Understanding the International Climate Regime and Prospects for Future Action

Kate Hampton
Green Globe Network, UK

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Prepared by Kate Hampton, Convenor of the Green Globe Network, UK, March 2004

Introduction

This paper has been prepared to support the work of the International Climate Change Taskforce. The paper seeks to provide an overview of the international climate negotiations, according to the following topics:

I. Establishment of the climate regime
II. Conduct of the climate negotiations
III. The Kyoto process
IV. Prospects for future action.

Summary

Establishment of the climate regime

- The origins of the climate regime can be found in emerging scientific consensus and the establishment of the Intergovernmental Panel on Climate Change (IPCC), whose first report triggered negotiations under the auspices of the UN and led to adoption of the Framework Convention on Climate Change (FCCC) in 1992.
- The FCCC seeks to prevent dangerous human interference with the climate and establishes differentiated commitments for industrialized and developing countries, as well as the institutions of the climate regime.

Conduct of the climate negotiations

- The climate negotiations, at the Conferences of the Parties (COPs), are conducted according to well-established rules of procedure. Decisions are made by consensus, although presiding officers have some discretion to move forward when only minor opposition remains.
- Negotiating occurs on the basis of draft decision texts and is conducted by officials in closed, informal sessions that address multiple issues concurrently. Final deals are made across issues in the final days of climate conferences, by politicians or high level civil servants.
- The IPCC extracts messages from evolving scientific information and presents them in a manner that is useful to policy makers. This science-policy interface is essential to the climate regime: IPCC Assessment Reports have been produced in time for, and had a significant impact on major decision points in the negotiations.
- Participants in the regime are government delegations, which work in negotiating blocs, intergovernmental organizations, which act as observers and provide technical support, non-governmental organizations, that engage in lobbying and public outreach, and the media.
- The EU, which will represent 25 countries as of May 2004, usually takes an environmental leadership position in response to public pressure.
- The Umbrella Group comprises other industrialized countries and is led by the US, Russia, Japan, Canada and Australia. It is a looser grouping with diverging interests and tends to advocate flexibility, cost-effectiveness, maximum use of carbon sinks and weak enforcement.
- The Group of 77 and China (G77) represents developing countries with often contradictory interests but works to safeguard the principle of differentiation. It is dominated by China, India, Brazil, South Africa and Saudi Arabia. Most G77 countries also work in smaller groupings. The Alliance of Small Island States (AOSIS) stands out as a group that takes positions of environmental leadership.
- There are a few smaller government groups made up of countries that do not feel adequately represented by the three larger blocs.
- Environmental NGOs are tightly coordinated through the Climate Action Network and shape public perceptions of the process.
- Business NGOs are a looser grouping focused on cost-effectiveness. Green business includes insurance, clean energy and carbon traders. Fossil fuel interests, led by some US

companies, have been engaged in campaigns of misinformation.

- Other NGO groupings represent local government and indigenous peoples.

The Kyoto process

- Drafted by developing countries, the Berlin Mandate (COP1) established the roadmap for negotiation of the Kyoto Protocol. Given the failure of the FCCC's voluntary approach to achieve emissions reductions, the Kyoto process aimed to establish mandatory absolute caps for industrialized countries. New commitments for developing countries were not included on the basis that developed countries had so far failed to take action.
- The Kyoto Protocol was agreed at COP3 in 1997 and included flexible mechanisms (International Emissions Trading and project-based Joint Implementation and the Clean Development Mechanism) to ensure cost-effectiveness. However, it took until COP7 for the operational rules, the Marrakech Accords, to be negotiated. Mandatory caps with flexibility was a formula devised by the US.
- The Kyoto Protocol created the foundation for a carbon market, supported by an international compliance system, effective monitoring and public participation.
- The FCCC and Kyoto provide a dynamic working mechanism that enables sequential decision making in the light of the best available scientific information.
- Kyoto is the major driver of greenhouse gas regulation and its abandonment would unravel domestic legislation in most industrialized countries, as well as undermining public confidence and causing major damage to North-South relations.
- Competitiveness concerns, which are often overstated, remain the major obstacle to climate policy. Consequently, many industrialized countries may wait for entry into force and the associated security that others will also act before fully implementing the necessary measures.
- The environmental impact of the Kyoto Protocol has been weakened by successive negotiations and pressure from the Umbrella Group. Without US participation and with full use of Kyoto flexibility, total Annex I emissions could be as much as 9% above their 1990 levels in 2012, instead of the 5.2% below agreed in 1997. However, this will still amount in a reduction against the business-as-usual baseline for these countries.
- The Kyoto process represents a huge amount of sunk human capital. Without Kyoto, there would be delays in reducing emissions that could result in irreversible damage to the climate system.
- Since President Bush reneged on Kyoto, Russia holds the key to the formula for its entry into force. President Putin is using Kyoto as a bargaining tool internationally and domestically, although he has promised ratification. If Russian ratification is delayed beyond 2005, there will be a major loss of momentum in the negotiations.

Prospects for future action

- Few countries have been forthcoming in making proposals for action beyond 2012. This is unlikely to occur until Kyoto enters into force and/or demonstrable progress is established in the vast majority of industrialized countries.
- For many developing countries, action (not just commitments) by the US will be a pre-condition for participation in any binding regime.
- Equity is an accepted and necessary pre-requisite for agreement.
- Even within the EU, challenges to climate action are emerging and EU enlargement will complicate internal decision making. However, public pressure will remain. The EU has committed to a 20-40% reduction in emissions by 2020 and a ceiling of 2°C warming. Germany has agreed to a 30% reduction by 2020 and the UK to a 60% reduction by 2050. Energy security is a growing concern for the EU. The EU plays a lead role in a number of international sustainable energy initiatives.
- Japan wants maximum flexibility and a weak enforcement system. There is significant inter-ministerial disagreement about climate action and it is unlikely that Japan will accept further cuts without action in the US and some developing country participation. Energy security drives energy efficiency and is a major concern for Japan.

- The US will be at least 30% above its 1990 emissions level by 2010. The Bush administration opposes carbon constraints outright. However, progress is occurring at state level and the vote on a recent bill in the Senate aimed at introducing carbon constraints showed a major swing in favour of mandatory action. However, developing country participation remains an issue. Presidential candidate John Kerry supports binding carbon caps but thinks the US Kyoto target is now impossible to meet. Energy security is a priority issue for the US.
- Australia has also reneged on Kyoto but the opposition supports the treaty.
- China is taking action on the ground, mainly in energy efficiency, but is highly resistant to commitments for developing countries in the negotiations. The key question is how to reorient investment in China's massive economy.
- India is also taking action, mainly on the deployment of renewables, but resists commitments for developing countries. India is highly vulnerable to climate change.
- Brazil, which supports an approach to the regime based on historic responsibility for temperature change, plays a leadership role in the negotiations and in sustainable energy initiatives. Deforestation is Brazil's major source of emissions.
- Africa is at major risk from the lowest levels of climate change and suffers from lack of capacity in the negotiations and in terms of adaptation. Poverty and HIV/AIDS are more pressing concerns but support for community resilience to climate change is also an urgent need.
- The US, China, India, Australia and South Africa are all highly dependent on coal. This is a major challenge for the future of the regime.
- BP has proposed a global concentration target of 550 parts per million of CO2 in the atmosphere.
- The Climate Action Network has proposed a warming ceiling of 2°C and a framework for future action based on three parallel, inter-linked tracks operating on the same or a very similar timetable: the Kyoto track, a Greening (decarbonisation) track and an Adaptation Track.

Conclusion

- The key weakness of the system lies in the failure of governments to ensure that climate objectives are integrated in other international processes and policy areas, such as trade, development and energy security. So far, the climate regime has not gained sufficient traction in other decision-making fora.
- Slow progress in the negotiations is not due to the mere absence of a widely acceptable framework for future action. Climate leadership will need to be focused on creating greater international willingness to act. If pragmatic and immediate ways to do this can be found, the boundaries of what is considered realistic longer term will change.

I. Establishment of the climate regime

The climate regime provides a framework to address one of humankind's greatest challenges ever, unparalleled in scale and complexity. From the outset, it had to provide a working mechanism with institutional, legal, political, economic and scientific dimensions that could be used to move the entire world towards a common goal. In order to prevent dangerous climate change, the use of energy and land, which underpins human activity globally, needs to be transformed at a rate and within a time horizon that takes account of possible feedback effects that might result in abrupt climate change.

Origin of the climate negotiations

In 1970, the UN Secretary General's environmental report acknowledged the potential of a "catastrophic warming effect". The UN convened the first World Climate Conference in 1979 and led to the creation of the World Climate Research Programme. The World Meteorological Organisation (WMO) and the UN Environment Programme (UNEP) ran a series of scientific workshops out of which scientific convergence emerged, and the Intergovernmental Panel on Climate Change was established in 1988 (IPCC) under the auspices of these two organisations (Grubb et al, 1999).

The First Assessment Report of the IPCC resulted in considerable debate but provided sufficient scientific evidence for the 1990 Second World Climate Conference to recommend that the UN begin negotiations on a global response. The negotiations process was launched by a resolution of the General Assembly to establish an Intergovernmental Negotiating Committee (INC) under its auspices; the resulting agreement became the 1992 United National Framework Convention on Climate Change (UNFCCC or FCCC).

