

INTRODUCTION-CURRENT INTERNATIONAL CLIMATE REGIME

In order to address the global environmental concerns, a number of multilateral environmental agreements (MEAs) are in place. Most of these agreements were initiated under the auspices of the United Nations Environment Programme (UNEP).



After negotiations, these MEAs have their own independence existence by way of their separate Secretariats providing necessary programmatic support. The Conference of Parties (COP) in case of Conventions and Meeting of Parties (MOP) for Protocols are the supreme bodies consisting of all Parties providing overall direction and guidance to such international agreements.

In case of climate change, the current international regime consists of the United Nations Framework Convention on Climate Change (UNFCCC) 1992 and the Kyoto Protocol, 1997. Due to lack of requisite number of ratifications, the Kyoto Protocol came into existence in February 2005. In addition, partnerships such as Methane to Markets, Carbon Sequestration Leadership Forum, and Hydrogen Economy etc are some other plurilateral initiatives complementing international efforts addressing the issue of climate change. The Asia Pacific Partnership on Clean Development and Climate Change (APPCDC) is the latest such initiative.

Climate change has been attributed to increased concentration of greenhouse gases (GHGs) in the atmosphere due to various human activities. As of now six gases had been covered under the Kyoto Protocol. In terms of quantity carbon dioxide by far, is the main greenhouse gas. From about 278 parts per million (ppm) concentration of carbon dioxide prevalent during pre-industrial period, it is currently 380 ppm. If the current trend of GHG emissions is not altered, it is expected to cause irreversible damage to the climate and to various ecosystems. Despite considerable scientific uncertainty, a global average temperature rise of 2 degree Celsius corresponding to 450-500 ppm carbon dioxide atmospheric concentration is considered as the safe tolerable limit for preventing dangerous anthropogenic interference with the climate system. Increased frequency and intensity of extreme climatic events including sea level rise and increased mean global temperatures are some of the manifestations of the anthropogenic climate change. The Intergovernmental Panel on Climate Change (IPCC) is the principle scientific body giving their periodic inputs on these issues. The fourth assessment report of the IPCC is expected in 2007.

Mitigation efforts are directed to 'cap' the overall global GHG emissions. Whatever we do, certain changes in the climate are inevitable. This leads us to go for adaptation- preparing our socio-economic systems to cope up better with associated climate change. Agriculture, water resources, forests and other natural ecosystems, health and infrastructure are some of the prominent sectors in need of adaptation measures. Mitigation and adaptation, therefore, are twin aspects of the climate change issue. Both mitigation and adaptation require resources and have considerable economic and social costs. Another related question is who is responsible for causing global climate change and who should bear the cost of mitigation and adaptation measures.

It would be interesting to note that certain issues such as equity, hegemony of vested interests, compliance with and enforcement of agreed framework, and involvement of stakeholders etc remain throughout various levels of environmental governance ranging from local to provincial/state to national and international levels. However, there is significant difference in terms of complexities of issues, their presentation and extent of direct involvement of the concerned stakeholders. While the concerned stakeholders aware of the issues involved, often directly participate at the local level of environmental governance, it is only negotiators representing their respective countries do so in case of international environmental governance. There now seems to be increasing trend to allow participation of non-governmental organizations in the meetings of MEAs but only as observers. Extent of disconnect between the negotiators and other stakeholders sometimes lead to sub-optimal progress in decision making and subsequent implementation of such decisions. Level of mutual trust and confidence among stakeholders, and sincerity of the purpose are universally important at all levels of environmental governance. The current international climate change regime is premised on certain fundamental principles summarized below and it would not be difficult to identify similar principles elsewhere at other levels of environmental governance:

- Equity and fair play;
- Common but differentiated responsibilities and respective capabilities;
- Right to development etc;

According to the Kyoto Protocol, developed countries (Annex I) are expected to reduce their overall emission of GHGs by about 5.2 percent of their 1990 emissions during the first commitment period between 2008-2012. There is no corresponding emission reduction obligation on developing countries. This could be achieved either by taking national measures or through a set of 'flexible mechanisms'. The Clean Development Mechanism (CDM) is one such mechanism where 'carbon emission reduction' achieved through activities in developing countries could be apportioned by the entities in developed countries by purchasing CERs. This process also results in creating international carbon markets. Entities in developed countries can also trade CERs through various registries. Certain portion of the proceeds from sale of CERs had been earmarked for adaptation

activities in developing countries. However, the mandatory contribution is not there for other two flexible mechanisms involving developed countries.

In terms of different sectors, it is energy transformation, transport, agriculture, industry, and commercial and residential sectors, which contribute mainly towards emission of GHGs. It is also noteworthy that their respective share varies from country to country largely depending on the lifestyles and consumption patterns of their societies. Keeping in view their historical and current emissions, developed countries are mainly responsible for anthropogenic emissions of GHGs. However, rapidly industrializing developing countries may also make significant contributions to overall global emissions in the coming decades.

As of now, there is vast difference in terms of per capita emission of GHGs between developing and developed countries. Some of the developed countries account for 4 to 5 times of the global average emissions while many developing countries are only at $\frac{1}{4}$ level of per capita global average. In order to achieve, their poverty alleviation and other developmental objectives, overall emissions from developing countries would continue to increase in the years to come. Use of low carbon technologies and energy efficiency and conservation measures can provide a long term answer to the question of emission reduction. However, due to various barriers such clean technologies are either not available or affordable in most developing countries. Even some of the technological solutions often propounded are not yet widely deployed sector-wide in most developed countries.

There are groups of countries such as least developed countries (LDCs) and Small Island developing states (SIDS), which have on the one hand, not contributed to the global emissions and on the other hand, are most vulnerable to the consequences of climate change. In fact due to sea level rise, the very existence of SIDS is at stake. Another set of countries such as OPEC are those which would be adversely affected by various response measures leading to reduction of GHG emissions.

The overall global ecological space in terms of GHG emissions is limited. As of now there is neither any international consensus nor political will for equitable allocation of available ecological space among different countries. Inter and intra generational equity issues are yet to be addressed. Different sectors in the economies of developed countries facing introduction of carbon constraint are finding it difficult to maintain their comparative and competitive advantage. Introduction of similar carbon constraints in developing country economies, therefore, is much more difficult.