



CLIMATE

United Nations Framework Convention on Climate Change

In force from March 1994, **ratified by** 186 countries (as of September 7, 2001)

Kyoto Protocol

Signed by 84 countries, **ratified by** 39 countries, not yet in force



ozone depletion

hazardous waste

prior informed consent

right to information

commission on

sustainable development

climate

biodiversity

desertification

persistent organic pollutants

forests

trade and environment

multilateral agreement

on investment

global environment facility

institutions for environment



Problem

The build-up of 'greenhouse gases' (GHGs) in the Earth's atmosphere — carbon dioxide, methane, nitrous oxide and chlorofluorocarbons (CFCs) — due to human activities traps the Sun's rays and heats up the Earth like a greenhouse. Of these GHGs, carbon dioxide is responsible for over half the enhancement of the greenhouse effect. Carbon dioxide emissions, caused by the burning of fossil fuels, are directly linked to individual lifestyles. The greater an individual's dependence on fossil fuels, the higher the per capita emissions.

If GHG concentrations continue to rise at present levels, global mean temperature is expected to rise by 1.4-5.8°C by 2100 compared to pre-industrial levels, and sea level will rise by 9-88 cm by 2100. Millions living in small island states and low-lying deltas in Bangladesh, China and Egypt will be rendered homeless, there will be severe incidents of drought and floods, loss of biological diversity, reduced crop yields and spread of diseases to regions where they are not currently known to exist.

Developing countries, with less ability to adapt, are twice as vulnerable to these adverse effects than industrialised countries, while small island states are three times more vulnerable.

The Convention and Protocol

A political process driven by climate scientists that began in the mid-1980s resulted in the adoption of a Framework Convention on Climate Change (FCCC) at the 1992 United Nations Conference on Environment and Development (UNCED). At the insistence of developing countries, FCCC recognised that countries had 'common but differentiated responsibilities' — industrialised countries, with larger historical and current GHG emissions, would be the first to reduce GHG emissions, allowing developing countries space for industrialisation. Industrialised countries were unwilling to commit themselves to definite reduction targets, so the convention meekly called on them to adopt national policies to stabilise their emissions to 1990 levels — a target most of them failed to meet.

At the third conference of parties to FCCC (CoP-3) in 1997, countries met in Kyoto, Japan, to discuss further GHG reduction commitments for industrialised countries. Under the resulting Kyoto Protocol, industrialised countries, listed in Annex B of the protocol, agreed to reduce their emissions in the 2008-2012 period by 5.2 per cent compared to 1990 levels.

The protocol also allowed three 'flexibility mechanisms', through which industrialised countries can meet their Kyoto targets without any domestic GHG reductions. These include the clean development mechanism (CDM) — project-based emissions trading between industrialised and developing countries, joint implementation (project-based trading between Annex B countries), and emissions trading (trading of excess emission allowances between industrialised countries).

To allow all countries an equal chance to develop, North and South will have to converge to a level of emissions that is sustainable in a way that poor countries still have the 'ecological space' to increase emissions before they take on reduction targets

Negotiating lifestyles

Climate talks broke down completely while discussing rules on how to implement the Kyoto Protocol at CoP-6 in November 2000, as the EU refused to accede to the demand by the US and its allies, of including carbon dioxide soaked by forests while accounting for Kyoto targets. Shortly afterwards, George W Bush won the US presidential elections, and rejected the protocol on grounds that the science of climate change was 'unsure', and that the protocol was unfair to US economy as it exempted 'population centres' like India and China from reducing GHG emissions.

At the resumed session of CoP-6 in July 2001, nations finalised a political deal on the controversial elements of the Kyoto Protocol without the US. The result was that a already weak Kyoto Protocol was rendered further ineffective, as heavy concessions were made to keep traditional US allies like Japan, Canada and Australia on board.

Challenges ahead

Climate negotiators are broadly divided into three groups.

