’ after 2012.

2007 The IPCC ‘Fourth Assessment Report’ is published.

2. UNFCCC: Outline of the treaty

As the Chronology (see Box 1.) describes, following the IPCC’s First Assessment Report, this treaty was negotiated in a two year period leading up to the U.N ‘Earth Summit’ in Rio, 1992, where it was ‘opened for signature’ for a year to June 1993.



Governments also had to ratify it domestically –meaning the implementation into national law such that they agree to be bound by it (technically, the terms ‘ratification’, ‘acceptance’, ‘approval’, or ‘accession’ are all used in the treaty). In total, 189 countries have ratified the UNFCCC. Governments are generally known as ‘Parties’ to the treaty, once they have ratified.

The UNFCCC text itself specifies that it would enter into force - become legally binding - 90 days after ratification by 50 countries, and within a year of that date, hold its first ‘Conference of Parties’ (COP). COP1 was held in March/April 1995, in Berlin, under the Chair of then German Environment Minister Angela Merkel.

The UNFCCC, contains 26 Articles which provide both a set of ‘content related’ commitments, as well as a full set of procedural matters. These are outlined further below.

There are two Annexes listing groups of industrialised countries. This is important, as many of the provisions of the Convention, covered below, describe the relative responsibilities of industrialised country and developing country Parties.

The most frequently referred to is Annex I which is the list of countries belonging to the Organization for Economic Cooperation and Development (OECD), as well as 12 “economies in transition” (countries in Central and Eastern Europe, including some states formerly belonging to the Soviet Union, and now Turkey)¹. The term ‘Annex I Parties’ is commonly used to refer to industrialised countries, and will be throughout this section.

¹ Annex II is more or less the same as Annex I, minus the economies in transition (Annex II is linked to provision of funds).

2.1 UNFCCC: Key Provisions

Article 2: the 'Ultimate Objective'

The UNFCCC, as its name implies, sets the overall framework for government efforts to tackle climate change. It recognizes that the climate system is a shared resource and that its stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases.

The "ultimate objective" of the UNFCCC – which also applies to the Kyoto Protocol – is *"the stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."* This level *"should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner."*



This creates a clear emissions-related objective with an implied timetable for action – based on the science of climate change, and ecological as well as economic thresholds. However, as yet this objective has not been defined, in practical terms. Although the pre-eminent scientific body, the Intergovernmental Panel on Climate Change (IPCC), advises the UNFCCC process, the definition of 'dangerous climate change' and delineation of the timetable for responding, are political decisions.

Box 2. Defining 'dangerous climate change'

There are different ways that dangerous climate change could be articulated, all are related.

* **Temperature-related goal.** The EU, for example, has currently adopted a temperature-related objective: to stop global temperatures rising more than 2 degrees higher than pre-industrial levels, stating: *"This will limit the impacts of climate change and the likelihood of massive and irreversible disruptions of the global ecosystem."*²

At the start of 2007, the EU proposed adopting a unilateral regional target for emissions reductions of 20% by 2020 to stay in line with the 2 degrees, and supporting a higher goal of 30% by 2020 for all industrialised countries.

* **Concentration limit.** Some believe the focus should be on the long-term emission concentrations ie setting an upper limit to how much CO₂ should be allowed to build up in the atmosphere, for example a 450 or 550 parts per million upper limit. With this approach an assumption needs built in on how sensitive and responsive the atmosphere is to rising greenhouse gas levels ie how much resulting temperature rise will occur, reference temperature (and sea level rise) and 'dangerous' impacts above. In its Communication at the start of 2007, the European Commission states that meeting its 2 degree target *"will require atmospheric concentrations of GHG to*

² European Commission, COM(2007)2: "Limiting Global Climate Change to 2 degrees Celsius The way ahead for 2020 and beyond", 10 January 2007.

*remain well below 550 ppmv CO₂ eq. By stabilising long-term concentrations at around 450 ppmv CO₂ eq. there is a 50 % chance of doing so. This will require global GHG emissions to peak before 2025 and then fall by up to 50 % by 2050 compared to 1990 levels.*³

* **Long-term emission reduction targets.** Several countries or states, have already adopted 2050 emissions reduction targets eg the UK of at least 80% by 2050 (over 1990 levels); the US Obama Administration supports an 80% reduction by 2050 domestic cap-and-trade approach; the EU has indicated industrialized countries will have to cut emissions by 80-95% by 2050, as part of its goal for a global cut in emissions of at least 50% by 2050, to enable developing countries to grow. (see also section 4.3 on 'Peak and Decline'.

Politics

Why has 'dangerous climate change' not been defined into a set of specific goals during the last 15 years? One explanation is that agreeing an upper limit of greenhouse gas concentrations beyond which the consequences are deemed dangerous, translates into a global emissions reduction goal, and a highly political debate over how quickly this should be reached and by whom. This carries with it strategic implications for fossil fuel production and use.

Throughout the mid-1990s there was a deliberate effort from some quarters, including fossil fuel and carbon intensive industries, to undermine the scientific rationale for taking action on climate change at all. Although there is a now widespread scientific consensus about the nature of the threat, and the fact that human-induced climate change is underway, a range of economic arguments have been advanced that suggest negative economic impacts of taking action too soon, all of which contribute to the difficulty of making progress in this area.

2.2 UNFCCC: 'Common but Differentiated Responsibility' – a Key Principle

Industrialised countries lead action (Article 3.1)



activity that other countries aspire to.

The ultimate objective of the Convention should be achieved on the basis of the principle of 'equity and in accordance with common but differentiated responsibilities and respective capabilities'. This acknowledges that while the global nature of climate change requires the 'widest possible cooperation by all countries', industrialised countries have a greater responsibility, given that they produced the largest share of historic, and current emissions, generated through economic

The UNFCCC background material puts it thus: "The Convention accepts that the share of greenhouse gas emissions produced by developing nations will grow in the coming years. It nonetheless seeks to help such countries limit emissions in ways that will not hinder their economic progress."

³ As above

Implications for current post-2012 negotiations

It is an important backdrop to the current round of talks. Developing countries can quite legitimately look for evidence that industrialised countries (listed in 'Annex 1') have taken existing emissions commitments seriously, before being prepared to discuss their own specific commitments. This is part of the political tension in the negotiations, particularly where actors from industrialised countries point to the growth in emissions from countries like China and India.

Financial flows are also important to developing countries: it is written into the Convention's main article on Commitments (Article 4, see below) that "The extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation by developed country Parties of their commitments.....related to financial resources and the transfer of technology..." (Article 4.7).

2.2.1 Other Principles

Other principles include precautionary action, sustainable development, and the fact that measures taken to combat climate change, including unilateral ones "should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade." The latter, of course, can be interpreted in a variety of ways, and has never been put to the test.

2.3 UNFCCC: Key Commitments

The main Commitments (Article 4) are:

- the preparation, by all parties, of a national inventory of greenhouse gas emissions (see 2.4.1 below for more detail), and a regular report to the Conference of Parties on implementation of commitments;
- to take measures to mitigate climate change, promoting sustainable management, technology transfer, cooperate on scientific and technological research and observation, and preparations for adaptation to the impacts of climate change;
- a non-binding commitment on Annex1 Parties (Article 4.2 (a) and (b)) to adopt national policies and measures to limit greenhouse gas emissions; to stabilise emissions at 1990 levels by the year 2000; start reporting on emissions and policies within 6 months of the Convention entering into force. This includes the agreement that Annex 1 Parties can implement policies and measures jointly, known as 'Joint Implementation', with criteria to be defined at the first COP;
- to review the adequacy of the above commitments (ie emissions targets, policies and measures) at the first COP. This resulted in COP1 agreeing a mandate to negotiate a 'protocol or other legal instrument' in 2 years, to contain further 'quantified emission limitation or reduction obligations' (which became the Kyoto Protocol).

- the provision of funds ('new and additional financial resources') by Annex 1 parties, to meet costs incurred by developing countries Parties to comply with various aspects of the Convention, including reporting, technology transfer;
- to give full consideration to what actions are necessary to meet developing country needs and concerns arising from the 'adverse effects of climate change and/or the impact of implementation of response measures' (Article 4.8).

This latter point, inserted largely by OPEC countries, is ostensibly related to the potential for emissions reductions to affect economies dependent on oil or other fossil fuel exports. This is widely regarded as a strategic argument, and it is fair to say it has been a source of frustration to many Parties. This is because progress in discussions about assistance to nations vulnerable to sea-level rise or natural disasters, under this Article, has been stalled by linking it to discussion about compensation-related options for oil producers, few Parties want to entertain discussion on the latter.

2.3.1 UNFCCC & Kyoto Protocol: National Inventories, National Communications

A fundamental element of implementation of the UNFCCC (Article 4, and detailed in Article 12) is the obligation on Parties to produce an 'inventory' of their greenhouse gases.

The inventory is crucial, as it forms the basic 'database' for compliance under both the UNFCCC and the Kyoto Protocol. A common set of precise 'methodologies' for calculating emissions and removals are agreed by the Parties at the COPs, as well as common reporting format. With a few exceptions, the "base year" for the inventory is set as 1990.

