

# KYOTO PROTOCOL (update)

Over the past several decades, rising concentrations of greenhouse gases have been detected in the Earth's atmosphere. It has been hypothesized that the continued accumulation of greenhouse gases could lead to an increase in the average temperature of the Earth's surface and cause a variety of changes in the global climate, sea level, agricultural patterns, and ecosystems that could be detrimental. Countries around the world have recognized the urgent need to take action to reduce Green House Gases (GHGs) in order to address the climate change challenge and the UN Framework Convention on Climate Change (UNFCCC) was adopted at the United Nations on May 9, 1992, and opened for signature at Rio de Janeiro on June 4. The objective of the Framework Convention was to *“achieve stabilization of the greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.”* The signatories agreed to formulate programs to mitigate climate change, and the developed country signatories agreed to adopt national policies to reduce anthropogenic emissions of greenhouse gases to their 1990 levels.

The first and second Conferences of the convention Parties in 1995 and 1996 agreed to address the issue of greenhouse gas emissions for the period beyond 2000, and to negotiate quantified emission limitations and reductions for the third Conference of the Parties. On December 10th, 1997, delegates from 160 nations completed negotiations on the Kyoto Protocol at the third Conference of the Parties under the UNFCCC to combat climate change at Kyoto, Japan and is known as the Kyoto protocol. In a significant step forward, developed countries agreed for the first time to take on legally binding targets for emissions of the following six principal greenhouse gases:

- carbon dioxide (CO<sub>2</sub>),
- methane (CH<sub>4</sub>),
- nitrous oxide (N<sub>2</sub>O),
- hydrofluorocarbons (HFCs),
- perfluorocarbons (PFCs)
- sulphur hexafluoride (SF<sub>6</sub>).

The European Community and a number of other, mainly Eastern European, countries, agreed to reduce emissions by 8% from the 1990 baseline over the 2008-2012 commitment periods, Japan and Canada to 6%. Some countries, because of their particular circumstances, were permitted to increase their emissions compared to 1990 levels, (Coal-exporting Australia is permitted to increase its emissions by 8%) but this increase will be limited. The overall target of Kyoto protocol represent *a total cut of 5.2% in developed country emissions between 2008 and 2012. On 16th February 2005 the Kyoto Protocol entered into force but the world's top polluter - the US - has not signed up to the treaty.* The US says the changes would be too costly to introduce and that the agreement is

flawed. Large developing countries including India, China and Brazil are not required to meet specific targets for now (The justification - to give them the right to develop without hindrance). Russia ratified the treaty in November 2004. The following are some of the special features of Kyoto Protocol.

- Joint Implementation Emission cuts need not be confined to within the country. They can be implemented elsewhere, with the financing country claiming credit for the resulting emissions savings.
- To tabulate its total emissions, a country can subtract the amount of gases absorbed by carbon sinks such as forests within its borders.
- A country that emits less than its assigned target can keep the excess for the subsequent period.

The Protocol also provides for three "**Kyoto mechanisms**", to help countries achieve part of these commitments through action to reduce emissions abroad.

1. The Clean Development Mechanism (CDM) is a way to earn credits by investing in emission reduction projects in developing countries.
2. Joint Implementation (JI) is a way to earn credits by investing in emission reduction projects in other developed countries that have taken on a Kyoto target.
3. International Emissions Trading (IET) will permit developed countries that have taken on a Kyoto target to buy and sell credits among themselves.

The above mechanisms enable countries to achieve their commitments more cost effectively. Countries have four means to meet their Protocol commitments and to calculate their net emission inventory. They are the following:

- Take any domestic action to reduce emissions from their industrial sectors, such as replacing fossil fuel use with renewable energy sources;
- Take domestic action through a limited set of forest-sector activities such as afforestation and reforestation which is counted as reductions, and deforestation which is counted as an emission;
- Use two market-based mechanisms
  - Emissions trading - Countries that overshoot their emissions-reduction targets can "buy" emissions rights from nations which have excess.
  - Project-based credit trading - allow them to buy, sell, or trade greenhouse gas reductions and emission allowances from other countries.
- Use a third market mechanism that allows buying or trading of project-based credits from other countries. e.g., the Clean Development Mechanism.

Since climate change affects the entire planet, an effective plan of action for reducing GHGs must also include efforts by developing countries. In order for

developing countries to enhance their contribution to fighting climate change, their capacity to do so must be strengthened. Capacity building and technology transfer needs to be a central part of the global approach to combating climate change. In addition, some countries such as the small island states are particularly vulnerable to the extreme weather and rising sea levels predicted to occur because of climate change. Adaptation assistance is therefore also an important part of the effort required by developed countries.