The INC process was concluded in fifteen months against a backdrop of prosperity and growing public concern for the environment in developed countries. Moreover, the collapse of the Soviet Union heralded a new era of optimism in international cooperation. The FCCC was opened for signature at the 1992 UN Conference on Environment and Development, the Rio Earth Summit. The treaty entered into force in 1994, three months after the required number of countries, 50, had ratified it. Now, they number 188.

Key features of the Climate Convention

The FCCC's objective is contained in Article 2:

"The ultimate objective of the Convention... is to achieve... stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a timeframe 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."

No definition of what constitutes 'dangerous anthropogenic interference' has been provided as of yet, either by the IPCC or by the negotiations. This is because what constitutes 'dangerous' is a matter of judgment, depending upon whether you live in, say, Tuvalu or New York City, or whether you are seeking to protect, for example, coral reefs or industrial infrastructure. However, the IPCC has been designed to provide the data and analysis necessary to inform such a judgment. The next IPCC Assessment includes a cross cutting theme regarding what is dangerous climate change. While this will not make a set judgment, it will provide further input for the UNFCCC process.

- A list of FCCC principles is set out in *Appendix A* to this report, but the principle of common but differentiated responsibilities is particularly important in understanding the development of the climate regime. This concept is not unique to the FCCC: it provides the basis for North-South cooperation since Rio and can be found in other multilateral

environmental agreements while trade rules have a similar concept of "special and differential treatment". For the purposes of differentiation, the FCCC identifies three categories of Party:

- Annex I Parties are industrialised countries, including economies in transition, and are subject to emissions limitations (voluntary in the UNFCCC, binding in the Kyoto Protocol);
- Annex II Parties are industrialised countries but not economies in transition, i.e. a developed country subset of Annex I, and, in addition, they are required to provide financial assistance and transfer technologies to other countries; and
- Non-Annex I Parties are developing countries, although this category also includes some former Soviet bloc countries. They also have a series of requirements but these are voluntary.

While no quantitative emission limitation was established for developing countries, the Convention included a requirement that Annex I Parties reduce their greenhouse gas emissions back to 1990 levels by 2000. Many of these countries did not interpret this commitment as binding, however, and few made any serious attempt to meet this objective, underlining the inability of purely voluntary agreements to achieve needed emissions reductions.

Other FCCC commitments include reporting on greenhouse gas emissions, implementation and reporting of climate change mitigation and adaptation programmes, development and transfer of technologies, research exchange, and public awareness and education. Differentiation is apparent across all commitments, not just in the adoption of emissions targets. The Convention requires that developed countries (Annex II Parties) provide resources to support action by developing countries (non-Annex I Parties). The relevant articles suggest that action by developing countries is dependent upon adequate resources (technical and financial) being provided by developed countries, but the wording is not precise enough to determine whether action is actually conditional upon them. In practice, growing demands upon developing countries by developed countries, for instance in relation to reporting, are accompanied with reciprocal demands by developing countries for improved financial support.

The FCCC also established the institutions of the climate regime:

- a Secretariat, which is responsible for the administration of the treaty and its affairs, including compilation and review of National Communications, organisation of meetings and preparation of supporting documents;
- an annual Conference of the Parties (COP);
- a Subsidiary Body for Scientific and Technological Advice (SBSTA), which is a negotiating forum that meets twice per year - once in June and once in parallel to the COP - to prepare decisions for adoption by the COP;
- a Subsidiary Body for Implementation (SBI), another negotiating forum meeting twice yearly;
- a Financial Mechanism to provide grants and concessional loans for activities in support of the Convention including capacity building and technology transfer. The financial mechanism was temporarily housed in the Global Environment Facility (managed by the World Bank with oversight from the UNEP and UN Development Programme, UNDP) although there is little prospect that this will change despite its ongoing criticism by many developing countries.

Finally, as a basis for ongoing action, the Convention included a provision to review the adequacy of commitments at its first Conference of Parties (as well as once more before 31 December 1998 and at regular intervals thereafter) and adopt additional measures accordingly.

II. Conduct of the climate negotiations

How the negotiations work

The agenda of the climate negotiations is drafted by the Secretariat in consultation with the President of the COP who is usually the environment minister of the host country. Most items are routine, although new items can be proposed by Parties. The existence of an item on the agenda will not guarantee that it is substantively addressed. The most persistent case of referral is that of the adequacy review: When the issue first came up for discussion after COP1, developing countries wanted the review to address the adequacy of the implementation of commitments (i.e. whether industrialised countries were making progress) rather than the adequacy of the commitments themselves (which would have raised issues of developing country participation to early in the Kyoto process). Industrialised countries rejected the association and the issue has been dropped, referred for consideration by the next COP at every COP since 1998.

The climate change negotiations are conducted according to rules of procedure that are based on those of the UN General Assembly and other environmental agreements, but were never formally adopted. Voting rules remain particularly contentious. However, "Most of the Rules [of Procedure] in fact reflect procedural practices that are so pervasive across international institutions that many are regarded as having the status of customary international law." (Yamin and Depledge, December 2003) Given the absence of voting rules, decisions are made by consensus. In practice, this means the absence of major opposition, explained in the following way: "Determining whether consensus exists and a decision can be adopted is one of the most significant tasks for a COP President or subsidiary body Chair, who is mandated by the Rules of Procedure to 'announce decisions'. Charm, cunning, humour, daring and a range of other techniques are deployed by such officers to generate consensus. Often a presiding officer will rely upon the reluctance of Parties to be seen as 'standing in the way', especially at a high profile meeting under scrutiny of NGOs and the media. In this regard, the opportunity for a Party to make a statement registering its concerns, and for that statement to be recorded in the formal report on the session, serves as a useful 'safety valve' that can enable reluctant Parties to join the consensus, while still safeguarding their national positions." (Yamin and Depledge, December 2003) The negotiations in Kyoto were resolved by the Chairman making such a ruling, thereby ignoring the opposition of one or more Parties.

Negotiations on the Convention and the Kyoto Protocol happen concurrently at the COPs. Non-Parties to the Kyoto Protocol are allowed to participate in discussions but may not take part in the adoption of decisions. The US stated that it would not intervene in Kyoto negotiations except when they related to budgetary matter or might set a precedent in international law. However, many participants believe that the US continues to have an impact of negotiations through the lobbying of Kyoto Parties and some governments cite the need for decisions to facilitate re-engagement of the US at some future date.

Documents are prepared by the Secretariat. For new discussions, a synthesis of country proposals is compiled and circulated, sometimes before or after an inter-sessional workshop, followed by a negotiating text that usually contains contradictory proposals. Disputed language is designated by square brackets in negotiating texts and the discretion of the presiding officer is important in determining how disagreements are presented. Most of the negotiations revolve around line-by-line discussions, although these do not necessarily proceed in the order in which they are printed. Most language is negotiated by civil servants, with ministers joining the discussion to make political trade-offs across the major issues of contention at the end of a COP. However, not all delegations will send ministers, even at crunch times, particularly developing country delegations. The effectiveness of delegations in the negotiations depends to a large degree on the political importance attached to climate change, the mandate given to negotiators and the resources – human and financial that a

delegation enjoys. Differences among countries on these issues – especially between North and South – can be crucial to the outcomes that result. Ensuring adequate participation by all countries is likely to be key to enhancing legitimacy and ensuring the decisions taken at COPs are treated as binding.

In practice, very little discussion takes place in COP plenary sessions or in Subsidiary Bodies. Instead, discussion takes place in informal issue-based working groups and 'in the corridors', where most lobbyists can also be found. These crucial negotiations do not occur in public, i.e. with the presence of the NGOs and the media. In the final days of milestone negotiations, a small informal plenary called a Committee of the Whole may be convened in which blocs are represented by only a few delegates. These deliberations are often private and allow negotiations to proceed unimpeded by Rules of Procedure. Documents for informal meetings are not published but are compiled and circulated by working group chairs with varying degrees of openness. Roundtables are convened on occasion, allowing for a broad exchange of views.

The science-policy interface

The role of the IPCC is to provide policy makers with an expert assessment of what is known about the global climate and the influence of human activity upon it. It is the world's most advanced mechanism for communicating between the utterly different communities of science and politics. The IPCC has to extract and filter messages from rapidly evolving scientific information and present them at specific points in time in a way that enables sequential decision making.

The IPCC has three working groups concerned with different aspects of the climate change issue; these are (1) the scientific basis, (2) impacts and adaptation, and (3) mitigation. IPCC authors are nominated by governments, who also review their findings, but they are subject to rigorous and extensive peer review involving hundreds of scientists around the world. Each IPCC working group provides a full assessment report and a Summary for Policy Makers; a Synthesis Report is also compiled to address questions asked by policy makers. The text of Summaries and the Synthesis Report is subsequently negotiated by governments to reflect an intergovernmental interpretation of the findings, while the full assessment reports remain the responsibility of scientific authors. The IPCC is not allowed to make policy recommendations, but does present analysis about the relative merits of different policy responses.