The inventory is broken down into 'emissions by sources and removals by sinks', from human ('anthropogenic') activities. Sinks refers to process or activity which removes greenhouse gases from the atmosphere e.g. forests, and other vegetation, which remove CO₂ through photosynthesis.

International 'bunker fuels' ie fuel use associated with international aviation and international maritime transport are reported separately in the national inventory, and are excluded from national totals. Currently these emissions remain unregulated under the UNFCCC and the Kyoto Protocol⁴.

Inventory data are submitted annually by April 15th by Annex I Parties, using a common reporting format; non-Annex I data are reported in national communications submitted at different points in time. Inventory data from the different Parties is listed on the official UNFCCC website (www.unfccc.int), and available from the respective government.

National Communications are reports produced outlining actions a Party is taking to implement all of its obligations under the UNFCCC. It must be submitted around every two to three years, or as agreed, by Annex I Parties, and periodically by non-Annex I Parties. For Annex I, it must outline policies

⁴ Parties have agreed, under Article 2.2 of the Kyoto Protocol, to work through the International Civil Aviation Organisation, and International Maritime Organisation to 'pursue limitation or reduction' of emissions, however progress has been extremely slow.

and measures adopted to mitigate greenhouse gas emissions, and the expected effect on emissions, as well as a summary of the greenhouse gas inventory. As with the national inventory, the national communication is reviewed externally by expert reviewers, following agreed guidelines, and is available publicly.

The 1996 Revision of the IPCC's *Guidelines for National Greenhouse Gas Inventories* was adopted at COP3, Kyoto, as the "methodologies for estimating anthropogenic emissions by sources and removals by sinks of greenhouse gases", in calculation of legally-binding targets during the first commitment period of the Kyoto Protocol.

The *Guidelines* are updated as required, with the most recent revision in 2006. This covers, for example, methodologies for accounting for carbon capture and storage in the inventory. Full information is available from the IPCC National Greenhouse Gas Inventories Programme website: <http://www.ipcc-nggip.iges.or.jp/>. This will be carefully scrutinised by both governments and those involved in projects or compliance-related activities under the Kyoto Protocol: for example, a change in Global Warming Potential used in an inventory could have implications for the number of compliance-related carbon credits for a given activity.

As well as national inventory and national communication information, the official UNFCCC website, also has reports of aggregated information, used to report on progress towards implementation of the treaty (through the Subsidiary Body for Implementation, see below). At COP12, November 2006 in Nairobi, a report was made synthesising national inventory data for Annex I Parties⁵. Its summary indicates that total aggregate greenhouse gas (GHG) emissions for:

- all Annex I Parties together decreased by 4.9% between 1990 and 2004 (this, and figures below, include removals from LULUCF 'sinks', as permitted for compliance);
- for economies in transition (EIT) Parties, GHG emissions decreased by 44.8%;
- for Annex I minus EIT Parties, GHG emissions increased by 12.1 per cent.
- Within the Energy Sector category, GHG emissions rose by 23.9% in the Transport, and 8.6% in the Energy Industries sub-categories between 1990 and 2004, although Energy Industries' emissions were higher overall. Emissions from fuel sold for aviation increased by 52%.

⁵ Document FCCC/SBI/2006/26, 'National greenhouse gas inventory data for the period 1990–2004 and status of reporting', 19 October 2006. Available from: www.unfccc.int > Documentation.

Box 3. Greenhouse gases under the UNFCCC/Kyoto Protocol

The UNFCCC regulates “greenhouse gases, not covered by the Montreal Protocol”, a form of wording adopted as some of the ozone depleting gases already regulated under the UN’s ‘Montreal Protocol on Substances that Deplete the Ozone Layer’, are also powerful greenhouse gases.

Itemised under the Kyoto Protocol (KP)’s Annex A, are the six main greenhouse gases. In the KP, these are treated as ‘a basket’ of gases, rather than individually, meaning that the legally binding target applies to the total of all the greenhouse gas emissions. For this reason it should be noted that each gas had different strengths, or global warming potentials (GWP) based on its impact on warming and lifetime in the atmosphere. Often statistics will use aggregated numbers and refer to a CO₂e – CO₂ equivalent – final amount.

The six main regulated greenhouse gases, and their sources, are:

- CO₂ – Carbon dioxide – primary contributor to global warming, mainly from fossil fuel combustion; [Global Warming Potential, GWP: 1*]
- CH₄ – Methane – agriculture practices and waste management processes, as well as release, from for example, coal mines; [GWP: 23]
- N₂O – Nitrous oxide – agricultural practices, mainly the use of nitrogen fertilizers in agriculture, and to a lesser extent animal waste handling, by product of fossil fuel combustion, mainly in the transport sector; [GWP: 296]
- PFCs – Perfluorocarbons – an alternative to ozone depleting CFC’s and HCFC’s, emitted as by-product of aluminium production, and also used in semi-conductor manufacturing; [GWP: 5,700-11,900]
- HFCs – Hydrofluorocarbons – mainly substitutes for CFCs and HCFCs, for use primarily in refrigeration, foam blowing, and air conditioning equipment; [GWP: range 120-12,000, the latter for HFC-23]
- SF₆ – Sulphur hexafluoride - used as an insulator for circuit breakers, switch gear, and other electrical equipment; also emitted from some semi-conductor manufacturing processes. [GWP: 22,200]

The last three, often referred to as the industrial greenhouse gases, are chemically engineered, and do not occur naturally. Some have very long lifetimes and are extremely powerful, although are a small percentage of overall emissions. Rising emission trends and incentives within international regulation, for example HFC manufacturing, are being carefully scrutinised.

The US 2006 emissions statistics⁶, CO₂ accounted for 83.8% of total US emissions; methane 8.6%, nitrous oxide 5.4%, and the industrial greenhouse gases 2.2%.

* GWP is for 100 year lifetime of the gas in the atmosphere, based on IPCC Third Assessment Report, ref www.eia.goe.gov

⁶ Reference “Emissions of Greenhouse Gases 2006”, Energy Information Administration, November

2.4 UNFCCC: Key Procedural matters

These include:

- the establishment and remit of the Conference of the Parties, COP, (Article 7) – the ‘supreme body’ of the treaty, at Ministerial level, which regularly reviews implementation and any related instruments (ie Kyoto Protocol) and makes decisions ‘necessary to promote the effective implementation of the Convention’;
- the establishment of a Secretariat: it has an overall coordination function, organises the COPs, and produces the documentation, its staff contains experts in all of the issue areas. It is based in Bonn, Germany. The current Executive Secretary, Yvo de Boer, has taken a very active approach to leading the Secretariat;
- the establishment of the ‘Subsidiary Bodies’: the Subsidiary Body for Implementation, SBI, and the Subsidiary Body for Science and Technical Assessment, SBSTA, (Articles 9, 10) which essentially do the ‘work’ of the Convention providing advice, and formulating the basis for agreements made at the ‘COP’s (see 2.5.1 below);
- the management of financial resources associated with implementation, through a ‘Financial Mechanism’ (Article 11); it was subsequently decided that this would be functionally managed through the Global Environmental Facility of the World Bank;
- procedures for amending and adopting amendments to the Convention (Article 15), and Protocols (Article 17);
- dispute settlement provisions (Article 14).



In terms of how decisions are actually made, Article 15.3 specifies, in relation to amendments to the Convention, that agreement between Parties should be by consensus but “If all efforts at consensus have been exhausted, and no agreement reached, the amendment shall as a last resort be adopted by three-fourths majority vote of the Parties present and voting at the meeting.” There is one vote per Party.

2.4.1 UNFCCC: Subsidiary Bodies⁷

Advice to the Ministerial-level Conference of the Parties are prepared through two ‘subsidiary bodies’: the Subsidiary Body for Scientific and Technological Advice (SBSTA), and the Subsidiary Body for Implementation (SBI). These bodies have a specific mandate. They are both open to participation by any Party and governments have a strong incentive to participate as these bodies create the basis for decisions at the COPs.

2007. Available from URL: www.eia.doe.gov/environment.html.

⁷ This section summarises background information available on the official UNFCCC website: www.unfccc.int

As its name suggests SBSTA's task is to provide the COP with advice on scientific, technological and methodological matters related to Articles of the UNFCCC. It has an important role as the link between the scientific information provided by expert sources, and the policy-oriented needs of Parties.

SBSTA, for example, will cover:

- provision of information on scientific knowledge relating to climate change and its effects:
- respond to scientific, technological and methodological questions raised by the COP e.g. technical work to improve the guidelines for preparing national communications and emission inventories, or specific sectors e.g. Land-Use, Land-Use Change and Forestry (LULUCF), carbon capture and storage;
- technical issues related to technology transfer;
- technical issues around adaptation and vulnerability.

SBSTA will work closely with the IPCC as needed, and can request methodological reports, technical papers and special reports' – for example the Special Report on Carbon Dioxide Capture and Storage, produced in 2005⁸.

