

Climate Change South Asian Leaders should Act Now!

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1. Background

Climate change is one of the biggest risks facing society. Its impact on people's life and livelihoods may be the single most important factor that undermines poverty reduction strategies. Countries of the South Asian region are particularly vulnerable because they are already exposed to greater relative risks because of their existing socio-economic conditions- extreme poverty, food and water insecurity, disease. The impact of climate is unlikely to be incremental; more likely are changes in the character of existing natural hazards- storm surges, floods, droughts and other extreme meteorological events. These risks must be understood and factored into development.

Worldwide, between 1980 and 2000, more than 1.2 million people lost their lives due to floods, droughts and storms (UNDP 2004) with a total financial cost exceeding US\$900 billion (Munich Re 2002). The number of people killed directly by extreme events is higher in Least Developed Countries as these countries are more exposed to more frequent and extreme weather events. In addition, climate-sensitive diseases continue to claim more than 1 million lives each year, mostly children under 5 years of age in developing countries. Without proper consideration of and a response to the impact of climate change on human development, more people will be at risk. Climate change also will affect people's livelihood pattern and strategies and will trigger food insecurity.

Therefore, it is the challenge of the South Asian countries to face the climate change risks; similarly it is also challenge of the global community to enable developing countries to maintain an effective climate monitoring network and climate change forecasting system to help governments and their development partners.

2. Climate Change: Who to Blame for This

A decade ago, the subject was fraught with uncertainty, but today the science of climate change has solidified into a real consensus on what is altering the atmosphere and who is to blame.

In 2001 the Third Assessment Report (TAR) of the Intergovernmental Panel on Climate Change (IPCC) concluded that there was overwhelming evidence to assert that human activities were causing the earth to warm. During the 20th century the world's average surface temperatures increased by approximately 0.6°C - two-thirds of that rise has taken place since 1975. Looking ahead, the IPCC forecasted that mean surface temperatures would increase by between 1.5°C and 6°C by 2100, with sea levels set to rise by between 15 and 95 centimeters (6 to 37 inches) by the end of the century.

Table : Pre-industrial and 1990 concentrations of major greenhouse gases and their recent annual growth rate

	CO ₂	Methane	N ₂ O	CFCs
Pre-industrial Concentration	280 ppmv	800 ppbv		
Concentration in 1990	354 ppmv	1720 ppbv	310 ppbv	CFC11=280 pptv CFC12=484 pptv
Recent annual growth rate	0.5%	0.6-0.8%	0.2-0.3%	CFC11=4% CFC12=4%

The 2001 report's pivotal assertion was that mankind or human activities, that emitted huge volume of 'heat trapping' gases in the earth's atmosphere, was to blame for this warming effect. The heat trapping gases, commonly known as 'greenhouse gases' mainly refers to carbon dioxide (CO₂), which is produced by the burning of fossil fuels, such as oil, coal and gas. Other gases, such as methane and nitrous oxide, also play an important part in locking warmth into the earth's atmosphere.

Along with the increasingly regular emission of the green house gases, the following activities are considered as the potential Carbon- dioxide emitting sources;

- Combustion of fossil fuel annually adding 5.7 X 10⁹ tons of carbon in the atmosphere.
- Deforestation particularly in the growing industrialized countries annually adding 0.6 - 0.5 X 10⁹ tons
- Massive utilization of natural coal in China, annually 200 tons of coal, could contribute upto 3 percent of worldwide emissions of Carbon-di-oxide.
- Gradual increasing trends of cement production, usually 5 percent annually, worldwide also adding considerable Carbon in atmosphere.

It has been stated that since the industrial revolution the atmospheric concentration of green house gases has been increasing, primarily due to human activities, such as combustion of fossil fuel, changes in the land use resulting deforestation, and expansion and commercialization of agriculture. Carbon-di-Oxide concentration of 280 parts per million by volume(ppmv) in 1880 has risen to 354 ppmv in 1990, an increase of about 25 per cent, and currently raising at rate of about 1.8 ppmv per year (0.5 per cent) due to anthropogenic emission.

Therefore, increasing of atmospheric Carbon-di-Oxide and other green house gases would affect the Earth's radiation budget and thus, lead global warming and they would have consequences of sea level change.

3. Climate Change and South Asia

Climate change adds a new and largely uncertain dimension to the development problem by compounding the risks of

natural hazards. This is evident already in many parts of the world, and South Asian Countries will be worst victim: for example, it is estimated that 50-65 per cent of development assistance in Nepal is directed towards activities potentially affected by climate risk (Agarwala et al. 2005).