Given that the findings of the IPCC are aimed at supporting decision making, development of the international climate regime cannot be seen in isolation from the emergence and consolidation of scientific evidence regarding climate change. Whereas the results of early climate models used in the First Assessment Report found that global warming was within the possible range of natural climate variability, it did show that human activity was leading to higher concentrations of greenhouse gases in the atmosphere - a finding that supported negotiation of the UNFCCC. The Second Assessment Report, completed in 1995 and published in 1996, found that "the balance of evidence suggests a discernible human influence on global climate", setting the stage for negotiation of the 1997 Kyoto Protocol. The Third Assessment Report was compiled in time for completion of the Marrakech Accords in 2001, stating that "there is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities". The Fourth Assessment Report is expected in 2007, so the review and presentation of new scientific information associated with it will have an impact on negotiations establishing post-2012 emissions controls, which are due to begin in 2005.

While the Convention and the Protocol provide for the use of best available scientific and technical information, there is still significant resistance to the integration of IPCC findings and their implications within the work programme of the Subisidiary Bodies and the COP. Some developing countries are particularly nervous about this item as it

approximates the adequacy review and will highlight not just the need for deeper cuts by industrialised countries, but also the need for developing country participation.

Participants in the climate regime

The participants in the climate regime include governmental actors, intergovernmental actors and non-government actors.

Government delegations are usually led by environment and foreign ministries, with increasing participation from trade/economic and development ministries. Evidently, richer countries provide larger, better resourced delegations than poorer ones, leading to a mismatch in capacity. In these complex negotiations, successful negotiating teams need to be experienced and multi-disciplinary, and are highly dependent upon individuals. Government delegations operate in negotiating blocs. The EU, the Umbrella Group and the G77 are the main ones.

The EU is represented by the 15 Member States and by the Commission (until May 2004 when it will represent the EU 25). The country that holds the EU Presidency speaks on behalf of the EU, although other countries may speak to particular issues within their expertise. Due to the complexity of internal negotiations on EU positions, the EU is often a slow and unwieldy negotiator, but tends to take positions of environmental leadership and is less averse to carbon regulation than the Umbrella Group (see below). EU governments are responsive to pressure from environmental NGOs due to high levels of public concern and awareness about climate change. In recent years, a group comprising EU accession countries, the Central Group (CG-11), existed separately but with positions aligned to those of the EU; EU enlargement in May 2004 makes this separate grouping obsolete.

The Umbrella Group, formally JUSSCANZ, includes the US, Japan, Australia, Canada, New Zealand, Russia, Norway, Iceland and the Ukraine. The Umbrella Group is loosely coordinated and is unique to the climate negotiations. Umbrella Group countries often make joint proposals and are the strongest advocates of flexibility, sinks and weak international enforcement. However, their interests in the Kyoto negotiations are widely divergent at present - not least on the issue of actual Kyoto participation. Switzerland left the Umbrella Group after Kyoto and, since elections in 2001, Norway's positioning is increasingly distant from that of other Umbrella Group members. It is not clear whether and which subset of these countries will function as a group in future discussions.

The Group of 77 and China (which has associate membership) is a 134-member negotiating bloc that represents developing countries throughout the UN system. The G77 works to safeguard the principle of differentiation within the climate negotiations, resisting commitments in the absence of significant developed-country action and financial assistance. The G77 represents a wide range of often contradictory interests in the negotiations and is dominated by the better resourced delegations of large developing countries, particularly China, India, Brazil, South Africa and Saudi Arabia. The group agrees common positions by consensus and like the EU, its internal negotiations can be slow. The G77 chair is selected on a rotating basis amongst Asian, African and Latin American countries.

In addition to working through G77, many developing countries are also affiliated to more coherent but overlapping groupings. These are:

- The Alliance of Small Island States (AOSIS) represents 43 member and 4 observers - mostly small island developing states but also a handful of low-lying states and developed island countries - and operates in environmental negotiations. AOSIS countries are particularly vulnerable to climate change, with some risking their very survival as nation states due rising sea levels. Supported by expertise of the Foundation for International Environmental Law and Development, AOSIS takes positions of environmental leadership.
- Least Developed Countries (LDCs) are identified as a group across the UN system and

comprise 49 countries, mainly from Africa. They are particularly vulnerable to climate change and suffer from very low negotiating capacity. They have been targeted for particular types of assistance under the climate regime, starting with support for the development of National Adaptation Programmes of Action.

- The African Group has 53 members and operates across the UN system.
- Members of the Organisation of Petroleum Exporting Countries (OPEC) coordinate their positions but do not negotiate as a bloc. However, they play an important role in negotiations: four of the last six G77 chairs have been members of OPEC. With the exception of Iran, whose expert chairing of G77 in Bonn was widely perceived as essential in securing agreement, OPEC countries tend to resist progress in the climate negotiations and have persistently sought compensation for the impact of climate change measures on their oil revenues. Within OPEC, Saudi Arabia stands out as a country that has been particularly unhelpful in achieving international consensus.

Three smaller country groupings also operate in the climate regime. The Open Balkan Group includes Bosnia Herzegovina and Macedonia. Central Asia, Caucasus, Albania and Moldova (CACAM) includes economies in transition that are not Annex I Parties, namely Albania, Armenia, Georgia, Kazakhstan, Moldova, Uzbekistan and Turkmenistan. The Environmental Integrity Group is made up of Switzerland, South Korea and Mexico; none of these countries felt that their interests were represented by other groups.

Intergovernmental actors include representatives from other environmental secretariats like the Convention on Biological Diversity; international financial institutions including the World Bank; UN bodies including UNEP and UNDP; and other international organisations like the Organisation of Economic Cooperation and Development (OECD) and the International Committee of the Red Cross. They act as observers in the negotiations but are sometimes called upon to provide technical support or perform particular functions in pursuit of the objectives of the Convention or Protocol.

Non-governmental organisations also act as observers and are grouped in the following way:

- With few exceptions, environmental NGOs are tightly coordinated through the Climate Action Network (CAN), which has over 300 members. Dominated at the COPs by the large international environmental organisations (Greenpeace, WWF and Friends of the Earth) and other well-resourced NGOs (particularly from North America and Europe), CAN has been increasingly successful in promoting participation by NGOs from developing countries. CAN is made up of regional nodes and has recently adopted a charter and established an international secretariat in Bonn. CAN serves as a forum to exchange information and formulate common positions. CAN also provides a daily bulletin on the progress of negotiations and regularly briefs the media. Many of the individuals within CAN are amongst the most knowledgeable participants in the climate regime and are seen as a reliable source of insight and information by governments and journalists alike. Public perceptions of the successes and failures of the climate regime are largely a function of NGO messaging around the COPs. Lobbying focuses on maintaining the environmental integrity of the regime and promoting public participation and transparency.
- Indigenous peoples' organisations attending the climate negotiations are focused on addressing sinks issues and promoting their status as an independent constituency for consultation purposes. They work through the International Alliance of Indigenous Tribal Peoples of the Tropical Forests. They cooperate loosely with the environmental NGOs.
- Business NGOs are a much looser grouping, represented by trade associations and other non-profit organisations in order to comply with UN rules. The most active 'green' participants come from clean energy businesses, the insurance industry and burgeoning carbon trading and consultancy practices, which all campaign for increased regulatory certainty. Fossil fuel intensive industries, particularly from the US, are focused on weakening commitments. The Global Climate Coalition, which represented these

interests until 2000, was actively involved in scientific misinformation campaigns but was disbanded following the withdrawal of BP and Shell. All business NGOs lobby for cost-effectiveness through simplicity and flexibility. Those especially active include the International Chamber of Commerce, which operates as a common bloc, and the Climate Council, representing coal-based electric utilities in the US.

- Local authorities participate through the International Council for Local Environmental Initiatives (ICLEI), which runs a climate change programme aimed at reducing emissions in 350 municipalities. They cooperate loosely with the environmental NGOs.

III. The Kyoto process

The Berlin Mandate

In the run-up to the First Conference of the Parties, COP1, in Berlin, an environmental backlash was emerging due to growing concerns about the potential costs of mitigation, particularly in the US and OPEC countries. Nevertheless, it was clear from the outset that additional action to prevent climate change would be necessary. Moreover, national targets would clearly be needed given most countries were off track in meeting the Convention's objective of returning Annex I emissions to 1990 levels; this objective was ultimately achieved by Annex I as a whole due to contraction of Eastern bloc economies in the early 1990s, but it was recognized that very little mitigation had occurred in industrialised countries to combat climate change. Negotiations about building on the FCCC were divisive. Despite opposition by OPEC, a group of developing countries concerned about the lack of progress decided to take a lead in negotiations by forming a 'green group' and proposing a negotiating framework that became the Berlin Mandate. Countries such as India, Brazil and AOSIS played a key role. The Alliance of Small Island States (AOSIS) proposed a quantitative target in Berlin, calling for a 20% reduction by Annex I countries by 2005.

Despite political tensions, COP1 resulted in a mandate for new negotiations, based on the 'green group' proposition. The provisions of the Berlin Mandate were the following:

- Policy development and coordination, as well as quantified and time-bound emissions limitation for industrialised countries, given their historic and current responsibility for emissions;
- No new commitments for developing countries, given their low per capita emissions and development priorities;
- Exchange of experiences between countries;
- Widest possible participation by countries, according to their differential capabilities;
- Use of the best scientific and technical information;
- Consideration of the AOSIS proposal; and

- Urgent completion of the process, as early as possible in 1997.

COP1 also resulted in an agreement to launch a pilot programme of project-based 'Activities Implemented Jointly' under which countries could cooperate in reducing their emissions.