The SBI gives advice to the COP on all matters concerning the implementation of the Convention. Tasks include:

- examination, and aggregation, of the information in the national communications and emissions in order to assess the overall effectiveness of implementation – this is of particular importance;
- review of the financial assistance given to non-Annex I Parties to help them implement their Convention commitments,
- advice on guidance to the UNFCCC financial mechanism (operated by the GEF);
- advice on budgetary and administrative matters.

There are some cross-cutting issues such as capacity building, the vulnerability of developing countries to climate change and response measures.

The SBSTA and the SBI traditionally meet in parallel, at least twice a year. Generally with one meeting mid-year in Bonn, and the other in parallel to the COP. There is a precedent to meet more often if there is a particularly high workload – but this has cost and workload implications, particularly for smaller countries with limited capacity in terms of government officials working on international climate change matters. Given the extremely high

⁸ See www.ipcc.ch; the Summary is available to download from: http://arch.rivm.nl/env/int/ipcc/pages_media/SRCCS-final/ccsspm.pdf

workload over 2008-2009 required to fulfill the Bali Roadmap by the end of 2009, there will be two extra meetings per year during this period.

2.4.2 SBSTA, SBI, COP: institutions also serving the Kyoto Protocol

SBSTA and SBI also serve as Subsidiary Bodies to the Kyoto Protocol. The Protocol's main annual meeting is also linked to the COP: it is somewhat confusingly called the 'COP/MOP', the 'Conference of the Parties, acting as the Meeting of the Parties' of the Kyoto Protocol. Articles 13 to 19 of the Kyoto Protocol, formalise the shared institutions, and include the Convention's Secretariat, the Subsidiary Bodies, the COPs, and rules of procedure.

This linked arrangement is more efficient, and enabled key areas of work for example on the rules for emissions trading, and non-compliance procedures to be delegated to the COP, and completed prior to the Protocol's entry into force.

The functions of the COP/MOP relating to the Protocol are similar to those carried out by the COP for the Convention – taking decisions, reviewing progress towards implementation and, reviewing the obligations in the context of the ultimate objective of the Convention.

3. The Kyoto Protocol

3.1 Parties to the UNFCCC that have not ratified the Kyoto Protocol

Parties to the UNFCCC, that are not Parties to the Kyoto Protocol – notably the United States -, can participate in Kyoto-related fora e.g. the Subsidiary Bodies and the COP/MOP, but only as observers. Non-Kyoto Parties cannot be on the bureau⁹ of the COP/MOP.



3.2 Kyoto: Ratification and Entry into Force

Following its signature in December 1997, in Kyoto, at COP3, the Kyoto Protocol started a lengthy ratification period, finally entering into force on 16 February, 2005. As written into the Protocol text (Article 25), it required 55 countries, accounting for at least 55% of the 1990-level emissions from industrialised countries to ratify. This double threshold meant that, when the US and Australia failed to ratify, Russia became a key country: and Russian ratification was not reached until November 2004. Australia ratified the Kyoto Protocol in December 2007, following a change of

⁹ The Bureau of the COP is comprised of the COP President (usually a Minister from the country hosting the COP), seven vice-presidents, the chairs of the subsidiary bodies, and a rapporteur. Its role is predominantly to advise the President of the COP on procedural management, however this is an important role during a COP in terms of facilitating agreement.

government. Its new Prime Minister, Kevin Rudd, received a standing ovation at the Bali Ministerial climate talks that month.

As of mid-January 2008, 177 countries plus the European Community have ratified the Kyoto Protocol, accounting for 63.7% of total Annex I Party emissions.

3.3 The provisions of the Kyoto Protocol¹⁰

The 1997 Kyoto Protocol works under the Convention's objective, principles and its institutions – as outlined above. However it was instrumental in shifting from the voluntary 'aims' to reduce greenhouse gas emissions, to agreement that Annex I Parties adopt *specific, legally-binding targets* to limit or reduce their greenhouse gas emissions.



3.3.1 Legally-binding targets

Individual targets for Annex I Parties, range from an 8% reduction for the EU as a whole, to an allowed 8% and 10% increase for Australia and Iceland respectively (see table below). This adds up to a total reduction in greenhouse-gas emissions of around 5 % compared to 1990 levels.

The targets are to be achieved in the first commitment period running from 2008-2012. A 5-year commitment period, rather than a single year deadline, allows countries to achieve their obligation averaged out over the five years, thus mitigating particular conditions, for weather patterns, or factors that alter national energy profiles, that could cause a single-year impact on emissions trends.

The Protocol's Annex A, lists the greenhouse gases, the six gases (see Box 3 above), and sectors/source categories – such as different energy and manufacturing industries and sources; land and waste management categories.

Annex B lists the binding targets¹¹. The overall emissions a Party is allowed to emit during the commitment period is called its 'Assigned Amount', and when trading between Parties occurs (under the Protocol's Article 17, see below and in detail in Module 3), the traded units are called 'Assigned Amount Units' or AAUs.

¹⁰ Parts of this section summarises background information available on the official UNFCCC website: www.unfccc.int

¹¹ These are called 'Quantified emission limitation or reduction commitments', and written as a percentage of the base year, i.e. the EU is listed as 92%.

Table 1. Binding Emissions Targets under the Kyoto Protocol (Annex B)

Country	Target (2008-2012 over 1990** levels)
EU-15*, Bulgaria, Czech Republic, Estonia, Latvia, Liechtenstein, Lithuania, Monaco, Romania, Slovakia, Slovenia, Switzerland	-8%
US***	-7%
Canada, Hungary, Japan, Poland	-6%
Croatia	-5%
New Zealand, Russian Federation, Ukraine	0
Norway	+1%
Australia ***	+8%
Iceland	+10%

* *The EU's then 15 member States negotiated a binding target as a block, (often referred to as the EU "bubble"), within which each member state has a binding individual target agreed under a so-called 'burden-sharing' arrangement.*

** *Some 'Economies in Transition' have a baseline other than 1990;*

*** *These were the targets negotiated by the United States and Australia at the 1997 Kyoto talks.*

Note: Although they are listed in the Convention's Annex I, *Belarus* and *Turkey* are not included in the Protocol's Annex B as they were not Parties to the Convention when the Protocol was adopted

3.3.2 Means to achieve the targets

Domestic policies and measures (Article 2), together with the so-called 'flexibility mechanisms' are set out in the KP as key means of meeting commitments. The flexibility mechanisms are summarised in Box 4, below, and covered in detail in Module 3. The latter are intended to help Annex I Parties cut the cost of meeting their emissions targets, through projects that reduce emissions, or increasing removals (or 'sinks') at lower cost than domestically.

However, Parties must provide evidence that their use of these mechanisms is "supplemental to domestic action", which must constitute "a significant element" of their efforts in meeting their commitments, although not specifically defined.

Businesses, environmental NGOs and other "legal entities" may participate in the mechanisms, albeit under the responsibility of their governments. This means that companies in the US, for example, which would require their governments to formally agree projects, would be excluded from participation. However subsidiaries of those companies, registered in Kyoto compliant countries, could participate in the mechanisms.

Box 4. Summary of ‘flexibility mechanisms’ under the Kyoto Protocol

Mechanism	Article in KP	Mechanics	Name of Unit created	Institutions
CDM*	Art. 12	Project-based, between Annex1 and non-Annex1 (or unilateral non Annex 1)	Certified Emission Reduction, CER	CDM Executive Board
JI**	Art. 6	Project-based, between Annex1 only	Emission Reduction Unit, ERU	JI Supervisory Committee
Emissions Trading	Art. 17	Government to Government, trading AAUs	Assigned Amount Units, AAU	
Removals or ‘sinks’ activities*** Land-Use, Land-Use Change and Forestry (LULUCF) – includes specific forestry, and land-management activities.	This is a category of permitted activities which are awarded specialised ‘units’ to reflect non-permanence .	LULUCF activities: restricted by activity, and quantity that can be used for compliance for Annex I, also restricted under the CDM	Removal Units, RMUs , Annex 1 parties Temporary, or long-term Certified Emission Reductions, tCERs, ICERs under CDM, must be replaced by permanent units.	

** The Protocol envisages a prompt start to the CDM, allowing CERs to accrue from projects from the year 2000 onwards. A levy from each CDM project – known as a “share of the proceeds” goes into an Adaptation Fund to help finance adaptation activities in particularly vulnerable developing countries¹².*

*** While the term “Joint Implementation” does not appear in Article 6 of the Protocol, it is commonly used; the entity established to oversee Article 6 activity is called the JI Supervisory Committee.*

**** Additional detailed rules govern the extent to which removals from the LULUCF category, commonly referred to as ‘sinks’, can be counted under the Protocol both by quantity, and type of activities. There is an individual cap for*

¹² Note that under the Kyoto Protocol there are three fairly modest funds for developing countries: the Adaptation Fund, based on the CDM levy; a Special Climate Change Fund focused on helping finance different sorts of projects; and the Least Developed Countries Fund supporting preparation and implementation of national adaptation programmes of action (NAPAs), and other defined activities.

each Party, for the amount of credit from forestry activity (listed in the Marrakech Accords). The reason for this limitation is the concern that emissions 'stored' in the biosphere, through human activity in relation to trees, soil, vegetation, could be re-released. Therefore it is not truly equivalent to avoiding emissions in the first place.

