

Global warming: Its impact on India*

Melting of Himalayas, flooding of rivers as in Bihar this year, tsunamis and cyclones are all natural calamities resulting out of climate change and global warming brought on indirectly by human beings. Unrestricted use of fossil fuels emits carbon dioxide, which the natural sinks in the bio-chemical cycle cannot fully absorb. This is because the existing sinks like forests and oceans are inadequate. This increases the concentration of carbon dioxide in the atmosphere, causing a greenhouse effect, leading to global warming.

In order to jointly develop a strategy and a statutory back-up plan for minimizing global warming; individual and institutional, a half-day meet was organized. Johnny Joseph (Indian Institute of Public Administration (IIPA), Maharashtra Regional Branch) welcomed and introduced the guests.

Suresh Prabhu (former Union Minister) in his key-note address gave an overview of the impact of climate change and global warming and ways to reduce the impact. According to the skeptics, this has been happening all the time. There was Ice age or presence of dinosaurs, which have long gone. Prabhu blamed the industrial revolution as one of the starting points of climate change. He said that ecosystem is like a human body, as it influences the entire planet. The carbon dioxide emission earlier was 280 ppm; today it has increased to 379 ppm. The temperatures are rising, making the glaciers melt and retreat. Sea levels have increased, more and more floods and draughts are expected.

In India, mentioned Prabhu, agriculture is the first casualty of climate change. For instance, the production of wheat and rice will get affected. The second most important challenge is water sector, as by 2050, the Indian population will go up to

1.6–1.8 billion. Fishermen, people living around coastal region, tourism will all be in jeopardy. Public health will be the worst hit.

To reduce the impact of climate change there can be two approaches: one is mitigation and the second is adaptation to climate change. Mitigation efforts attempt to prevent hazards from developing into disasters altogether, or reduce the effects of disasters when they occur. At present, said Prabhu, 62–63% of electricity is generated using fossil fuels and coal. It is important therefore to move away from coal and instead generate renewable energy using other sources such as solar energy, wind energy, etc. Migration of coastal population, increasing public transportation and forestry are the main adaptations that India can opt for. As accepted by the State Government of Maharashtra, one third or 33% of land needs to be covered with forests. At present, however, forest land is only around 20%; so the challenge here is to find more land, which can then be converted into forests. Today, the forests present are covering only 12% of land.

Prabhu stressed on the preparation of an action plan, where the problem is tackled district by district, make a disaster management plan and create awareness amongst people to adapt to climate change. The main use of carbon-derived energy in the US and Europe is in buildings – heating systems and for private transport. Interestingly, China's emissions are far more than US because of coal use. But both China and India need that energy in industrial production, which is vital to their growth.

In 1996, the landmark Kyoto protocol was signed to deal with global warming and climate change globally, which did not include the developing countries, China and India. Kyoto could not achieve the level of greenhouse gas reductions, which the majority of climate scientists believed was necessary. After the United Nations conference on climate change in Bali last December and in the run-up to its successor in Copenhagen to be held next year, countries are gearing up for

the second phase of the Kyoto Protocol on greenhouse gases after 2012.

Following the key-note address, a film on global warming entitled *The Inconvenient Truth* by Paramount Classics and Participant Productions was screened. It reflects an inspirational look at man's fervent crusade to halt the deadly progress of global warming by exposing the myths and misconceptions that surround it.

This was followed by a panel discussion. Rajeev raised several issues and aspects of adapting to climate change and global warming. As a nation, since India does not contribute much to global warming, mitigation needs to be shared, opined Gokhale. Also, as compared to mitigation, until now adaptation has received much less attention.

According to Kumar, climate change will affect the health status of people in India. Earlier, WHO reported a three-month window period of malaria high for cold states but today the same has increased to nine months, merely because of half a degree rise in the temperature. To control the disease pattern, Rs 12,000 crores have been given as adaptation funds. Reduction of energy usage is the answer to this problem, according to Kumar.

Kalia said that the private sectors command and control the mechanism of carbon footprint of activity. The amount of carbon dioxide each day can be reduced using personal, societal and industrial targets. Emphasis on individual contribution was made by Deshpande using several adaptation measures such as storage of rain water, harvesting water by farmers, sprinkler irrigation, conserving domestic water, using solar energy for traffic lights and street lights, making use of public transports, car pooling, etc.

*A report of the Annual Meeting on 'Global warming: Its impact on India' organized by the Indian Institute of Public Administration (IIPA), Maharashtra Regional Branch held at Mantralaya Annexe, Mumbai on 6 September 2008.

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