Negotiation of the Kyoto Protocol and Marrakech Accords

The context and politics of the negotiations leading from COP1 to conclusion of the Marrakech Accords are described in *Appendix B* to this report. A description of the outcomes of the Kyoto negotiations is included in *Appendix C*.

Without witnessing the negotiations firsthand, it is difficult to appreciate the amount of human capital that has been invested in the climate negotiations to date. Thousands of individuals are currently involved, with thousands more that are indirectly involved.

The agreements are the product of give-and-take across dozens of issues by nearly 200 governments under pressure to reconcile multiple interests in the climate negotiations, as well as non-climate agendas. Given the difficulty of moving forward, delegations work to agreed principles when they are shaping new agreements. In the absence of political will or opportunities for agreement, they have a retrograde tendency and fall back on or 'recycle' agreed language from other negotiations. Even when a deal is made, countries, usually Umbrella Group countries, will renege on particular aspects of the deal, threatening to unravel the entire agreement.

After a decade of negotiations, the headline achievement is a set of mandatory and absolute national targets amounting to a 5.2% reduction in the emissions of industrialised countries against 1990 levels, averaged over the years 2008-2012. These mandatory absolute targets are important because they:

- provide certainty in outcome,
- create a price for carbon, i.e. some internalisation of environmental costs; and
- enable the creation of a market for carbon.

The conclusion of the Kyoto Protocol and its rules codified the approach of mandatory absolute targets because the voluntary approach of the FCCC had not been effective in reducing emissions. However, Kyoto's innovative compliance system will not result in legally binding consequences until it is adopted as an amendment to the Protocol after entry into force.

The Kyoto process has developed several additional and important features. These are:

- cooperation and differentiation to ensure the widest possible participation;
- use of best available scientific and technical information;
- cost-effectiveness and flexibility through joint implementation, accounting for carbon sinks and use of the multi-gas approach;
- provisions for financing and capacity building;
- 'learning by doing';
- transparency through reporting and review;
- public participation;
- negotiating and administrative institutions; and
- a process of sequential decision making and review against an objective (although this objective is as yet undefined).

Impact and status of the Kyoto Protocol

The Kyoto Protocol is a major driver of greenhouse gas regulation. Although it is domestic regulation that actually puts a price on carbon and provides incentives for cleaner energy, Kyoto targets have provided the basis for such regulation amongst ratifying Parties. EU Member States are required to show how emissions allocations to industry under the EU-wide emissions trading scheme will help fulfil their Kyoto targets, even though the directive itself is independent of Kyoto's entry into force. In Canada, Japan and New Zealand, Kyoto also serves as a reference point for emerging regulation.

Because entry into force of the Kyoto Protocol will establish a binding international regime of emissions limits, it provides more reticent countries with the knowledge that others will also act. In some countries, policy may unravel

if Kyoto does not enter into force as vested interests move in to take advantage of the international policy vacuum. Competitiveness concerns remain the major impediment to greenhouse gas regulation, including within the EU although, as recent research by Trucost and CIRED shows, these are often overstated. But the absence of US and Australian participation will continue to undermine climate policy, even when the Kyoto Protocol enters into force.

- According to the International Energy Agency, if the Kyoto Protocol entered into force with complete participation by Annex I and resulted in a real 5.2% emissions reduction against 1990 levels by 2012, the treaty would achieve a 22% reduction against the business-as-usual baseline for Annex I. Developing country emissions would offset this achievement to a large extent but a 10% reduction against the global 2010 baseline would remain. However, since Kyoto, the context for implementation has changed:
- The inclusion of forest management limits the overall reduction required to a 3% decrease against 1990 levels. Other sinks and the use of the Clean Development Mechanism (CDM) are not included in these figures but they will further decrease the impact of Kyoto.
- US non-participation will further limit the reduction to 2% below 1990 levels. Assuming that the US voluntary intensity target of 14 February 2002 is met, US emissions will be 30% above their 1990 levels by 2012. As a result, total Annex I emissions could be as much as 9% above their 1990 levels in 2012, assuming that all the available 'hot air' is used, that is the gap between current emissions and Kyoto targets in ex-Eastern bloc countries resulting from economic contraction in the 1990s. Using only half the available hot air would result in a slightly smaller increase of 7%.
- US non-participation is likely to decrease the price of a tonne of carbon from $32 to $5, making it much easier for other countries to meet their targets. Reduced demand and increased competition from IET and JI against CDM may undermine technology transfer to developing countries.
- Nevertheless, Kyoto will have a significant impact on participating countries: the EU energy-related CO2 intensity will have to decrease by 26% and Japan's by 30% against levels in 2000 (IEA, 2002).

The Kyoto Protocol provides a process for negotiating post-2012 emissions reductions. Second Commitment Period negotiations are supposed to start no later than 2005 (i.e. the specified two years before the beginning of the First Commitment Period). These negotiations should be completed as early as possible in order to encourage early action and maintain the effectiveness of the proposed compliance system. They could be triggered by the adequacy review, a Berlin-style mandate or political declaration that would provide a roadmap for discussions. New commitments would be adopted as amendments and/or annexes to the Kyoto Protocol.

Without the Kyoto Protocol, international action to address climate change would be much slower and climate policy would be less consistent across borders. This is a particularly important when considering the value of the Kyoto Protocol against the scientific imperative. Of course, new negotiations could start without Kyoto's entry into force, but the problem is not one of procedure. Delays in international negotiations always foster mistrust and delay progress against common objectives, but delays in the climate negotiations will also result in the foreclosure of climate stabilisation options, potentially leading to irreversible damage.

Prospects for entry into force

In order for the Kyoto Protocol to enter into force and become binding, it needs to be ratified, i.e. passed into law, by 55 Parties to the FCCC and enough industrialised countries to account for at least 55% of industrialised countries' total carbon dioxide emissions in 1990. Although 120 countries had ratified at the end of 2003, the decision of the Bush administration to renege on the treaty left Russia with the key to the Kyoto formula. Currently, 44.2% of industrialised country emissions are included; only ratification by the US, which represents 36.1% of these emissions, or Russia, which represents 17.4%, could bring Kyoto into force. Ukraine, an Annex

I Party, ratified the Kyoto Protocol in February 2004 bringing the number of Parties to 121, but its emissions will not count toward the 55% formula due to earlier irregularities in its national inventory.

Most commentators believe that Russia will ratify the Kyoto Protocol. The question is when. Russia is well below its Kyoto target and, even if Russian economic growth is sustained throughout this decade, the country has plenty of 'room to breathe' as it begins the process of decoupling emissions growth from economic growth. The Kyoto mechanisms could encourage foreign investment in improving the efficiency of the Russian energy sector and Europe needs Russian gas to meets its own Kyoto targets. Although the US has dropped out of Kyoto, demand still exists for Russia's surplus emissions allowance, so-called 'hot air', as almost all Kyoto countries are currently far from meeting their targets. In recent signals that Russia intends to ratify, the Russian Minister of Natural Resources has begun implementing Kyoto-compliant greenhouse gas inventory standards and systems to support use of the Kyoto project mechanisms.

Press reports from the World Climate Change Conference held in Moscow in 2003 suggested that President Putin's previously positive position on Kyoto had changed. In fact, the conference merely shed light upon ongoing domestic disagreement and political posturing. Shortly after the Moscow conference, Putin appeared rather more positive while addressing an international audience in Bangkok, reinforcing previous statements about Russia's intention to ratify. Internally, the President is using Kyoto as a political tool in the run-up to elections in March 2004, possibly allowing his economic advisor, Andrew Illarionov, to sow the seeds of doubt. Public awareness of climate change and the potential benefits of Kyoto is still very low in Russia. The environmental movement in Russia is focused mainly on domestic pollution and socio-environmental issues. Russia is also home to a loose but effective grouping of anti-Kyoto forces led by Russian scientist, Yuri Izrael, and industry giants Interros and Yukos Oil. The most influential supporter of Kyoto in Russia is Anatoly Chubais, former Prime Minister and CEO of electricity monopoly RAO UES, who was also a leading opposition candidate in last year's parliamentary elections on behalf of the Union of Right Forces.

Externally, the Russian government is seeking maximum geo-political and economic leverage from Kyoto, appealing alternately to the current EU and the US 'world views'. The Russian government is also seeking to use Kyoto as a bargaining chip in Russia's WTO accession negotiations. The EU and the US, but particularly the EU, have been pushing for reform of the Russian energy sector as part of accession talks. The major point of contention is that the domestic gas price in Russia is significantly lower than the global price. The EU is calling for an end to this de facto subsidy and a break-up of the state gas monopoly, Gazprom. The Russian government recently agreed to liberalise the electricity sector, but negotiations over gas remain deadlocked. RAO UES and Gazprom, which have been lobbying in favour of ratification, both have partnerships with European firms and are keen to benefit from Kyoto-related investment and maintain a 'green' public image. As demonstrated by the arrest of former Yukos Oil boss and opposition supporter, Khodorkovsky, reform of the Russian energy sector is not just about energy policy, but forms part of a power struggle between Russian business oligarchs and the Kremlin that is reaching fever pitch in the run-up to the elections.