3.3.3. Marrakech Accords

This is the detailed 'rule book' for how the flexibility mechanisms, and a range of other details linked to meeting commitments under the Kyoto Protocol, the majority of rules were agreed at COP7, 2001, in Marrakech, and formally adopted at the first Meeting of the Protocol, December 2005¹³.

3.3.4 Monitoring, Reporting and Verification

The Kyoto Protocol's effectiveness will depend upon two critical factors: whether Parties follow the Protocol's rulebook and comply with their commitments; and whether the emissions data used to assess compliance is reliable.

To ensure the latter, monitoring, reporting and verification are outlined in Articles 5, 7 and 8, of the Protocol. The Protocol's monitoring procedures are based on the national inventory and national communication provisions under the Convention (see 2.4.1 above), with supplementary information to demonstrate compliance with the Kyoto Protocol.

Parties must establish and maintain a national registry to track and record holdings and transactions of Kyoto Protocol units (AAUs, CERs, ERUs, and RMUs – see Box 4). These registries link in with an International Transaction Log (ITL), established by the Secretariat. The ITL is a central part of validating transactions, ensuring the integrity of accounting, and therefore compliance. It will also interface with the EU's Emission Trading Scheme transaction log, as well as national registries.

An annual compilation and accounting report of each Party's emissions and transactions over the year will also be published by the Secretariat. All information, except that designated as confidential, will be made available to the public.

In order to address the concern that some countries could "over-sell" and then be unable to meet their own targets, the Protocol rulebook requires Annex I Parties to hold a minimum level of AAUs, CERs, ERUs and/or RMUs in a "commitment period reserve" that cannot be traded.

¹³ The formal document detailing the rules relating to the flexibility mechanisms is FCCC/CP/2001/13/Add.2 (21 January 2002), this is downloadable from www.unfccc.int; alternatively from the International Emissions Trading Association website www.ieta.org, via 'climate change and market mechanisms' section.

3.3.5 Compliance

The Protocol's compliance system, consists of a Compliance Committee, and two branches: a facilitative branch and an enforcement branch. As their names suggest, the facilitative branch aims to provide advice and assistance to Parties, including "early-warning" that a Party may be in danger of not complying. The enforcement branch has the power to apply certain consequences on Parties not meeting their commitments.

If a Party fails to meet its emissions target, it must make up the difference in the second commitment period, plus a penalty of 30%. It must also develop a compliance action plan, and its eligibility to "sell" under emissions trading will be suspended.

There are detailed procedures with specific timeframes for the enforcement branch, including the opportunity for a Party facing the Compliance Committee to make formal written submissions and request a hearing where it can present its views and call on expert testimony. In the case of non-compliance with emission targets, the Party can also lodge an appeal to the COP/MOP if that Party believes it has been denied due process.

Before enforcement procedures start, Annex I Parties have 100 days after the expert review of their final annual emissions inventory, to make up any shortfall (e.g. by acquiring AAUs, CERs, ERUs or RMUs through emissions trading).

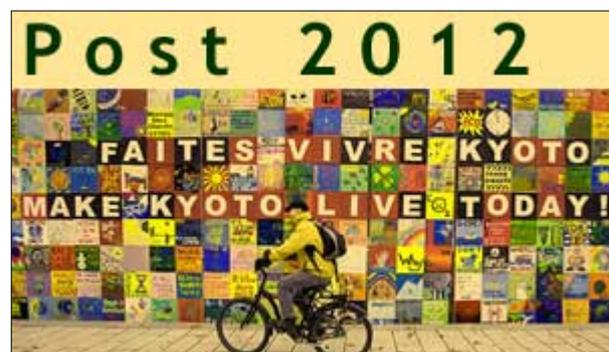
4. 'Post 2012' and the Bali Roadmap

In December 2007, at the 'COP13' round of talks in Bali, Indonesia, Ministers reached final agreement on a deal known as the 'Bali Roadmap'. Its main feature was to formalise a two-year process to negotiate a global framework which will include commitments by both developed and developing countries, for adoption at the December 2009 Ministerial round of talks, in Copenhagen (COP15). This encompasses the US. In parallel, a separate work stream on further commitments under the Kyoto Protocol will continue, with the Kyoto signatories (not including the US). These twin tracks are expected to merge, ahead of COP15.

4.1 Background to the Bali deal

The backdrop to the Bali deal was set up at the first Ministerial level meeting in December 2005 (COP 11, COP/MOP1 in Montreal) following the entry into force of the Kyoto Protocol. In Montreal, governments agreed:

* To initiate talks on further commitments under the Kyoto



Protocol, as specified under its Article 3.9¹⁴, and that these talks would aim to adopt results as early as possible and in time to ensure that there is no gap between the first and second commitment periods. It became widely accepted that this meant by the end of 2009, in order to allow necessary time for government ratification prior to 2012. It also reflected an increased understanding by governments that uncertainty over the post-2012 regime was affecting business confidence in the emissions trading markets established through the Protocol's flexibility mechanisms.

* To embark on a 'Convention Dialogue' under the overarching Framework Convention, which intended to be an opportunity to 'exchange experiences and analyse strategic approaches for long-term cooperative action to address climate change'.

Although procedurally the Bali Deal/the Convention Dialogue was weak (under pressure from the US, it was set up as an 'open and non-binding exchange of views and will not open any negotiations leading to new commitments'). Nevertheless, it kept the matter of broader commitments on the agenda. This was also politically important for the industrialised Kyoto countries many of whom needed to show back home that they were not the only ones looking to take further action globally.

Lastly the groundwork for the review of the Kyoto Protocol, written into its Article 9, was laid out and was further defined in Bali.

4.2 Bali Roadmap

Building on both the Convention Dialogue and the post-2012 Kyoto timeframe, the Bali Roadmap – the set of decisions made at COP13, in particular the Bali Action Plan, formalises the two-year process leading up to Copenhagen. It aims governments to actually discuss and negotiate under a grouping called the Ad hoc Working Group on Long term Cooperation (AWG-LCA) under the Convention.

Governments stated in the Bali Action Plan that deep cuts in global emissions are necessary to achieve the UNFCCC ultimate objective, and emphasised the urgency to address climate change as indicated in the IPCC report released in 2007.

They agreed that the AWG-LCA process shall cover both more action (national and international) on mitigation as well as on adaptation, technology development and transfer, and provision of financial resources and investment.

There are two key operational paragraphs that define what governments will negotiate by the end of 2009, relating separately to developed and developing country commitments.

For developed countries, new commitments must be 'measurable, reportable and verifiable' ['MRV'], including 'quantified emissions limitations and reductions' – the language commonly meaning targets and timetables¹⁵. These apply to 'all developed countries' – which is a code for including the United States.

¹⁴ Article 3.9 of the Kyoto Protocol states that consideration of commitments for Annex I parties for subsequent commitment periods, must occur at least seven years before the end of the first commitment period (ie 2005).

¹⁵ For developed countries, the key operational elements in the Roadmap are to agree: "measurable, reportable and verifiable nationally appropriate mitigation commitments or actions, including quantified

For developing countries, these are 'nationally appropriate mitigation actions' with technology and financing to be enabled in a verifiable way¹⁶. This creates room for a great deal of flexibility on how these 'actions' might be defined. The latter reference to technology and financing was controversial, particularly for the US, as it could be perceived as a form of conditionality on developed countries to be fulfilled prior to developing country commitments. However in the final hours of the Bali talks, there was sufficient assurance provided by key developing countries, and sufficient pressure on the US to back down, to enable agreement to be reached.

In overall terms, while the Roadmap language is detail-free, it is very important as it reflects a good consensus on the need to move forward in step, with both developed and developing countries being prepared to take on different forms of new commitments.

In parallel, there will be the ongoing talks on commitments under a second phase of the Kyoto Protocol, outlined above, aimed at a new set of post-2012 agreements for industrialised countries (currently excluding the US). This is under the Ad Hoc Working Group on Further Commitments for Annex I Parties in the Protocol (AWG-KP) established in the Montreal negotiations. This forum has already met several times, and has its own work plan in terms of analysis and progress to assist reaching new commitments. This so-called 'Kyoto track' is expected to merge, or potentially be absorbed into the broader 'AWG-LCA' talks ahead of the Copenhagen meeting, given the clear overlap.

This slightly awkward two-track process also enabled the US to be included in the overall process of defining commitments, through the overarching Convention-based LCA talks, without having to be part of the Kyoto Protocol. It also creates room for changes to the US position signalled by President Obama.