Bangladesh is approaching the havoc of sea level. In the Southwestern Khulna region 5.18-mm/year sea level rises is recorded which may go up to 85 cm by 2050. World Bank's study on the impact of sea level rise in Bangladesh reveals that 15 to 17 percent land areas i.e. 22135 to 26562 square kilometers will be inundated within next 100 years by 100 cm sea level rise, which will make 2 core people environmental refugee and a country like Bangladesh may not be able to accommodate such huge uprooted people.

Table : Predicted picture of sea level rise by 2050 and 2100

Parameters	Average Scenario 2050	Worst Scenario 2100	2050	2100
Total relative sea level rise, cm	83	340	153	460
Absolute sea level rise, cm	13	200	13	220
Land subsidence, cm	70	70	140	240
Shoreline erosion km	1	2	1.5	3
Loss of habitable land, skm	1	26	16	34
Population displaced,%	7	30	13	40
Reduction of Mangrove areas	50	75	79	95

(Woods Hole Oceanographic Institute, 1986).

The physiology, morphology and other natural conditions have made South Asia more vulnerable to many disasters like tropical cyclone, storms, floods, tsunami, earthquake etc. which are very devastating and cause immense suffering and damage to people, property and the environment. Nearly one million people have been killed in Bangladesh by cyclones since 1820.

Though the relationship between the intensity and frequency of tropical cyclones and climate change is contentious, but it is clear that sea level rise is increasing the threat of flooding and the risk of coastal inundation by storm surges. Ecosystem changes, due to changes in patterns of rainfall and temperature, are changing the behaviour of crop pests and human exposure to climate-sensitive diseases, as well as changing the length of the growing season and irrigation requirements.

The potential for natural environmental hazards and climate change to undermine development is great and growing (DFID 2006). Following the Indian Ocean Tsunami in 2005 The World Bank notes that more intense floods, droughts and storms are already having major impacts on the economic performance of South Asian countries and the lives and livelihoods of millions of poor people. Therefore, the poverty reduction and national development are held back by the variability and extremes of climate, and it is doubtful that the Millennium Development Goals (MDG) will be achieved unless countries are far better equipped to manage the impacts of natural disasters and climate change, and unless climate and disaster risk management are included in development planning.

Our Position

- Mainstreaming climate change risk reduction in development planning:** Our analysis of national development plans, poverty reduction strategy papers, sectoral strategies and project documents in climate-sensitive sectors indicates that little or no attention is paid to environment and climate change, and even, being forced by the IFIs and Multinational Trade Giants, we take many development program which are unsustainable and nature devastating. SAARC county leaders should 'SAY NO' to nature devastating projects of IFIs and Multinationals.
- Research Information Sharing:** Climate change is a global societal and political problem and rich countries are largely responsible for this. Hence, international community should support global, regional and national research and information systems on risk, inter alia by helping developing-country governments build adequate monitoring and dissemination programmes at the national level.
- Resource and Technical Assistance for Adaptation and Capacity Building:** The threat to sustainable development caused by climate change and natural hazards is significant and growing. While countries of big economies are delaying in the implementation of Kyoto Protocol, which would mitigate climate impacts in the longer term, hence, adaptation is the only way to cope with the inevitable effects of climate change over the next few decades. The capability of a country to adapt depends on its ability to monitor climate and financing on the alternative measures. As the Developing economies are particularly vulnerable and more prone to natural hazards, so they should be supported with adequate resources and technologies.
- Development of a Regional Climate Research and Monitoring Centre in SA Countries:** The government of the South Asian Countries should establish a regional Climate Research Centre with adequate monitoring and dissemination programmes both at regional and national level. This must be accompanied by institution-building to develop the national capability to transform climate data into useful information that enables governments to include climate change in economic development programmes. Collaboration between a wide-range of stakeholders is also needed to strengthen coordination between government ministries and between government, non-governmental organizations, the private sector and academia to understand and respond to the implications of climate change on disaster risk and development.
- Subsidy for Climate Friendly Agriculture System:** The level of agricultural subsidies should be linked to the adoption of environment friendly agriculture system and land use policies. Subsidies for high input/ chemical based farming must be stopped.
- Common Stock Market for South Asian Carbon Trading:** South Asian countries should develop a common strategy for strengthen their effective involvement in Carbon Trading. In this regard they could seek possibilities for the establishment of a 'Asian Carbon Stock Exchange'