The EU, Japan and Canada are engaged in low-intensity discussions with the Russian government but have so far resisted attempts to link Kyoto ratification with other issues due to resistance from trade and economic ministries. Russia has benefited from high oil and gas prices, accruing significant revenues in recent times and improving its negotiating position. However, significant foreign investment will clearly be needed to modernise its energy sector and improve Russian competitiveness in the long term. The availability of subsidised domestic energy is a major factor in Russian competitiveness at the moment and despite

widespread energy shortages, something that the Russian population is used to.

Three scenarios for Russian ratification bear examination:

1) If Russian ratification occurs within the next year, implementation of Kyoto will remain largely unaffected by the delay. Once elections are out of the way in March 2004, the process of ratification will be less politicised and, hopefully, somewhat easier. Russian ratification before the US presidential elections in November 2004 could have a significant impact on climate politics there.

2) If Russian ratification is delayed beyond 2005, there will be a major loss of momentum in the negotiations process. The implementation of Kyoto commitments by more reticent Parties may also be delayed and the longer countries wait to act, the more likely they will be to miss their targets. If entry into force is too late for Second Commitment Period negotiations to start on time, the compliance regime will be undermined and future commitments could be weakened.

3) Russia reneging entirely on Kyoto is an unlikely scenario. However, if the Russian President were to announce that Russia was pulling out of Kyoto, as the US and Australia have done, then the EU would probably seek partners in establishing a new regime, probably based around the extension of the EU emissions trading scheme or common international incentives for cleaner technology and investment building on the partnerships process arising from the World Summit. However, the dangers of this outcome should not to be underestimated, not least to North-South trust and public confidence. Reinvention would be a costly process and may result in failure to meet the Convention's goal.

IV. Prospects for future action

Few countries have been forthcoming in making proposals for action beyond 2012. This is unlikely to occur until Kyoto enters into force and/or demonstrable progress is established in the vast majority of industrialized countries. For many developing countries, action (not just commitments) by the US will be a pre-condition for participation in any binding regime.
Equity is an accepted and necessary pre-requisite for agreement. An exposition of the many dimensions of equity (consequential, procedural etc) is not within the scope of this paper. Reduction in per capita emissions inequalities, common but differentiated responsibilities, precaution, historic responsibility, technology and resource transfer will all have to be part of the outcome. In addition, climate change will have to be seen in a wider context of human interdependence and resilience, energy security and sustainable development.

The EU 25

Public awareness and concern about environmental issues is relatively high in Europe and environmental NGOs are well-resourced, experienced and influential, particularly in shaping public opinion. Green Parties have participated in a number of national government coalitions and are active within the European Parliament. Climate change legislation is formulated at national level and increasingly at European level. EU countries were amongst the first to formulate climate change targets and the EU plays a leadership role in the negotiations, albeit a clumsy one.

The EU has a collective target to reduce emissions by 8%. On the basis of existing measures, the EU's 15 Member States and the EU as a whole are off-track in meeting their Kyoto targets and some countries, particularly Spain, are beginning to challenge the EU's environmental leadership position on competitiveness grounds. Emissions reductions achieved to date are largely the result of the UK's 'dash for gas' and German reunification which both required large investments in less

carbon technology but were not based on climate policy. However, on the basis of policies in the pipeline and a context of expected falling gas prices as new capacity comes on stream, the EU15's distance to target could become small. The EU has adopted renewables targets and, although these are not currently binding, they are supported by an array of support mechanisms at national level.

Within the EU, the Kyoto 'burden-sharing agreement' recognises differing national circumstances and allows for emissions increases against the 1990 baseline in some countries, and reductions in others. EU enlargement from 15 Member States to 25 Member States will bring a lot of 'hot air' into the EU system. However, it is unlikely that this hot air will be allowed to enter the EU emissions trading scheme, although it could pass from government to government, weakening implementation within the EU15. Originally resistant to the idea of international flexibility, the EU is now is biggest proponent in practice and has designed its emissions trading scheme to link up to similar schemes as they emerge in other countries. In addition, the Netherlands, Denmark and other countries are actively seeking CDM and JI opportunities and developing projects. However, the EU as a whole remains cautious about the use of sinks as a climate protection measure.

The EU has already adopted an objective to limit global warming to 2C above pre-industrial levels which, at the time it was proposed, corresponded with an atmospheric concentration 550ppmv. The EU's Sixth Environmental Action Programme calls for an emission reduction of 20-40% against 1990 levels by 2020. Germany has proposed a target of 30% below 1990 levels by 2020 for itself, on the condition that the EU accept a 40% target while the Czech Republic recently established an objective of a 30% reduction in per capita emissions between 2000 and 2020. The UK has proposed a longer term target of a 60% reduction by 2050.

Within the climate negotiations, the EU has been a lead proponent of better integration between science and policy and at COP8, invited other countries to discuss the future of the regime. Outside the climate negotiations, some EU countries have been engaged in developing a new energy diplomacy aimed at promoting renewable energy and energy efficiency globally through initiatives like the Johannesburg Renewable Energy Coalition (JREC) and the Renewable Energy and Energy Efficiency Partnership (REEEP). These initiatives are aimed a creating demand for sustainable energy amongst more reticent countries, facilitating climate action in the longer term.

However, even although the EU champions sustainable development and provides proportionally more aid than most OECD countries, a credibility gap is clearly emerging between the rhetoric and reality of emissions reduction and support for developing countries, thereby undermining the EU's effectiveness in achieving its international climate objectives. Coupled with the new complexity of policy making in an enlarged EU, this creates a growing danger the Europe will no longer be in a position to play its traditional role in the climate negotiations. This presents a threat to the regime as a whole.

Germany, France, Italy and Spain number amongst the world's top ten net importers of oil and energy security remains a dominant concern. Oil meets over 40% of the EU15's primary energy needs, gas accounts for 23% and coal and nuclear account for a further 15% each. Transport emissions are set to overtake power sector emissions by the end of this decade. Northern EU countries have significant wind and biomass energy potential and the EU has a vibrant domestic renewable industry.

Per capita emissions of greenhouse gases were just over 11 tonnes of CO2 equivalent per year in 2000.

Japan

Public concern about the environment is growing rapidly in Japan which, like Europe, has an active anti-nuclear lobby. Environmental

NGOs are comparatively under-resourced but are rapidly gaining influence. NGO campaigns aimed at Japanese ratification centred on the Protocol's negotiation in Kyoto and on the need for Japan to take a position of responsibility and leadership. Traditionally a closer ally to the US than to the EU, Japan is likely to cooperate increasingly with the EU on climate issues due to its common status as a Kyoto Party. This trend is notable in the recent similarity of submissions relating to the relationship between the World Trade Organisation and Multilateral Environmental Agreements.

The Japanese Kyoto target is a 6% reduction. With existing measures, Japan will be 12.6% above its 1990 emissions level by 2010. Japan negotiated to achieve maximum flexibility at Bonn and Marrakech and is expected to make maximum use of the flexibility mechanisms and sinks allowance. Japan has also been reluctant to accept legally binding consequences for non-compliance. Domestic implementation is stalled in interdepartmental wrangling with the environment ministry proposing introduction of a carbon tax and the economics and industry ministry, METI, proposed renegotiation of Kyoto to ensure US and developing country participation. At present, the Japanese government has only negotiated voluntary agreements with industry in order to reduce emissions and these are having little impact on Japan's emissions trajectory. These measures will be reviewed in 2005, at which point the environment ministry has stated that it will introduce mandatory measures if industry cannot deliver on its own.

Japan has not adopted a long-term climate change objective. In the next few years, Japan is unlikely to agree to new targets in the absence of US and developing country commitments. Japan is involved in scientific and technology-based cooperation with the US and participates to limited extent in sustainable energy initiatives with the EU.

Japan is the most energy efficient economy per unit of GDP and consequently, its ability to reduce emissions at a given cost of carbon is more limited than that of the EU. Japanese energy policy is dominated by energy security concerns: it is second only to the US in net oil imports and this dependency on foreign oil has traditionally been a driver for energy efficiency. Oil meets nearly 50% of Japan's energy needs, while coal amounts to 19%, nuclear power to 16% and gas to 12%. Japan has a vibrant renewables industry and dominates the solar power market. It is also a leading advocate of carbon capture and storage, including ocean sequestration.

Per capita emissions in 2000 were just under 11 tonnes of CO2 equivalent per person per year.

The US

The US has a strong environmental movement and public opinion is overwhelmingly in favour of action to prevent climate change. The US has traditionally been a pioneer of environmental policy, both at home and internationally. For the US to ratify an international treaty, the President has to present the treaty to the Senate, which has to pass it by a two-thirds majority. The Clinton administration made a substantial contribution to shaping the architecture of the regime, ensuring cost-effectiveness. Until 2001, the US also promoted public participation, transparency and effective enforcement throughout the negotiations.

In 2001, the Bush administration withdrew from Kyoto and reneged on a campaign promise to introduce mandatory carbon constraints. This announcement was followed by publication of an energy plan that advocated construction of 1200 new power plants over the next 20 years, an aggressive international strategy to improve access to foreign fossil fuel reserves and a roll-back of environmental protection measures. President Bush has introduced a voluntary emissions intensity target that will allow for a 30% increase in emissions by 2010 against 1990 levels. Business-as-usual emissions could result in an increase as high as 40% above 1990 levels. Under Kyoto, the US agreed to a 7% reduction.

