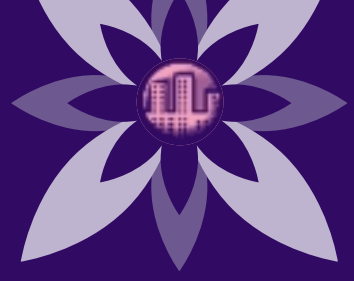


CLIMATE CHANGE

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Climate Change: Policy

Past and present emissions have already committed the earth to at least some degree of climate change over the course of the 21st century. Some impacts are already under way, others are committed, yet only beginning to arrive. (See Climate Change Leaflet 2, Impacts).

The climate system responds to changes in greenhouse gas levels only slowly, with a time lag induced by the immense thermal inertia embedded in the vast amount of water contained in the world's oceans.

Delays in thermal mixing and varying degrees of residency in the atmosphere by greenhouse gases (See Climate Change Leaflet 1, Science) mean there is a substantial difference between the period in which emissions are produced (or reduced), atmospheric concentrations, temperature levels, degree of warming and the timing of the arrival (and degree of intensity) of eventually expected impacts (See Fig.1).

Developing Countries and Climate Change

Social and economic systems tend to be more vulnerable in developing countries with weaker economies and institutions. People living in arid or semi-arid lands, low-lying coastal areas, flood-prone areas, or on small islands are at particular risk from climate impacts, both current and predicted.

Greater population densities in many poorer parts of the world mean that people living in less-developed countries are more vulnerable to current hazards such as storms, floods, and droughts. They will also be correspondingly even more exposed as the climate deteriorates.

Poorer countries also have less resources available to them for early-warning systems, climate protection measures, disaster relief measures and adaptation strategies.

The United Nations and Climate Change

Evidence of human interference with the climate first emerged in 1979 at the First World Climate Conference (See Fig.2).

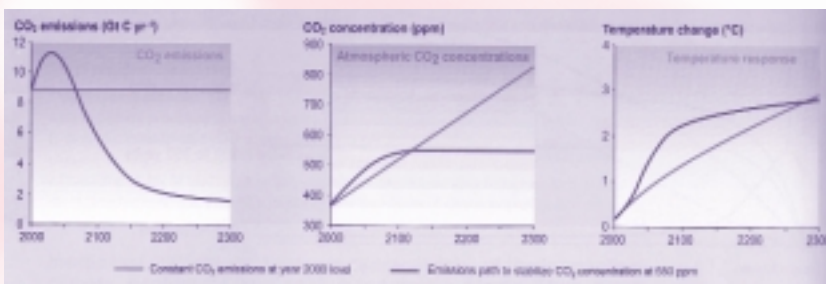
As public concern over environmental issues continued to increase during the 1980s, governments grew progressively more aware of climate issues. In 1988 the United Nations General Assembly adopted resolution 43/53, proposed by the Government of Malta, urging the 'Protection of global climate for present and future generations of mankind.'

During the same year the governing bodies of the World Meteorological Organisation and the United Nations Environment Programme created a new body, the Intergovernmental Panel on Climate Change (IPCC), to marshal and assess scientific information on the subject.

In 1990 the IPCC issued its First Assessment Report, which confirmed that the threat of climate change was real. The Second World Climate Conference held in Geneva later that year called for the creation of a global treaty. The General Assembly responded by passing resolution 45/212, formally launching negotiations on a convention on climate change, to be conducted by an Intergovernmental Negotiating Committee (INC).

Fig. 1

Impact of stabilizing emissions versus stabilizing concentrations of CO₂



Source: IPCC/WMO/UNEP



Source: UNFCCC "Caring for Climate"

The INC first met in February 1991 and its government representatives drafted the United Nations Framework Convention on Climate Change (UNFCCC), after just 15 months of negotiations, on 9 May 1992. In June 1992, at the Earth Summit in Rio de Janeiro, the new Convention was opened for signature. It entered into force on 21 March 1994. It has since been joined by 188 UN Member States, as well as by the European Community acting as a regional entity. This almost worldwide membership makes the Convention one of the most universally supported of all international environmental agreements.

UNFCCC is the foundation of global efforts to combat climate change. Its ultimate objective is:

"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 time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner" (Art.2)

The Convention sets out some guiding principles:

- *The precautionary principle says that the lack of full scientific certainty should not be used as an excuse to postpone action when there is a threat of serious or irreversible damage;*
- *The principle of equity recognises that there is distinct injustice in the fact that while the majority of historic (and current) greenhouse gas emissions have been produced by the wealthier countries of the world, poorer countries and regions (which are not so responsible for causing climate change) are the very countries and regions most exposed to its effects, and the least able to respond and adapt;*
- *The principle of "common but differentiated responsibilities" assigns the lead in combating climate change to developed countries, in recognition of the principle of equity (See Fig.3).*

Even as they adopted the Convention, however, governments knew that its provisions would not be sufficient to tackle climate change.

At the first Conference of the Parties to UNFCCC (COP 1), held in Berlin in early 1995, a new round of talks was launched to discuss firmer, more detailed commitments for industrialised countries, a decision known as the Berlin Mandate.

After a further two and a half years of intensive negotiations, a new treaty representing a substantial

extension to UNFCCC and including legally binding emission reductions was forwarded for adoption at COP 3 in Kyoto, Japan, in December 1997.