Other elements, laid out in the Bali Action Plan and which will be central to the Copenhagen deal in 2009 are:

4.2.1 Technology Transfer

This is a potentially key political, 'lubricant' between north and south, particularly as developing countries look for evidence that the agreements under the 1992 Convention – which includes technology transfer – are met, prior to taking on new commitments themselves. Real world challenges include reaching a shared view of what technology transfer means at this moment in time (compared to the early 1990s when the Convention was signed), and what international activities the UN can facilitate. The Bali Action Plan includes consideration of:

- effective mechanisms for the removal of obstacles and the provision of financial and other incentives for the development and transfer to developing countries of 'affordable, environmentally sound technologies', and

emissions limitations and reductions by all developed countries, taking into account differences in their national circumstances.”

¹⁶ For developing countries the key operational elements in the Roadmap are to agree: “nationally appropriate mitigation actions by developing countries in the context of sustainable development, supported and enabled by technology, financing and capacity building, in a measurable, reportable and verifiable way.”

- cooperation on R&D of 'current, new and innovative' technology

As with the other specific areas, how this might be monitored, reported and verified (the 'MRV' issue) would have to be determined as well.

In Bali, despite some setbacks, there was final agreement that the Global Environment Facility (under the World Bank) would define a 'strategic programme' to scale up the level of investment for technology transfer.

4.2.2 Adaptation

The nature of the management of the existing Adaptation fund was the subject of extensive discussion in Bali. This is a key area for developing countries, which are widely acknowledged as facing the brunt of climate change impacts and costs. The issue of Adaptation to the impacts of climate change is one which will rise in priority; under the Bali Action Plan, amongst other things, parties must consider:

- international cooperation to assist with assessing vulnerabilities in a country; integration of adaptation actions into sectoral and national planning,
- risk management and risk reduction strategies, including potential role of insurance and
- how the Convention can catalyse actions in this area in other multilateral bodies, the private sector, and others.

4.2.3 Financing and Investment

The provision of financial resources and investment to support action on adaptation and mitigation will be a crucial issue in reaching a deal in Copenhagen. If developing countries are going to do more to tackle greenhouse gas emissions, they want to see what industrialised countries are prepared to put on the table to help them. On the other hand, for scaled up financial resources to flow, industrialised countries are likely to have to be accountable to their treasuries over what the money will be used to deliver.

Access to 'adequate, predictable and sustainable' financial resources (and financial and technical support) is the top item in the Bali Action Plan, with emphasis that these should be new resources not redirection of existing aid or other support. The role of private sector finance is specifically mentioned in the context of 'Mobilisation of public- and private-sector funding and investment, including facilitation of climate-friendly investment choices' (Bali Action Plan, Article 1(e)(v)).

4.2.4 Reduced Emissions from Deforestation in Developing countries (REDD)

This topic is very important for overall climate protection, and is now re-emerging onto the international agenda¹⁷. In Bali there was agreement that:

¹⁷ The issue of 'avoided deforestation', and forestry related issues (LULUCF) was on the international agenda in the late 1990s, and was a contributing factor to the collapse of the international talks in the Hague (COP6, November 2000). One of the issues at that time, was concern that if carbon credits

- there is an urgent need to take meaningful action,
- parties should be encouraged to take actions, including activities demonstrating emissions reduction projects in this area,
- formal work on methodologies should be implemented and
- under the Bali Roadmap further options of 'policy approaches and positive incentives' should be considered.

Protecting and valuing forests adequately, including for their role in the climate system is clearly a crucial issue.

However, it should be noted that 'REDD' is sometimes used as shorthand for meaning carbon finance i.e. including 'avoided deforestation' in carbon markets. In this context, there are a number of approaches being discussed. It might be useful to highlight that this area has many issues raised by governments and stakeholders that need understood, resolved and structured into any agreement such that all parties take the same approach. These include:

- methodological issues i.e. how to measure 'forests',
- deforestation or degradation activity and rates amongst others,
- prevent leakage (protection in one area leading to deforestation in another),
- sovereignty (land-use related),
- indigenous peoples' rights; liability,
- compliance/enforcement and
- the underlying causes of deforestation itself.

For this reason it is complex, and rather more controversial, than might be assumed at first.

4.3 Scale: science meets politics: 'Peak and Decline'

In terms of the scale of what governments might be aiming to achieve in new agreements, under the Kyoto talks in 2007 governments noted that IPCC figures indicate global emissions need to peak in the next 10 to 15 years, and then decline to well below half of 2000 levels by 2050 to reach the lowest stabilisation levels of Greenhouse gases. For this, an indicative range of around 25-40% reductions for industrialised country emissions by 2020 would be needed.

Re-referencing this explicitly in the Bali Roadmap and the Kyoto Track preambles was too prescriptive for some governments, although supported by others. But it remains albeit as an oblique reference to the IPCC work. The degree of debate over this issue firmly puts the science of climate change and the scale of ambition for post-2012 commitments on the agenda, particularly given the level of scrutiny on this matter from observers at the talks. In this context it is useful to outline 2008-2009 positions by the EU, US 'ambition level', as well as China, as lead actors in the negotiations.

were sold from natural forests that were not cut down (avoiding deforestation) eg from the Amazon, the climate could be worse off, unless there was proper data on the baseline and measurement side on deforestation rates; there were also a series of issues around plantations. The debate has moved on since then reflected in renewed efforts to take an international approach through the 'REDD' discussions.

The EU has by far the most 'worked through' position of the industrialized countries. The Environment Council of Ministers in March 2009¹⁸ notes its agreed Climate Change and Energy Package, which contains a binding unilateral commitment to reduce GHG emissions by 20% by 2020. The Council reaffirms its support for a further reduction of emissions according to the 30% target by 2020. This aim appears as part of a 'global and comprehensive' post-2012 agreement. The Council remarks that it should be 'provided that other developed countries commit themselves to comparable emission reductions'. The agreement states that global emissions must be cut by 'at least' 50% by 2050 (compared to 1990 levels), and must peak in 2020 to be on track for this. It also suggests that economic transformation to achieve an 80-95% cut by industrialized countries by 2050 will be required.

The 2009 EU Environment Council also suggests that developing countries as a group, particularly the more advanced developing countries, will need to 'achieve a substantial and quantifiable deviation below the currently predicted emissions growth rate'. The Council notes that analysis indicate that these emissions would be around 15-30% below *business as usual* by 2020 (slowing the rate of growth, rather than absolute targets). This would also be needed to be consistent with the principle of common but differentiated responsibilities.

Excursion: Development in the United States of America

President Obama laid out a decisive departure from the Bush Administration's position on climate within a short time of taking office (reflected in the unprecedented inclusion of a reference to global warming in his inaugural speech). In late January, a General Policy Statement on the agenda for energy and the environment was released which contains amongst other things the implementation of a US economy-wide cap-and-trade program to cut greenhouse gas emissions by 80% by 2050 (a baseline was not specified); as well as a commitment to 'Make the US a leader on climate change'.

In March 2009 Todd Stern, Obama's appointed 'Special Envoy on Climate Change', gave his first main speech which he opened by borrowing from another 2-word press release: 'We're back'. He goes on to state: "*We are seized by the importance and urgency of the task. The President has made the transformation to a low-carbon economy a core part of his domestic agenda. And we are eager to get a strong new international agreement done in Copenhagen.*"

In a further departure from the past, his speech lays out several principles for the US approach. These include:

- firmly based in the science;
- US recognition of its own responsibility 'as the largest historic emitter of greenhouse gases' and the need to put in place a strong and mandatory domestic plan to cut emissions (integrated into, and not postponed until after the economic recovery);

¹⁸ Contribution of the Council (Environment) to the Spring European Council (19 and 20 March 2009). Further development of the EU position on a comprehensive post-2012 climate agreement - Council conclusions. Document 7128/09, 3 March 2009; available from <http://register.consilium.europa.eu/pdf/en/09/st07/st07128.en09.pdf>

- the need to work with other industrialised countries to ensure a 'significant flow of funds' to developing countries¹⁹.

In addition, the priority placed on a multi-billion dollar package of measures to support renewable energy, energy efficiency and smart grids within the national stimulus package (formally known as the American Recovery and Reinvestment Act of 2009) adopted by President Obama on February 17, indicates the impetus already being given to solutions that will underpin the cap-and-trade program.

Excursion: Development in the People's Republic of China

Prime Minister Wen Jiabao outlined the Chinese approach early in 2009 during a tour in Europe. While confirming that it was too early for China to take on specific quantified emissions reductions targets in Copenhagen [a position which is consistent with the Bali Action Plan which does not call for developing countries to take on binding emissions reductions], given their stage in development. However, he stated strong support for the Copenhagen process, and the 'top priority' being given to climate change on the Chinese agenda. He announced the establishment of a 'national leadership group' on tackling climate change, which the Prime Minister himself heads, as well as a national programme on coping with climate change. China's national 11th five-year plan, sets obligatory targets for saving energy and reducing pollution. The target requires per unit GDP energy consumption to reduce by 4% every year, and in total by 20 per cent in five years²⁰.

State of Play: Poznan

At the halfway point between Bali and Copenhagen, a Ministerial round of talks 'COP 14' took place in Poznan, Poland in December 2008. Expectations were low in terms of specifics; however the meeting was seen as an important staging post for momentum building on the way to the Copenhagen and just followed the election of President Obama in the United States.

