

Corporate Response to Climate Change

Dr. S.Z. Qasim

[Former Secretary, Government of India,
Department of Environment & Department of
Ocean Development & Chairman,
World Environment Foundation &
Centre for Environmental Studies]

Most of the scientists and environmentalists throughout the world agree that the “planet earth” is going through a serious crisis because of climate change created by global warming. This is caused by gases such as carbon dioxide (CO₂), methane, nitrous oxide etc. released in the atmosphere. Of these, CO₂ is the major gas which is generated because of excessive burning of fossil fuels like hydrocarbons (solid, liquid and gaseous). The concentration of CO₂ in the atmosphere has been going on since centuries and it has reached 379 p.p.m. in 2005. This is the highest in the U.S. in 6,50,000 years because the pre-industrial value of CO₂ was 280 p.p.m.

The rise in the overall global temperature is expected to be 5°C by the end of this century. This would create many ecological hazards. For example, by the middle of this century, 25% of the existing fauna and flora would become extinct. Greatest crisis would occur in marine fauna because warmer ocean would lead to bleaching of coral reefs and shell dissolution of shelled marine animals like mussels, limpets, snails etc. There is a serious danger of the Himalayan glacier melting away. This would create floods in the rivers followed by droughts subsequently.

Some of the symptoms of climate change on which there is a broad agreement among most scientists are as follows:

- a) Frequent droughts and wildfire
- b) Floods and crop failures
- c) Destruction of climate-sensitive species
- d) Frequency of Hurricanes like Katrina
- e) North India being denied of its proper winter

Corporate Response

Since 1750, human activities have played havoc by overloading the atmosphere with CO₂. This will result in average rise of global sea levels. The rise at the end of the year 2100 is expected to be more than one metre. This will lead to inundation and submergence of many low-lying areas of several countries and island states. By the middle of this century (2050), the forecast is that, because of dryness, the per capita availability of water will get reduced by 30%. The fall in wheat production in India would be 17% even if the temperature rise is 0.5 – 1.0 degree Celsius.

Corporate response to combat climate change will call for a change in life style of people. A greater use of solar devices should be made to heat water. Instead of ordinary bulbs for lighting the houses, Compact Fluorescent Lamps (CFL) should be used because ordinary bulbs convert only 5% energy to produce light, the rest is generated as heat. It has been suggested that multi-storeyed buildings should be constructed which will have insulation to retain

heat during winter and opening of windows in the direction of wind to allow circulation of air-flow to replace air-conditioning during summer. These are called 'green buildings'. Computers and all electrical gadgets should be turned off when not in use. Similarly, the use of cars for short distances should be avoided and air travel should be reduced if the work could be done by the use of telephone or e-mail. A change over to wind and solar power (renewable) would be very necessary in place of conventional energy generation which requires fossil fuel. In India, one company "Suzlon", alone earned \$1.5 billion in wind turbine revenue in the year 2006.

Between 1990 and 2004, energy consumption rose 37% in India and 53% in China. The per capita emission of CO₂ is about 21.75 tons in the U.S. whereas in China it is 4.03 tons and in India it is 1.12 tons. The use of paper should be cut down because, alternatively, the use of e-mail and telephone can save thousands of trees. Public transport should be made use of as far as possible. In fact, Singapore has shown the way where the use of private cars has been significantly reduced in favour of public transport. Power-generating plants based on fossil fuel must modify their technologies to reduce the emission of CO₂ drastically. Similarly, all industries must demand clean technology instead of what is being used at present. Developed countries should sell clean technology to developing countries at a cheaper rate.

Emission of CO₂

The annual per capita emission of CO₂ in different regions of the world is as follows:

		(Metric Tons)
U.S.A.	–	15.7
Central and South America	–	2.3
Africa	–	1.1
Europe	–	7.9
Middle East	–	6.8
Eurasia	–	8.6
Asia and Oceania (China, Japan, India)	–	2.6

The sources of CO₂ emission in the U.S. have been worked out. These are: transportation – 33%; industry – 28%; homes – 21%; business – 17%.