The new treaty - now known as the Kyoto Protocol - contained new provisions designed to hasten delivery of Article 2 of UNFCCC, under which industrialised countries undertake several new specific commitments:

- *The richest countries undertake to provide new and additional financial resources to the poorer countries more exposed to climate change (and less responsible for causing it); (see table 1)*
- *The wealthier countries undertake to firstly, develop, and secondly, to then facilitate the transfer of "cleaner, less polluting technologies" to poorer countries;*
- *Developed countries undertake to reduce the total of their collective emissions of six specified greenhouse gases by a minimum of 5.2% compared to the level of emissions measured in 1990 (*);*
- *Each country's "common but differentiated" emissions target must be achieved by the period 2008 - 2012. (It will be calculated as an average of the five years);*
- *"Demonstrable progress" must be made on the delivery of commitments by 2005.*
- *Emission reduction commitments can be met using three innovative "flexible mechanisms" involving trading*



Source: UNFCCC "Caring for Climate"

Table 1 Per capita emissions, 2000

UNFCCC Annex 1 per capita emissions, Year 2000 <i>(tonnes CO₂ equivalent, all sources, excluding sinks)</i>	
Australia	26.15 t / capita
United States of America	25.45 t / capita
Canada	23.62 t / capita
New Zealand	20.09 t / capita
Ireland	18.10 t / capita
Belgium	14.94 t / capita
Luxemburg	14.92 t / capita
Finland	14.22 t / capita
Netherlands	13.73 t / capita
Denmark	12.92 t / capita
Greece	12.39 t / capita
Norway	12.31 t / capita
Germany	12.09 t / capita
Japan	10.96 t / capita
United Kingdom	10.94 t / capita
European Community	10.83 t / capita
Iceland	10.68 t / capita
Austria	9.85 t / capita
Spain	9.79 t / capita
Italy	9.49 t / capita
France	9.33 t / capita
Portugal	8.47 t / capita
Sweden	7.79 t / capita
Switzerland	7.33 t / capita
Global Average	3.8 t / capita (1)
Developing Countries	1.9 t / capita (1)
Least Developed Countries	0.2 t / capita (1)

Sources: Emissions: UNFCCC; Populations: IEA; Calculations; GRIAN
(1) CO₂ from fossil fuels only. Source: IEA

of emissions permits;

- The possibility of emissions reductions being credited for land-use and forestry activities that absorb (or "sink") greenhouse gases;
- Accounting, reporting and review mechanisms, including in-depth review of national reporting;
- Compliance provisions, including a Compliance Committee to assess and deal with problem cases.

(* This group target will be achieved through cuts of:

- 8% by Switzerland, most Central and East European states, and the European Union;

(The EU has further divided its -8% target up amongst member states under a common but differentiated "burden sharing agreement. Under this agreement, Ireland is allowed to increase emissions by up to 13%;

- 7% by the US;

- 6% by Canada, Hungary, Japan, and Poland.

Russia, New Zealand, and Ukraine undertake to stabilise their emissions at 1990 levels;

Norway may increase emissions by up to 1% from 1990 levels,

Australia may increase emissions by up to 8%;

Iceland may increase emissions by up to 10%.

Since 1997, however, global action on climate change has been stalled by difficulties in converting the Protocol's ambitious compliance regime into practice.

Particular difficulties have been encountered in operationalising the flexible mechanisms for emissions trading. Accounting procedures to ensure the integrity of emission credits obtained through land-use and forestry activities have proved exceedingly complex to both construct and agree.

Additionally, one of the potentially most useful aspects of the Protocol from the point of view of the less-developed and least-developed poorer countries, the Clean Development Mechanism - which should have ensured the speedy transfer of cleaner technologies to these countries - has only very slowly begun to acquire momentum in the absence of fully functioning emission trading markets in richer countries.

These have been slow to develop since the USA withdrew its commitment to ratify the Protocol in March 2001. The USA was responsible for 36% of developed country emissions in 1990, and so (under the rules for ratification of the Protocol drafted in 1997) the USA is entitled to 36% of the votes required to enable it to enter into force in terms of international law.

The rules specify that the Protocol may only enter into force once countries representing 55% of 1990 emissions lend their support. So the USA has always held sufficient votes to be within 10% of being a blocking minority.

More than 4 years after the Protocol should have entered into force (in 2000) and approaching 7 years on from its original adoption by UNFCCC Parties in Kyoto (in December 1997) it is only with the announcement in October 2004 that the Russian Federation finally intends to ratify the treaty that momentum may finally have been restored.

Sources, citations, further reading and websites:

(1) United Nations Framework Convention on Climate Change, <http://unfccc.int/>

Climate change information kit (UNFCCC/UNEP)

Caring for climate - a guide to the Climate Change Convention and the Kyoto Protocol (UNFCCC)

(2) Intergovernmental Panel on Climate Change: <http://www.ipcc.ch/>

Climate Change 2001: Synthesis Report (IPCC)

(3) United Nations Environment Programme: <http://www.unep.org/>

(4) World Meteorological Organisation: <http://www.wmo.int/index-en.html>

(5) GRIAN (Greenhouse Ireland Action Network): <http://www.grian.ie>

Science; Impacts; Policy.

(6) Department of the Environment, Heritage and Local Government: <http://www.environ.ie>

(7) ENFO-Information on the Environment: <http://www.enfo.ie/>



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ENFO is a service of the Department of the Environment, Heritage and Local Government.

Printed on recycled paper
2004