The US continues to promote a 'technology-based' approach climate change and more

climate change research - there is no sign of any meaningful commitment to cap emissions emerging from the administration. The US National Security Strategy mentioned that a stabilisation target for atmospheric concentration was desirable, although no figure was given. Nevertheless, a number of US states have adopted renewables portfolio standards and are considering and implementing greenhouse gas regulation, particularly in the North-East and California, which has also adopted a programme to improve fuel efficiency. In October 2003, the McCain-Lieberman Climate Stewardship Bill aimed at introducing carbon constraints received 43 votes in its favor, demonstrating a major swing in the Senate towards supporting mandatory caps on carbon dioxide. Environmental policy in the US often emerges at the State level, before the federal government steps in an effort to harmonise regulation.

The US has much lower energy costs than other OECD countries and consequently, US per capita emissions of greenhouse gases are 25 tonnes of CO2 equivalent per year. Total US emissions account for one quarter of global emissions. The US has huge renewable energy resources; installed capacity for power from renewables and public funding for research and development is globally significant in absolute terms. However, Japanese and European firms have overtaken US manufacturers due to the lack of home-grown regulatory and fiscal incentives. Energy security is a high profile issue politically due to recent black-outs and growing public concern about the security implications of dependency on oil imports from volatile world regions. The US derives 40% of its energy from oil, 24% from coal (most of which is domestic, making the US the second largest coal producer in the world), 23% from gas and 9% from nuclear power. The US is a leading proponent carbon capture and storage, with demonstration and commercial projects already underway.

Whether climate change will become an issue in this year's presidential elections remains to be seen. Domestic environmental issues may carry more weight with the electorate, although climate change could also figure as a foreign policy issue in the emerging debate about the nature of American leadership. Russian ratification of the Kyoto Protocol before 2 November would raise the profile of the issue.

Senator John Kerry, who has now secured the Democratic nomination, is a leading environmental advocate in Congress. When asked "Do you support ratification of the Kyoto Protocol to curb greenhouse gas emissions?", Kerry demonstrated his knowledge of the agreement in his answer saying, "No - Again, no one has taken a stronger leadership role on the Kyoto process than me. Having said that, because of the Bush Administration's inaction the binding targets set in the Kyoto Protocol are no longer achievable. We need to immediately reengage the international process, perfect Kyoto, maintain strict, binding targets, and increase developing nation participation so that we can ratify a strong, effective, and meaningful international agreement" (The Sustainable Energy Coalition, January 2004). This reaffirms the view presented in the Kerry-Biden amendment to foreign appropriations, passed unanimously in 2002, which also stated that the Byrd-Hagel resolution (see *Appendix B*) was not intended to provide the opportunity for abrogation of any US responsibility to reduce emissions. It seems therefore that Kerry supports the framework of Kyoto – strict binding targets – but notes the difficulty in meeting those targets due to lack of action in the US up to this time.

When asked "What binding CO2 emissions reductions measures, if any, will you support in your Presidency?", Kerry answered that, "The Kerry Administration will make climate change a true national priority. We will develop policies that will significantly reduce our emissions while growing our economy and creating jobs. I support, for example, capping carbon pollution from power plants, increasing automobile efficiency, and ratifying a legally binding international agreement to cut carbon emission." In addition, Kerry's energy plan, available on his campaign website, advocates a nationwide 20% renewables target for 2020, a reduction in oil dependency of two million barrels of oil per day,

increasing the North American supply of natural gas, reorienting subsidies towards clean energy, investment in hydrogen (which would be derived mostly from renewables) and support for clean coal technologies.

Russia

The key question for Russia is ratification, which is linked to wider Russian concerns about geopolitics and economic prosperity as discussed earlier. However, energy sector modernisation is likely to be an ongoing concern in Russia's approach to the climate negotiations. Russia will also have to diversify its economy in the longer term: it is the sixth biggest producer of coal and its fifth biggest exporter, the largest producer and exporter of gas and the second largest producer and exporter of crude oil. Of course, in the short to medium term, Russia stands to win as action to mitigate climate action is likely to increase demand for Russian gas.

Australia

Prime Minister Howard joined President Bush in reneging on the Kyoto Protocol. However, the opposition is already on record saying that a change in government at the next election would lead to ratification.

Australia is the fourth largest producer of coal and its biggest exporter. Relying on coal to meet 48% of its energy needs, Australia is one of the world's highest per capita emitters.

China

China leads the world in coal production and is second in coal exports. China is the second biggest producer of electricity after the United States as well as the second biggest producer of electricity from coal. It is ranked sixth in terms of crude oil production, ninth in terms of oil imports and is also the ninth net importer of oil and petroleum products.

Chinese energy needs are met 56% by coal and 20% by oil, while renewables and waste amount to 19%. Unlike most developing countries, access to energy is not an issue in China.

Although China is vocally opposed to increased commitments for developing countries in the climate negotiations, their domestic record tells a different story. China's emissions in comparison to their GDP have sunk – a decoupling has occurred. Energy efficiency is a main tenet of much of Chinese energy policy and recently the cabinet decided that climate change and sustainable development should be a consideration in all decision-making at all levels. The huge costs associated with air pollution and acidification are widely recognized.

China is not lacking in the scientific and technical capacity necessary to address climate change. Chinese institutions have an impressive knowledge of the impacts of climate change and the government is focused on technological innovation, already researching possibilities such as a hydrogen-powered transportation system. The key questions are how to reorient investment in China's vast economy in order to bend the emissions growth curve and who will finance it.

With a huge population and low per capita emissions, China is likely to seek some per capita element in future commitments.

India

India is likely to suffer greatly from warming over 2C. Indian agriculture and water supplies are vulnerable and extreme poverty makes adaptation difficult for most communities.

India only represents 3% of global emissions and its large population suggests that a per capita element will be important in shaping future commitments. Like China, India is vocally opposed to increased commitments for developing countries in the climate negotiations, despite cause for optimism on the ground. India has the world's fourth largest wind industry in the world and great capacity for innovation.

India is also the third largest coal producer and its sixth largest importer. India ranks third in terms of electricity production from coal. Coal meets 34% of Indian energy needs while

renewables and waste make up 39%. The challenge of providing access to affordable modern energy services and reducing indoor and outdoor air pollution are key issue for Indian sustainable development.

Brazil

Brazil has often taken a position of leadership in the climate negotiations, as well as in sustainable energy initiatives such as JREC and REEEP, and is generally committed to reaching agreement. President Lula is has become a leading voice in the developing world on the issues of debt, trade and poverty, most notably during the WTO ministerial in Cancun.

Brazil is the origin of a two proposals that have been particularly influential in shaping the climate regime: the Clean Development Fund (see *Appendix C*) and the Brazilian Proposal for future commitments that is based around historic responsibility for temperature change. The Brazilian Proposal also has applications for determining polluter pays outcomes, for instance in supporting adaptation.

A key challenge for Brazil will be how to prevent deforestation, which is currently the major cause of Brazilian emissions. There is a tendency in the conservation community to assume that the assignment of carbon value to primary forests will act as a simple solution in this regard, but this is a highly complex issue. Brazil is the fourth biggest importer of electricity and relies on oil to meet 49% of its energy needs, on hydro for 13% and on other renewables and waste for 24%. Energy security is an increasing problem in Brazil.

The African Group

Africa suffers from a major lack of capacity to engage and really represent its interests in the climate negotiations. African food security, water resources and human health are severely threatened by the lowest levels of climate change. Extreme poverty and HIV/AIDs are understandably more immediate priorities but adaptation funding is urgently needed to support community resilience and preparedness.

South Africa is a case apart, with high per capita emissions. Coal meets 74% of its energy needs. It is also the fifth largest coal producer and its fourth largest exporter.

Other participants

Other participants in the climate regime have established interests but were not within the scope of this paper. The roles of AOSIS, OPEC and the rapidly industrialising economies of South-East Asia and Latin America will be particularly important.

However, two non-governmental players deserve a brief mention here insofar as they have made proposals that relate to future action. First, BP has proposed a global concentration target of 550ppmv. Second, the Climate Action Network has proposed that global mean warming be limited to a peak increase of below 2oC (above pre-industrial times) and that the warming should be reduced as fast as possible from this peak. In addition, they have identified a framework for future action based on three parallel, inter-linked tracks operating on the same or a very similar timetable: the Kyoto track, a Greening (decarbonisation) track and an Adaptation Track.

Conclusion

In conclusion:

- The international climate regime is a multi-dimensional working mechanism that enables the international community to address a challenge of unparalleled scale and complexity.
- In order to secure maximum participation, the climate regime provides for differentiation between countries according to their sustainable development priorities and to principles of equity.
- The Kyoto system represents a huge amount of sunk human capital and a delicate balance of complex trade-offs resulting from sequential deals over more than a decade.
- The main provisions of the Kyoto Protocol are essential foundations to any meaningful action to address climate change, namely the

establishment of mandatory absolute emissions caps and internationally agreed accounting and verification procedures.

- Collapse or abandonment of the Kyoto Protocol would unravel domestic regulation in most industrialized countries, foster international mistrust, undermine public confidence and result in delays that could potentially foreclose options for climate stabilization.
- The key weakness of the system lies in the failure of governments to ensure that climate objectives are integrated in other international processes and policy areas, such as trade, development and energy security. So far, the climate regime has not gained sufficient traction in other decision making fora.