Many countries of the world are switching over to bio-fuel such as ethanol made from corn or sugarcane. Many experts believe that, “Just as the climate has changed due to human activity, humans have the power and technology to reverse the damage”. For doing this, new technologies are being introduced in the future, which will hopefully be fruitful.

India's Role to Control CO₂ emission

In this context, it is necessary to point out the initiatives taken by India for promotion of renewable energy, to reduce CO₂ emission. The information can be summarized as follows:

	(MW)
Total installed power capacity in India –	1,32,110.21
Total renewable power –	10, 251.68
Per cent of renewable power to total power –	7.75%

*Total installed wind power capacity in the
as on 31.12.2006 :*

	(MW)
World –	73,904
Germany –	20,622
Spain –	11,615
U.S.A. –	11,603
India –	6,270

India stands 4th in the world.

India's achievement on renewable energy technologies as on 31.03.2007 are as under:

Biogas plants (nos.)	–	3.9 million
Solar photovoltaic with the composition as under:	–	75 MW
a) Street lights	–	61,321
b) Home lighting systems	–	3,13,859
c) Lanterns	–	5,65,658
d) Power plants	–	1.87 MW
e) Solar water heating	–	1.65 million sq.m.
f) Wind power	–	7092.00 MW
g) Small hydro	–	1975.60 MW
h) Biomass power	–	524.80 MW
i) Bagasse (left over of sugarcane after the extraction of juice) used for power production	–	615.83 MW
j) Energy from waste material	–	43.45 MW

Different sites for wind farms can be seen at Chitradurga and at Sogi in Karnataka, at several places in Tamil Nadu, Rajasthan and at Satara in Maharashtra.

Many more are coming up at places where wind conditions are favourable. At Kiltan Island in Lakshadweep, a 100 KW solar power plant provides energy needs for the entire island

Kyoto Protocol

The first collective attempt to cut down CO₂ emission was made at Kyoto in Japan in 1997. In this meeting, it was agreed that the industrialized nations would cut down their emission containing CO₂ that is warming the atmosphere, disrupting weather patterns and thus leading to climate change. The reduction would be about 5% relative to 1990, starting from 1998 through to 2012 level. The United States did not sign this protocol. The countries included were G-8 namely U.S., Canada, U.K., France, Germany, Italy, Japan and Russia. Five developing countries, namely, India, China, South Africa, Brazil and Mexico also participated in the Kyoto meeting. Another meeting of all the countries, which participated at Kyoto, was held in June 2007 in Germany in which the U.S. did not participate. Formal talks on post-2012 agreement on climate change are due to begin in Bali in December 2007. Since there is far too much money involved in significant reduction in CO₂ emission, it is unlikely that all the G-8 countries would agree.

Nobel Peace Prize on Climate Change

The 2007 Nobel Prize for Peace was awarded to Al Gore – the former Vice-President of the United States. It was announced on 12th October 2007 that it has been shared with the United Nation's

Intergovernmental Panel on Climate Change (IPCC), which is headed by Dr. R.K. Pachauri from India. The Nobel will provide a major boost to the international campaign for action against global warming. The award is a great recognition to Al Gore who has been one of the greatest campaigners against the climate change. His documentary film entitled “*An Inconvenient Truth*” has won an Oscar in 2007. This was also on “Climate Change”.

The Nobel Committee cited the recipients for their work as “to build up and disseminate greater knowledge about man-made climate change and to lay the foundation for measures that are needed to counteract such changes”.

Reacting to the honour, Al Gore said: “*Change is possible. We know that, and we can alter our relationship with the world around us to create a sustainable future... The environment is much more than a policy position to me; it is a profoundly moral obligation. We only have one Earth. And if we do not keep it healthy and safe, every other gift we leave our children will be meaningless*”.

Pachauri’s reaction was “*It is a positive development also because the prize today has brought climate on everyone’s radar. The key findings of IPCC will get more attention. It will prompt governments to take decisions.*”

Thank you