The key outcomes from Poznan are the following:

- Agreement to prepare for and start formal negotiations based on a negotiating text that will be on the table by the June round of talks in mid-2009. This will contain most of the elements of the global deal, and at this time its dimensions will be clearer. Governments have opportunities to submit their views in key areas, in the first half of 2009.
- Reflecting the diplomatic attention and its place on the political agenda now, the UN Secretary General Ban Ki Moon arrived in Poznan for his second consecutive year at a COP to address Ministers; Al Gore also addressed delegates.
- Parties requested the CDM's Executive Board to undertake a variety of activities linked to streamlining and accelerating procedures under the CDM, as well as assessment of (technical, methodological, legal) issues linked to the possible inclusion of Carbon Capture and Storage (CCS) in the CDM. CCS will also be on the agenda again during 2009 sessions.
- Functioning of the Kyoto Protocol's 'Adaptation Fund' (funds from a 2% levy on CDM activity) was resolved; although there was no agreement on additional funding streams (e.g. levy on JI or AAU trading). This illustrates the

¹⁹ Keynote by Todd Stern to US Climate Action Symposium, 3 March 2009, Washington DC.

²⁰ Financial Times, Transcript of interview with Prime Minister Wen Jiabao, 2 February, 2009. Available from www.ft.com with subscription.

importance and likely tensions between industrialised and developing countries over financial resources. This can be expected to continue to play out throughout the Copenhagen negotiations.

Outlook on 2009

As well as the basic negotiating issues in the Bali Action Plan, above, and an indication on the scale of ambition, (though the detail may be worked through afterwards), the so-called 'MRV' issue (Monitoring, Reporting and Verification) will be crucial to the functioning of the deal.

While MRV is already important under CDM and trading mechanisms, MRV also needs to be defined for REDD issues, mitigation actions that developing countries take (for example any move to define sectoral approaches), and also for industrialised countries in the context of technology and financing provisions. The 'accounting' side is crucial to understand both compliance and level of outcomes (on the GHG side) that are actually being delivered collectively.

Throughout 2009 there will be the sense of time-pressure. This pressure will be exacerbated by the timing around to the new US Administration getting operational, tackling the complexities, and procedural realities of delivering a domestic package to control its emissions trajectory, as well as the congressional challenge of the international dimensions.

This adds to the sense of how intensive 2009 will be on this agenda. As raised in Section 7 below ('Other Processes'), one can expect to see increased Heads of government or state involvement; a revitalised 'Major Economies Meeting' process under President Obama; and UN General Assembly attention all being used to foster the 'shared vision' and trust building between countries and negotiators.

5. Process: who is there, how it works

Government delegations are those doing the actual negotiations. At the COPs and COP/MOPs there is usually a Ministerial segment of two to three days, where Environment or designated Ministers arrive with the authority to make decisions or negotiate a final agreement. Delegations participate through activities in the Subsidiary Bodies, and often 'Contact Groups' or 'Informal Groups' are set up to make progress on particular topics. Negotiations on further commitments under the Kyoto Protocol, for example, occur through a formally established 'AdHoc Working Group' (AWG) where all Kyoto Parties participate. Non-Kyoto Parties, e.g. the United States, can participate as Observers. If there is a logjam in a particular area, the Chair of a group, or of the overall COP, may convene a very informal smaller group of countries to try and make progress.



Individuals, or companies, can only attend as part of business or environmental 'Non-Governmental Organisations' (NGOs) with registered Observer status (the organizations need formal approval for this). Intergovernmental bodies such as the United Nations Environment Programme also attend the talks, as do registered media. This means that there

can be a significant number of people participating. Given the unprecedented media and political attention to the issue in the lead up to Bali, it was not a surprise to find that 10,800 government, NGO and media participants were attending the talks: more than 3,500 from governments, 5,800 from Observer organisations and nearly 1,500 accredited media²¹.

Generally, different governmental groupings - e.g. the European Union, G77 and China, Africa Group, the Alliance of Small Island States (AOSIS), sometimes the JUSSCANNZ grouping (Japan, US, Switzerland, Canada, Norway, New Zealand), GRULAC (Group of Latin American Countries) and OPEC (Organisation of Oil Exporting Countries)- will convene for an hour in the morning to coordinate views for all the relevant sets of talks going on.

Business and Industry NGOs (BINGOs), and separately the Environmental NGOs (ENGOS) convene together on a daily basis to exchange information on proceedings. There are also 'side events' which give governments, companies, environmental groups, trade unions, and academics the opportunity to set out their views: all Parties and Observers can organise or participate in side events. Businesses often attend for business-to-business (B2B) opportunities around the sidelines of the talks, e.g. through the International Emissions Trading Association, as the actual negotiations can seem arcane if the detail is not being followed.

Business and Environmental NGOs also have formal opportunities to address government delegates. Since the mid-1990s, the business lobby has split, into what may rather crudely be described as a 'progressive' voice, looking for clearer, stronger government actions to reinforce emerging commercial opportunities, and those that would rather delay government action. This is now a broad and deepening business voice, reflecting the maturation of carbon opportunities and other solutions industries such as renewable energy (including in combination with other external factors such as oil price volatility and energy security concerns), the public attention to the issue and consequent reputational risk as well as the growing awareness of the role of the international talks in shaping the domestic and regional policy agenda (and therefore investment environment)²².

New issues, or views are usually developed and fed-in to the system between the major sessions through submissions from governments (terms of reference, and deadlines being agreed at the talks, and listed on the official website). Businesses and NGOs can feed in views to relevant government officials nationally. In addition, sometimes specialist or expert workshops will be organised (again with terms of reference agreed at the talks) to progress matters, for example in areas on 'Innovative financing for technology transfer' or on technical details around Carbon Capture and Storage (CCS).

²¹ Earth Negotiations Bulletin, Summary report on Bali (<http://www.iisd.ca/climate/cop13>).

²² For a brief history of business at the international talks, see for example: the Business section, Module 2, of: 'The Kyoto-Marrakech System: a Strategic Assessment', prepared by Michael Grubb, Benito Muller, Kirsty Hamilton and Tom Brewer, with other commissioned authors, June 2003, IC Consultants. Alternatively various statements from business organisations that attend the talks The Climate Group, the Business Councils for Sustainable Energy, the Global Wind Energy Council, Carbon Markets Association, International Carbon Investors and Services, as well as UNEP Finance Initiative with a 10 year history at the talks. There are also other initiatives such as the Corporate Leaders Group (Prince of Wales, Programme for Industry), and the Institutional Investors Group on Climate Change in the UK, the Investors Network on Climate Risk (INCR) in the US, and the Carbon Disclosure Project internationally that reflect the call for more robust policy frameworks from governments to stimulate investment in the low carbon agenda.

During 2007, and updated in 2008, at the request of governments, the UNFCCC Secretariat commissioned a piece of work on Investment and Financial Flows to Address Climate Change, which included two workshops with investors – the full report, and workshop reports, are on the official website. This work, although now complete, reflects the growing recognition of the importance of understanding the scale of investment, and needs of the financial sector in directing investment towards a low carbon agenda. This strand is also receiving increased prominence in the G8 for example.



6. A window onto the politics

Climate change emerged as an ‘environmental’ issue in the late 1980s. Its solutions involve fundamental changes to the conventional energy and transport infrastructure. This will affect the carbon intensity of economic activity and will show implications for industrial, agricultural, security and broader economic policy.

At a national level, energy is a strategic foreign policy issue, and can be a highly political matter. The resource endowment of a country is brought to bear on the likely ‘negotiating mandate’ of that government. For example whether it is an oil or gas producer or net importer, whether it has extensive coal resources, whether it has an energy-intensive manufacturing base with concerns over rising energy prices, or perceives competitive pressures from countries with cheaper, or more subsidised energy.

The issue of the economic consequences of the impact of climate change itself, and “climate security” are only just starting to appear on the political agenda, with the publication of the Stern Review (see below). New energy resources such as renewables, of which many countries have underdeveloped national potentials, have arguably not yet been recognised in the same way as conventional fuels have in energy foreign policy settings. This non-recognition disagrees with the substantial growth in investment in the renewable energy over the last four years. Despite the financial crisis, investment reached \$155 billion in 2008, an increase of around 5% over 2007 levels .

This negotiating mandate sets the terms for a delegation on particular topics of importance, and is often agreed at Cabinet level prior to a COP, or, in the case of the EU, at its Environmental Council of Ministers.

This makes for a highly complex international process with countries seeking to protect perceived national interests, often intensively lobbied for domestically, but avoiding international opprobrium for blocking progress. At the current stage of negotiations there are also some critical issues about how industrialised and non-industrialised countries define their responsibilities.