Finally, it is worth noting that slow progress in the negotiations is not due to the mere absence of a widely acceptable framework for future action. Climate leadership needs to be focused on creating greater international willingness to act. If pragmatic and immediate ways to do this can be found, the boundaries of what is considered realistic longer term will change. Progress on the following fronts would be helpful:

- Devising a shared narrative that links climate action to prosperity, equity and sustainable development;
- Changing the language of burden to a language of opportunity by demonstrating the desirability of system change and innovation;
- Finding the triggers that will leverage the resources necessary to a step-change in clean energy investment; and
- Promoting public awareness and involvement.

Despite the current impasse, the urgent need to change the global emissions trajectory makes it necessary for leaders in the climate regime to begin the process of discussing and shaping future action without delay.

Appendices to background paper

Appendix A – Principles of the FCCC

- The principles of the FCCC are contained in the Preamble and in Article 3. They are the following:
- Climate change is identified as a "common concern of humankind" - suggesting a legal responsibility upon states to prevent damage to it.
- States have a sovereign right to exploit their own resources, but also the responsibility to ensure that activities within their control do not cause damage to others.
- States have "common but differentiated responsibilities", i.e. all states have a common responsibility to protect the climate but the actions they take can be differentiated according to their development priorities.
- Action to prevent climate change should proceed on the basis of "equity".
- The precautionary principle requires that states take action to prevent environmental damage before scientific certainty exists, particularly where damage could be "serious or irreversible".
- Policies and measures should be comprehensive but take account of different socio-economic contexts.
- States have the right to "promote" sustainable development.
- Measures to combat climate change should not constitute a means of "arbitrary or unjustifiable discrimination or a disguised restriction on international trade".

Appendix B – Context and politics of the Kyoto Protocol negotiations

Between Berlin and Kyoto, governments tabled a wide range of proposals resulting in a 100-page negotiating text (Grubb et al, 1999). The AOSIS proposal from Berlin provided an anchor for the negotiations and was adopted by the environmental movement. The EU proposed an agreement focusing on coordinated policies and measures that received little support, followed later by a proposal for a mandatory absolute 15% reduction target for Annex I countries that was supported by a burden-sharing agreement, allocating emissions reductions to individual EU Member States. After much delay, Japan provided its own proposal for a 5% reduction when Prime Minister Hashimoto brought an end to interdepartmental bickering. OPEC, led by Saudi Arabia, acknowledged that action was required but called for the establishment of a compensation fund to address the issue of lost oil revenues, thereby returning to G77 and resolving the Berlin split. Brazil proposed a system of emissions allocation based on historic responsibility for temperature change, and a proposal for a Clean Development Fund that would use penalties for non-compliance to support the deployment of clean technologies in developing countries. G77 as a whole lent its support to the EU target and Brazilian fund.

The US government was particularly important in shaping the Kyoto regime. The Clinton administration publicly rejected industry-led challenges to climate science and stated that the US would accept binding targets provided that flexible, cost-effective measures, particularly emissions trading, were deployed to meet them. The move from a voluntary to a mandatory approach at COP 2 in Geneva was a major shift in US policy. Emissions trading and 'flexibility' were new and required a lot of explanation to the international community.

In the lead-up to Kyoto, however, industry associations worked behind the scenes on the Byrd-Hagel resolution, a non-binding Senate resolution advising the US delegation. While the vote (95-0) looked like a landslide opposed to any US commitments without the same level of commitment from developing countries, it was rather a meaningless vote for many uninformed Senators and was later manipulated in a $13 million advertising campaign. The shift in the Clinton Administration to ask for 'meaningful participation by developing countries' was a damaging one as the US was far above its own voluntary goal and never specified what meaningful participation might mean. This ambiguity seeded mistrust in the negotiations. Nevertheless, President Clinton, after much economic assessment and consultation, announced that the US position was stabilization of all six GHGs at 1990 levels by 2008-2012. The outcomes of the Kyoto conference are described further below and listed in detail in *Appendix C*.

While the Kyoto Protocol was designed during 30 months of negotiations, subsequent talks at COPs 4-7 provided the detailed rules needed to operationalise the Protocol's provisions. However, this second round of negotiations proceeded against a background of global recession, triggered by the Asian financial crisis in 1998. Governments became increasingly nervous about the introduction of carbon constraints that would - it was perceived - place a costly burden on industry and the energy sector, stifling recovery. Some Annex I governments began identifying ways in which the operational rules could be elaborated in ways that would reduce the burden of the targets they had agreed in Kyoto. The negotiations at COPs 4 and 5 were slow and largely technical in nature, enabling governments to elaborate and exchange proposals, and identify areas of disagreement. The slowness of the Kyoto follow-up process further delayed action to reduce emissions, contributing to the sense that the Kyoto targets would be difficult to reach.

The purpose of COP6, held at the end of 2000 in The Hague, was to finalise an agreement on Kyoto's operational rules. The negotiations were political and high-level, but as UK and US negotiators were preparing to inform the press about agreement on a final deal, the talks collapsed. By this point, the talks had already overrun and many delegates, particularly developing country delegates, had left the conference centre and begun their journeys home. There is a range of views about the validity of the 'deal that never was' and, more generally, about the cause of the talks' collapse. Many participants were critical of the COP President's handling of the high-level segment, during which he presented a negotiating text that many delegations believed went too far and was introduced too late. Others rejected the lack of inclusivity of the final-hour negotiations, believing that any agreement that was reached could not have provided the basis for international consensus. The focal point of discussions was a dispute between the EU and the US administration – and it was still uncertain at this moment who the next President would be - on the number of tonnes by which the operational rules would weaken the Kyoto targets. The US stuck to its position for a very long time, making any "deal" unlikely due to lack of time. The UK, playing its preferred role of transatlantic broker, was particularly keen to seek agreement and tried to find such a deal in the end-game. However, the proposal was controversial and arrived late, not leaving enough time for the EU to discuss it and offer a counterproposal, or any time for developing countries to learn about the proposal at all. The resulting spectacle was one of confusion and acrimony.

In March 2001, the new US administration

under President Bush rejected the Kyoto Protocol, triggering an outpouring of public condemnation across the globe. It also went back on the campaign promise to set a mandatory cap on CO2 emissions from power plants. At the EU-US Summit in Gothenburg in May 2001, under intense public pressure, the EU stated that it would ratify Kyoto by the end of June, with or without the US. At the meeting, the Bush administration agreed not to interfere with the negotiation and adoption of the Kyoto Protocol - a promise that was kept up to June 2001 but since has not been kept in practice; for instance, US representatives repeatedly sought to discourage Canada from ratifying. International attention was now focused on Japan: would the Japanese government join the EU in moving forward or would it follow its more traditional ally, the US, in rejecting the Kyoto agreement? The fact that the Protocol was negotiated in Japan gave Kyoto supporters considerable leverage but although the EU was willing to ratify Kyoto before detailed rules had been agreed, Japan and most other Annex I countries waited until after COP7, when the rules were largely completed and adopted as the Marrakech Accords. In the end, only Australia joined the US in outright rejection of Kyoto.

COP6bis, held in Bonn in July 2001, resulted in political agreement after two weeks of sleepless nights. This time, the focal points for disagreement were amongst Japan, the EU and Russia, and between Annex I and the G77. Without the US, Japan and Russia were essential to the Kyoto formula and both were reluctantly convinced to agree to a deal on the contentious areas of sinks and compliance. In the case of Japan, this was largely to avoid being blamed for the collapse. In the case of Russia, it received every concession it had requested. Agreement with developing countries was reached when the EU, Canada and a handful of other Annex II countries finally made a political commitment to guarantee certain levels of funding by 2005; Japan was noticeably absent from the group. Agreement within G77 was made possible by the isolation of OPEC, whose persistent opposition was eventually overruled. This mirrors COP1 where a smaller sub-section of G77 (without OPEC) joined together to move the process forward.

The Bonn Agreement formed the basis for the Marrakech Accords, agreed at COP7, later in 2001. However, COP7 was not plain sailing either, as Japan and Canada sought to renege on key elements of the deal, particularly in relation to compliance. Agreement from Russia also proved difficult, and a generous sinks allowance became necessary to secure their sign-on. After Marrakech, the only key element of the Kyoto architecture still to be resolved were the rules relating to the use of sinks for CDM crediting.

Appendix C – Outcomes of the Kyoto negotiations

Quantified emission limitation and reduction commitments

The key issues for negotiation were time scales for the targets, greenhouse gas coverages, how to account for sinks, whether targets should be differentiated within Annex I, how the EU's collective commitment would work in practice. The Kyoto Protocol resolved these issues in the following way:

- Binding, absolute emissions targets are applied as an average across a five-year Commitment period from 2008 to 2012;
- countries much show demonstrable progress toward meeting their targets by 2005;
- the FCCC base year of 1990 was maintained, although economies in transition were allowed to choose other base years;
- a basket of six gases was adopted including CO2, N2O, CH4, HFCs, PFCs and SF6;
- to enable comparison across the gases, the IPCC's 100-year Global Warming Potentials were adopted; GWPs provide a calculation in CO2-equivalent for each of the other five Kyoto gases;
- the absorption of CO2 by sinks was only to be accounted for when 'direct, human-induced' changes were made to forests, but a large set of questions remained unanswered and were referred to the IPCC for advice, so negotiations on sinks continued long after 1997; and
- targets were differentiated across Annex I, amounting to a collective greenhouse gas emissions reduction of 5.2% against 1990 levels by 2008-2012.