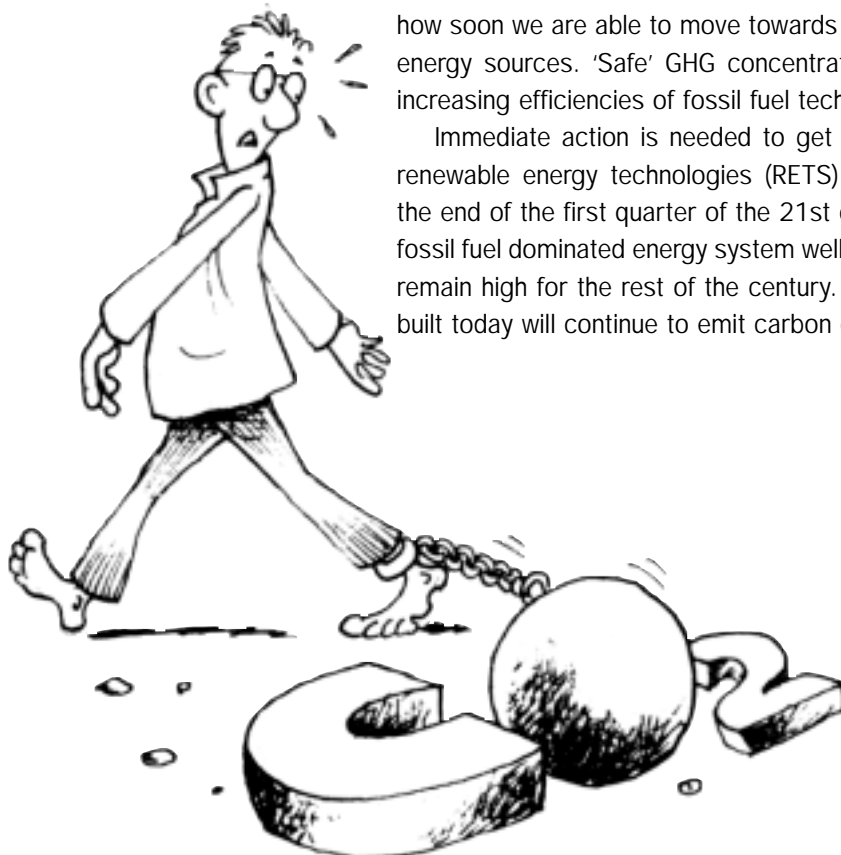
- The EU and small island states want ecologically effective action — effective control of GHG emissions and climate change mitigation
- The Umbrella Group (US, Japan, Canada, Australia and New Zealand) wants economically effective action — minimum possible impact on their economies
- Developing countries want socially just and equitable action

For long-lasting commitment, climate negotiations will have to keep all three goals in mind.

● Ecological effectiveness: no-carbon economy

Whether or not the world can check climate change depends entirely on how soon we are able to move towards a global economy built on zero-carbon energy sources. 'Safe' GHG concentration targets cannot be met by simply increasing efficiencies of fossil fuel technologies.

Immediate action is needed to get out of a fossil fuel-based economy. If renewable energy technologies (RETS) are not competing in the market by the end of the first quarter of the 21st century, the world will be locked into a fossil fuel dominated energy system well up to 2050, and carbon emissions will remain high for the rest of the century. For instance, a fossil fuel power plant built today will continue to emit carbon dioxide for 30 years.



Equity considerations demand that poor nations have the maximum environmental space for their future growth and the threat of climate change be averted as fast as possible because they will suffer the most

- **Economic effectiveness:** avoid penny-wise, pound-foolish decisions

Flexmex are currently considered the most economically effective strategy as emissions reductions can be made in developing countries at a much lower cost.

But any market-driven emissions trading system, such as the ones proposed, will automatically seek fossil fuel-based least-cost options. Mechanisms such as cdm, therefore, will subsidise the fossil fuel sector and lock out renewable energy, undermining the ecological objectives of the Kyoto Protocol.

RETS — from windmills to solar cells, fuel cells and biomass energy — have witnessed remarkable technological progress and cost reductions in recent decades, despite reduced government support for research and development. Yet they have been unable to penetrate the energy market sufficiently because of increased liberalisation of energy markets and the resulting increase in competition.

They will begin to compete only if governments create conditions that favour their increased penetration. Developing countries offer the best niche markets but lack of capital prevents them from making full use of the current progress in rets.

- **Equity and social justice:** equal rights to development

Equity demands that poor nations have the maximum environmental space for their future growth and the threat of climate change be averted as fast as possible because they will suffer the most.



The Kyoto Protocol as the present outcome of the climate change negotiations focuses only on economic effectiveness, at the cost of ecology and equality requirements. At best, the protocol can be called a very small beginning

As long as the world remains within a carbon-based energy economy, a system of tradable and equitable per capita emissions entitlements will have to be set up, to equally distribute rights to the atmosphere.

To allow all countries an equal chance to develop, Southern and Northern countries will have to converge to a level of emissions that is sustainable in a manner that poor countries still have the 'ecological space' to increase emissions before they take on reduction targets.

Ecology, Economy, Equality

A system of equitable entitlements will create strong incentives for industrialised countries to get out of fossil fuel technologies and invest in renewable technologies. It will also provide developing countries with the right opportunity to start participating in the global efforts to fight climate change. Studies show that trading creates an incentive for these countries to keep their emissions low.

To avoid subsidising further use of fossil fuels and to support niche markets for rets, trading between industrialised and developing countries under CDM should be restricted only to projects that use zero-carbon systems. This will help reduce the price of RETS and help them compete with fossil fuel technologies. The emissions reduction cost per tonne of carbon will be 3-4 times higher in the initial commitment period — some US \$30-40 billion for the CDM market instead of the estimated US \$10 billion market. But in the long term, investments in demand-side energy efficiency and renewable energy technologies are likely to lead to lower requirements for investment in the energy sector.

Once RETS begin to compete with fossil fuel-based systems, the problem of climate change will be arrested and the stringency placed on the world economy by low per capita entitlements will be removed.

The present agreement focuses only on economic effectiveness, at the cost of the other two requirements. At best, it can be called a very small beginning.



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