Recalling the principle of common but differentiated responsibilities, some developing countries have until recently not even been prepared to discuss what type of actions they may take to curb rising emissions trends, until they see that industrialised countries are taking their Kyoto commitments seriously. Having said this, many developing countries are indeed taking action consistent with climate protection, although climate change may not be the motivating factor. Notable would be the efforts in China to adopt significant renewable energy and energy efficiency policies and measures for energy security reasons, as above. On the other hand the EU and other Kyoto countries are facing domestic pressure over competitiveness impacts if they take on more stringent targets. Sometimes these arguments

may appear overstated by some business lobbying organisations which want to avoid or delay climate policy. Without a domestic policy package that can limit and reduce the nation's emissions trajectory, a government may not want to negotiate a strong international approach despite the fact that such a strong international approach can help justify stronger domestic action. This dynamic is constantly in play.

As this is a negotiation, countries may take early negotiating positions, which hide their real bottom line, adding to the perception that progress is slow or non-existent, or that the process cannot deliver.

In situations where particularly controversial issues have been on the agenda, it is not unusual for the COP to continue through the final night. The Bali talks required an additional day and an unprecedented final-morning visit from the UN Secretary General – finishing finally on Saturday evening.

The publication of the UK Stern Review on the Economics of Climate Change, in late 2006, was an effort to create greater consensus on the need for, and the economic feasibility, of taking action. Sir Nicholas Stern, a former Chief Economist at the World Bank, and advisor to the UK Prime Minister, concluded that the costs of action are far outweighed by the costs of inaction:

“Using the results from formal economic models, the Review estimates that if we don't act, the overall costs and risks of climate change will be equivalent to losing at least 5% of global GDP each year, now and forever. If a wider range of risks and impacts is taken into account, the estimates of damage could rise to 20% of GDP or more.

In contrast, the costs of action – reducing greenhouse gas emissions to avoid the worst impacts of climate change – can be limited to around 1% of global GDP each year.”²³

This report, together with the attention placed on the IPCC's Fourth Assessment Report released during 2007, and notable climate change consistent 'events' or phenomenon leading to public concern: such as the drought and wildfires in Australia, thinning of Arctic sea ice; plus domestic politics have all contributed to the rise up the political agenda.

Useful to note, in the context of the financial crisis and political debates over 'economic stimulus packages', there has not been a fall-off in interest politically, or within the investment community, in renewable energy, energy efficiency or other cleantech/ environmental investments. These are central to what one might call the 'implementation agenda', and crucial to delivering any Copenhagen deal on the ground. In this context, Sir Nicholas Stern's 2009 'An outline of the case for a 'green' stimulus', directly links the delivery of the climate agenda with the level of economic stimulus that the current situation warrants, and the opportunity to deliver this through solutions to climate change:

“If the appropriate mix of policies is adopted, action to tackle climate change could form a central part of a fiscal package designed to moderate the economic slowdown. A 'green' fiscal stimulus can provide an effective boost to the economy, increasing labour demand in a timely fashion, while at the same time building the foundations for sound, sustainable and strong growth in the future”²⁴.

²³ The report is available from www.sternreview.org.uk

²⁴ 'An Outline of the Case for a 'Green' Stimulus, Policy Brief February 2009', A Bowen, S Fankhauser, N Stern and D Zhengelis, Grantham Research Institute on Climate Change and the Environment, Centre for Climate Change Economics and Policy.

7. Other processes

The UN Convention and Kyoto Protocol processes are the main formal negotiating fora. However other multilateral meetings or processes offer important informal opportunities to build trust and tackle particular parts of the debate.

7.1 G8

The annual G8 Summit has been used in recent years as an opportunity to catalyse Heads of State attention onto climate change, starting with the UK Presidency in 2005, and subsequently under the German Presidency in 2007, and Japanese Presidency in 2008. Importantly, for assisting international exchange, 'G5' major developing countries (Brasil, China, India, Mexico and South Africa) have been invited to offer their inputs.

Background

Under the UK Presidency, the G8 Summit established the 'Gleneagles Dialogue' which reported in 2008. This contributed a forum where a less politicised engagement could occur between the industrialised G8 economies and a broader group of countries 'with the greatest energy needs', including Australia, Brazil, China, India, Indonesia, Mexico, Nigeria, Poland, South Africa, South Korea, and Spain. The engagement of this range of countries, with an effort to involve both Energy and Environment Ministers, was seen as a useful forum to reach a better understanding of issues and interests; it provided a final report to the G8 Summit in Japan.

Through the Gleneagles process, the G8 asked the International Energy Agency (IEA) to develop and advise on alternative energy scenarios and strategies aimed at a clean, clever and competitive energy future. In June 2006 the IEA published the "Energy Technology Perspectives 2006" report, which has been regularly updated. This work sits alongside the IEA's annual 'World Energy Outlook'.

In addition, the World Bank and other Multilateral Development Banks (MDBs) were tasked with coming up with new proposals to create a new investment framework for clean energy and development, including assessing the opportunity to increase investment volumes into renewable energy and energy efficiency. This gave rise to the development of a so-called 'Clean Energy Investment Framework', and to the World Bank and MDBs approving a package of 'Climate Investment Funds' (CIF), in 2008²⁵. The CIF package was supported by the G8 Summit in Japan, and donors had pledged new funding of US\$6.1 billion by September 2008. Some of the funds in the CIF have been criticized by NGOs for not being clear enough about what is included or excluded in 'clean technology'.

At the Japanese Summit in 2008, leaders supported the adoption of an international UNFCCC goal of at least a 50% cut in GHG emissions by 2050. They also approved a package of 25 energy efficiency recommendations (from the IEA), including higher

²⁵ For further information refer to: <http://go.worldbank.org/58OVAGT860>

energy efficiency standards to be implemented nationally, and the establishment of an International Partnership for Energy Efficiency Cooperation.

G8 2009 – Italy

July 2009 will be President Obama's first G8 Summit. There are now high expectations that this will therefore be a key fora for him to set out the US agenda in a range of areas, including climate, and 'free up' the G8 process from the generally recalcitrant position of the Bush administration on this issue.

7.2 The Major Economies meetings & UNGA

The Major Economies meeting process was established, again by the US, ahead of the German G8 Presidency in 2007, and held its first meeting in September 2007. As the name suggests, it aimed to bring together representatives of major emitting countries (developed and developing), as a contribution to the UN process. At its inception it was seen as a politicized meeting with intent to create an alternative to the UN process, thus undermining it (this led to political reiteration in 2007 and 2008 that the UN is the primary negotiating fora).

Under the Obama Administration both the Major Economies process (and the Asia Pacific Partnership below) can take on a new complexion. At the end of March 2009, President Obama launched a new round in the Major Economies process – the Major Economies Forum on Energy and Climate. It will involve 17 countries and, following a preparatory process starting in the US at the end of April, will culminate in a Major Economies Leaders Forum alongside the G8 Summit in Sardinia, Italy. This is seen as underscoring the priority President Obama is placing on lending his weight to a strong Copenhagen outcome, and has the potential to be a key piece in the jigsaw.

The major economies include: Australia, Brazil, Britain, Canada, China, the European Union, France, Germany, India, Indonesia, Italy, Japan, Korea, Mexico, Russia, South Africa and the United States. Denmark will also be involved given its role as host to COP15 in December 2009.

The UN Secretary General, Ban Ki Moon, has already signalled that there will be a high-level meeting alongside the UN General Assembly general debate in September 2009. When announcing this in January 2009 the Secretary General stated: "Amid all our difficulties, let us remember: This [climate change] is the one true existential threat to our planet."²⁶

7.3 Finance Ministers' Meeting

In Bali, in parallel to the UN talks, a meeting of Finance Ministers took place on climate change, and separately Trade Ministers. The Finance Ministers' agenda included discussion of: the economic magnitude and consequences of climate change; policy instruments for addressing the issue; and common objectives on climate change finance issues.

²⁶ UN Press Release, 12 January 2009, <http://www.un.org/News/Press/docs/2009/sgsm12044.doc.htm>

This reflects the recognition that climate change has deep economic consequences both in terms of impacts of climate change itself, and impact on trade and competitiveness of current and future industrial development paths. While this is not a formal process, it is potentially a significant step, and signals that climate change is finally coming out of the 'environment' box and into mainstream government policy, the first step of which is understanding it from the perspective of those looking after a nation's Treasury.

This may be helped by the 'green stimulus' or 'green new deal' debates that have arisen in high profile in the opening months of 2009 in response to recessionary economic conditions arising from the financial crisis. The G20 meeting in early April 2009, is one meeting which, while not considering climate change specifically, could provide a much needed impetus towards economic recovery based upon fostering 'low carbon' industrial development, green jobs, and renewable energy and other clean technologies.

7.4 The Asia Pacific Partnership

In July 2005, six countries announced an 'Asia Pacific Partnership' ('APP')



on climate change: Australia, China, India, Japan, Republic of Korea, and the United States, with Canada joining in October 2007. The countries agreed to work together, and with private sector partners, in the areas of energy security, national air pollution reduction, and climate change, in ways that promote sustainable economic growth and poverty reduction. Like the Major Economies Meeting, at the time of its launch, there was some cynicism that this was being established as an alternative to the UN talks.

Eight public-private sector task forces were set up to examine different technological options and issues. As yet it is not clear how the APP will evolve under the new Obama Administration. So this is a 'watch this space', although some see it as being of lesser importance this year than some of the processes above.