Publication of the IPCC report on terrestrial sinks helped provide clarity on this complex issue, which is officially referred to as Land Use, Land Use Change and Forestry (LULUCF). The Protocol has a number of articles that handle the LULUCF issue – from afforestation, reforestation and deforestation activities in Annex I countries (article 3.3), to potential additional activities such as agricultural soils (article 3.4) to a special clause for Australia land-use situation (article 3.7). In the end, due to pressure from a number of countries, Article 3.4 was widened and included the following activities: forest management, revegetation, cropland management and grazing land management. However, use of these additional activities is capped and emissions reductions arising from the use of sinks are traceable through their designation as Removal Units (RMUs). Whether sinks projects were allowed in the Clean Development Mechanism was also delayed, with final rules only emerging at COP9 in 2003. Sinks rules were negotiated largely on the basis of a desire by some countries to restrict the level of emissions reductions required to meet their Kyoto targets. Due to scientific uncertainties and opposition by a number of countries, the real potential of terrestrial sinks is severely limited.

The highly complex reporting standards, accounting and monitoring procedures needed to support the Kyoto systems were also agreed at COP7. It is fair to say that the Kyoto Protocol has a solid set of methodological procedures for measuring, reporting, reviewing and monitoring all six greenhouse gases. This was essential to create a base for the assurance of compliance with commitments and the international emissions trading system.

Policies and measures (PAMs)

These are policy instruments aimed at limiting domestic emissions, although actions to limit emissions outside a country's jurisdiction are also included. The key negotiation issues are the level of harmonisation across countries and reporting requirements. The EU advocated high levels of policy prescription and coordination but this approach was rejected

by other countries on the grounds that it infringed upon sovereignty and did not take account of differing national circumstances. Kyoto resulted in a requirement that Annex I countries must, *inter alia*, protect and enhance sinks, promote sustainable agriculture, limit or reduce transport and waste emissions, enhance energy efficiency, promote renewable energy, and reduce or phase out market imperfections (fiscal incentives, subsidies etc) in all greenhouse gas emitting sectors that run counter to the objective of the Convention. Information about PAMs must be exchanged and PAMs are peer reviewed and evaluated. Annex I countries must also take account of the adverse impacts of PAMs on developing countries, including those dependent on fossil fuels. Since Kyoto, progress in this area has been limited to the development of good practice guidance and the development of tools to promote information exchange and help measure and compare the effectiveness of PAMs. A key issue for the future will be how international cooperation, particularly linking domestic emissions trading schemes, can improve environmental effectiveness and address concerns about competitiveness.

Flexibility mechanisms

These are mechanisms aimed at improving the cost-effectiveness of the Kyoto Protocol by allowing countries to reduce emissions at the lowest marginal cost. They are International Emissions Trading (IET), the Clean Development Mechanism (CDM) and Joint Implementation (JI). The US agreed to accept binding targets on condition that international flexibility formed an integral part of the Kyoto regime. Other countries were confused by the concept of flexible but binding targets. The US had experience of using emissions trading domestically to limit sulfur dioxide emissions, but this experience had not been replicated elsewhere and was regarded with some suspicion. The JUSSCANZ group was the first to adopt the proposal. The EU eventually agreed to international flexibility on condition that it would be 'supplemental' to domestic action. G77 remained opposed to flexibility, largely because it undermined the focus on domestic action and responsibility within Annex I countries and would enable rich countries to buy up the cheapest emissions reductions available in developing countries. However, agreement was reached when Brazil and the US recast the Brazilian Clean Development Fund proposal so that, instead of penalties for non-compliance being used to fund clean development, funding for clean development would result in emissions credits that could used for compliance.

International Emissions Trading works in the following way: an over-budget Annex I government can buy emission allowance units (so-called Assigned Amount Units, AAUs) from an under-budget Annex I Party. Under Joint Implementation, Annex I countries can fund emissions reduction projects in other Annex I countries and count the reductions (Emission Reduction Units, ERUs) against their Kyoto target. Reductions are calculated according to a counterfactual baseline, i.e. what would have happened to emissions without the project. Under the Clean Development Mechanism, Annex I countries can fund emissions reduction projects in non-Annex I countries and count the reductions (Certified Emissions Reductions, CERs) against their Kyoto target. Like JI, the reductions are calculated against a hypothetical baseline. JI and CDM projects should be 'additional', i.e. if the Kyoto carbon value had not been made available to the project, the associated emissions reductions would not have occurred. This condition was aimed at excluding business-as-usual projects. Use of the flexibility mechanisms should be supplemental to domestic action, although no quantification of 'supplementarity' was ultimately provided.

While the CDM does not imply any emissions reduction commitment for developing countries, it is worth noting that this is the only direct involvement that non-Annex 1 parties have in efforts to mitigate climate change. This has been recognized as potentially important in terms of developing local expertise and understanding, identifying opportunities for cutting or limiting emissions and facilitating their participation in any future regime that includes international emissions trading.

Most of the rules needed for use of the flexibility mechanisms were agreed at COP6 and COP7. These include eligibility and compliance rules, establishment of registries and accounting procedures, limits to prevent over-selling (the Commitment Period Reserve), and project validation and verification systems. The CDM Executive Board has already been established and reviewing project proposals on an ongoing basis. The JI Supervisory Committee has yet to be formed. Sinks projects under the CDM are restricted to afforestation and reforestation projects and their use limited to 1% of each Annex 1 country's 1990 emissions. Nuclear projects were excluded from both CDM and JI.

Compliance

International law is hard to qualify as binding on countries in the same sense that national law is binding on individuals. However, the Kyoto compliance system, designed in Bonn and part of the Marrakech Accords, sits on the cutting edge of international environmental enforcement and as close to binding as possible. Originally agreed in Bonn at COP6, the agreement miraculously survived a concerted attack by Japan, Russia, Canada and Australia in Marrakech. The agreement provides for the adoption of a compliance system with specified features at the First Meeting of Parties to the Protocol; the timing for adoption of the compliance decision is a requirement of the Protocol itself.

It should also be noted that the Protocol also states that it must be amended in order for consequences for non-compliance to become legally binding. Ultimately, any country can drop out of the Kyoto system at any time, as is true of any international treaty. The only thing that holds the system together is political will, which is a determined by diplomatic and public pressure and incentives, like access to knowledge and the flexibility mechanisms, which encourage countries to stay in the system. This means that the success of the compliance system is ultimately dependent upon governments wishing to remain within the system and therefore accept the consequences for non-compliance as legally binding.

- The main features of the Kyoto compliance system are the following:
- Eligibility requirements for participation in the flexibility mechanisms;
- A compliance committee with a facilitative branch and an enforcement branch - the facilitative branch acts as a warning system, alerting regime participants to possible non-compliance by Annex I Parties, while the enforcement branch acts like a judicial body, reviewing compliance and applying consequences for non-compliance;
- 'Legally binding consequences', including a penalty of 1.3 tonnes in the next Commitment Period for every tonne by which a target is missed in the current period.

The equitable geographical membership of the compliance committee was a victory for G77, as Annex I countries fought hard to gain an absolute majority. Public participation is provided for in that NGOs may submit reports to the compliance committee; however, access to information during compliance hearings is limited.

Financing

In Bonn, a number of Annex II Parties made a collective commitment to contribute US$410 million (€450 million) new and additional per year by 2005 to financing action by developing countries, with a review in 2008. Funding can include contributions to GEF climate change related activities, bilateral and multilateral funding and contributions to any of the funds established by the Marrakech Accords. These funds are:

- an Adaptation Fund, which is financed by voluntary contributions and a levy on CERs generated by CDM projects;
- a Least Developed Countries Fund, which supports a special work programme of largely technical assistance; and
- a Special Climate Change Fund, which will fund adaptation, mitigation, technology transfer, economic diversification and capacity building; adaptation was established as the priority during discussions in 2003.

The Marrakesh Accords require Annex II Parties to report on their financial contributions on an annual basis, with these reports to be reviewed by the COP.

Adaptation

Adaptation has been a great weakness for the negotiations. Originally manipulated by those countries unwilling to mitigate and by OPEC countries seeks compensation of the impact of climate policy, it is now the subject of protracted methodological discussions and planning. processes. The only disbursement of funding to date has been in the preparation of National Adaptation Programmes of Action to Least Developed Countries. Good adaptation measures, like water conservation and better prevention of vector-borne diseases, are hard to separate from good sustainable development. However, the language of mainstreaming provides rich countries with an escape clause when it comes to questions of funding. As climate science improves, it will be easier to identify the local impacts of human-induced warming in a way that is useful to individual communities and, hopefully, to make the polluters pay.

Technology Transfer

Technology transfer is essential to adaptation and to the prevention of dangerous climate change, but has received very little attention in the climate negotiations. The focus of work to date has been to discuss the best ways of transferring technology and exchange information. An Expert Group on Technology Transfer has been established that provides recommendations to Parties, focusing mainly on the development of technology needs assessments and the creation of 'enabling environments' for technology transfer.