8. Conclusion

While the UNFCCC and Kyoto Protocol processes are often characterised as being slow and inefficient, these are nevertheless the only truly international fora for determining firm, meaning binding, collective action. The Framework Convention sets a strong objective and important principles, including the respective responsibilities of developed and developing countries. The Kyoto Protocol, during highly tense 1997 negotiations, agreed on binding national targets for industrialised countries, a set of innovative 'flexibility mechanisms' and a compliance regime. This has created the basis of an international carbon trading market,



and signalled to the market - through the binding targets - that governments are prepared to take the issue seriously.

At the start of 2009, negotiations on the Bali Roadmap and the next phase of the Kyoto Protocol are starting to form the basis for real negotiations. But negotiations are still at an early stage with governments' facing a hectic agenda of meetings to keep things on track during 2009. With the new US administration now in place, there is a renewed sense of forward momentum and optimism in the lead up to Copenhagen, notwithstanding the timeframe for the Administration to formulate its domestic and international agenda.

Although climate change is an environmental issue, with an emissions focus, governments will need to adopt policies and measures governing energy and other basic infrastructure in order to provide conditions to substantially decarbonise economic activity. This is being positively aided by the debate over a 'green' direction of economic recovery after the financial crisis – shifting the debate over solutions to climate from 'environment' to 'industrial and economic' strategy. As always, the credibility of domestic, or regional, implementation will be a vital piece in creating the conditions for a strong international deal in 2009.

Key Terms

Glossary (edited version of UNFCCC official glossary)

Assigned amount unit (AAU)

A Kyoto Protocol unit equal to 1 metric tonne of CO₂ equivalent. Each Annex I Party issues AAUs up to the level of its assigned amount, established pursuant to Article 3, paragraphs 7 and 8, of the Kyoto Protocol. Assigned amount units may be exchanged through emissions trading.

Adaptation

Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

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

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.

Annex I Parties

The industrialized countries listed in this annex to the Convention: the 24 original OECD members, the European Union, and 14 countries with 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 greenhouse emissions

Greenhouse-gas emissions resulting from human activities.

Bunker fuels

A term used to refer to fuels consumed for international marine and air transport.

Bureau

A body responsible for directing the work of the COP. Its 10 members are delegates elected by each of five regional groups. The Bureau includes the COP President, six Vice Presidents, the Chairs of SBI and SBSTA, and a rapporteur. Each of the Convention's subsidiary bodies also has a Bureau.

Carbon market

A popular, if misleading 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. The term comes from the fact that carbon dioxide is the predominant greenhouse gas and other gases are measured in units called "carbon-dioxide equivalents."

Carbon sequestration

The process of removing carbon from the atmosphere and depositing it in a reservoir.

Certified emission reductions (CER)

A Kyoto Protocol unit equal to 1 metric tonne of CO₂ 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.

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.

Executive Board of the Clean Development Mechanism

A 10-member panel elected at COP-7 which supervises the CDM and has begun operation in advance of the Protocol's entry into force.

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".

Conference of the Parties serving as the Meeting of the Parties (COP/MOP)

The Convention's supreme body is the COP, which serves as the meeting of the Parties to the Kyoto Protocol.

Emission reduction unit (ERU)

A Kyoto Protocol unit equal to 1 metric tonne of CO₂ equivalent. ERUs are generated for emission reductions or emission removals from joint implementation projects.

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.

Entry into force

The point at which an intergovernmental agreement becomes legally binding -- occurring at a pre-stated interval after a pre-stated and required number of ratifications by countries has been achieved.

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.

Group of 77 (G-77) and China

A large negotiating alliance of developing countries that focuses on numerous international topics, including climate change. It seeks to harmonize the negotiating positions of its 131 member states.

GRULAC

Group of Latin American and Caribbean States.

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.

Joint implementation (JI)

A mechanism under the Kyoto Protocol through which a developed country can receive "emissions reduction units" when it helps to finance projects that reduce net greenhouse-gas emissions in another developed country.

JUSSCANNZ

An acronym representing non-EU industrialized countries which occasionally meet to discuss various issues related to climate change. The members are Japan, the United States, Switzerland, Canada, Australia, Norway, and New Zealand.

Land use, land-use change, and forestry (LULUCF)

A greenhouse gas inventory sector that covers emissions and removals of greenhouse gases resulting from direct human-induced land use, land-use change and forestry activities.

Marrakesh Accords

Agreements reached at COP-7 which set various rules for "operating" the more complex provisions of the Kyoto Protocol. Among other things, the accords include details for establishing a greenhouse-gas emissions trading system; implementing and monitoring the Protocol's Clean Development Mechanism; and setting up and operating three funds to support efforts to adapt to climate change.

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.

Ratification

Formal approval, often by a Parliament or other national legislature, of a convention, protocol, or treaty, enabling a country to become a Party. Ratification is a separate process that occurs after a country has signed an agreement.

Removal unit (RMU)

A Kyoto Protocol unit equal to 1 metric tonne of carbon dioxide equivalent. RMUs are generated in Annex I Parties by LULUCF activities that absorb carbon dioxide.

Sink

Any process, activity or mechanism which removes a greenhouse gas, an aerosol or a precursor of a greenhouse gas from the atmosphere. Forests and other vegetation are considered sinks because they remove carbon dioxide through photosynthesis.

Subsidiary body

A committee that assists the Conference of the Parties. Two permanent subsidiary bodies are created by the Convention: the Subsidiary Body for Implementation (SBI) and the Subsidiary Body for Scientific and Technological Advice (SBSTA).

UNEP

United Nations Environment Programme.

Source: UNFCCC

Lesson Review

This lesson has outlined the history and process around the main international regulations on climate change and carbon – defined in the UN Framework Convention on Climate Change. In outlining the content of the Convention and its Kyoto Protocol, focus has been on the provisions that structure government compliance, as well as the international carbon market instruments (the detail of the latter are picked up in Lessons 8, 9 and 10). As the current provisions of the Kyoto Protocol - its first commitment period - end in 2012, the lesson introduced the approach governments are taking, through the UN process, towards negotiating a 'post-2012' regime; with particular detail on the December 2007 'Bali Roadmap' agreement, which sets out government objectives for a 2 year round of talks. These talks should culminate in December 2009, with a 'global deal' to be finalised at the Ministerial 'COP' meeting.



Additionally, other international efforts, by governments, to address climate change were introduced. The lesson also raised some of the underlying political matters around climate change, and underlying strategic energy issues, that often come into play in how governments approach the negotiation process.

Additional Reading

UNFCCC/KP

UNFCCC, Kyoto Protocol, official website: www.unfccc.int, this contains all the documentation, including the full text of the two treaties, and links through to specialised CDM websites, and information about meetings.



Farhana Yamin, Joanna Deplege, 2005. *The International Climate Change Regime: A Guide to Rules, Institutions and Procedures*, Cambridge University Press.

IPCC

Intergovernmental Panel on Climate Change, official website: www.ipcc.ch. 'Anniversary Brochure' "16 Years of Scientific Assessment in Support of the Climate Convention" (December 2004); information about the Fourth Assessment Reports on Science, Impacts and Responses to climate change, published in 2007 will be here.

Full text of the IPCC 2001 Third Assessment Report is available on <http://www.grida.no/>

Economics

Stern Review on the Economics of Climate Change:

<http://www.oce.gov.uk/activities/stern.htm>; this is the full text of the review (700 pages), by chapter. The Review provides a good overview of the science, economics (costs and benefits) and approaches towards the international framework.

Reports on Business and international climate policy

Reference report – cross sectoral views on the transmission between international policy and investment: Hamilton, K., and Kenber, M., April 2006, "Business Views on International Climate and Energy Policy", report commissioned by UK Government, with a detailed survey of different businesses'. Available from URL: www.bcse.org.uk or www.theclimategroup.org.

UNEP Finance Initiative: "CEO Briefing on the Future of Climate Change Policy: The Financial Sector Perspective", December 2005 (prepared for COP/MOP1, Montreal). Available from URL: www.unepfi.org.

Reference report - background on the corporate lobby: "Corporate engagement in Canada, the EU, Japan and the US and influence on domestic and international policy", Module 2 of 'The Kyoto-Marrakech System: a Strategic Assessment', Michael Grubb et al. June 2003. Available from URL: <http://www3.imperial.ac.uk/icept/publications/workingpapers>.

Related Links

- Pew Centre on Global Climate Change, www.pewclimate.org, good set of reference briefings on topical issues for business, including a summary of its 'Pocantico Dialogue' with senior policymakers and business on the future of climate policy.
- The Climate Group, www.theclimategroup.org, business initiatives around climate change.



UNEP Finance Initiative (UNEP FI)

e-Learning Course on Climate Change: Risks and Opportunities for the Finance Sector



in collaboration with:

UNEP FI Climate Change Working Group | United Nations Institute for Training and Research |
UNEP FI Australasian Credit Risk Advisory Committee | EPA Victoria | Bank of America