A Future Agenda for the State Failures in Combating Environmental Degradation

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Modern societies are absolutely within the realm of State System and some call it as ‘Statist’ wherein every action of people is controlled by the action of the State. It is true that many Welfare States in modern world has a tendency to become absolute State by rejecting the external governance by international agencies and transnational organization in order to go by the classical definition of sovereignty. Global issues today change the course of State action and its meaning. There are debates like dilution of State sovereignty in the context of globalization. Understandably, the global problems need global solutions and the issue that has been taken up in this paper, indeed, needs global direction on every State to combat environmental degradation. In our college syllabus we were directed by Supreme Court orders that the Board of Studies must follow the instructions provided by them for the inclusion of environmental studies as compulsory paper for all disciplines. India has been making all efforts in fulfilling the international obligation for the protection of the environment. However, the quest for globalization some time over runs the need for environmental protection. In my paper more example being quoted from the Indian experiences of environmental issues.

The World environmental system is in danger and many political scientists are of the view that it can be protected by redefining State sovereignty. It is a far realm dream of establishing World governance today. Organized international responses to shared environmental problems will occur only through cooperation among states, not through the imposition of a supranational authority over them. Through international organization we have solved problems like cholera eradication, slave trade and nuclear testing on the earth surface. The focus here is on institutions that consist of organizations and constellations of organizations. Activities for which the rates of anthropogenic releases of pollutants to the environment have decelerated since 1955--for example, sulfur, lead, and carbon tetrachloride emissions--are also areas for which international environmental institutions were developed and applied.

For instance, in Vellore, the leather industries has been mushroomed after 1990s because of the demand for leather goods and the state government never cared the much needed treatment of the effluents from the industries which led to degradation of the river water system and as a result many agricultural activities came to a stand still and agricultural laborers migrated to near by towns in search new employment. It is only after the famous

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case Vellore Citizens Forum Vs Leather Industries, the court has given direction for the compulsion of effluent treatment system and the polluters must pay for the damages principle. India’s environment is in fact in a state of severe decline. While our natural resources take a beating, the institutions and agencies that are supposed to safeguard them, including the Union Ministry of Environment and Forests, are not taking effective steps for combating environmental degradation.

In the last three to four years the Ministry of Environment and Forests (MoEF) under its previous Minister and Secretary, has presided over the dilution of a number of crucial environmental regulations. The notification on Environmental Impact Assessment, designed to make development projects ecologically sensitive, has been “re-engineered” to make it easier for industry to get licences. The Coastal Regulation Zone notification, which has helped save many of the coastal ecosystems on which depend the lives of a third of our population, is being changed to provide commercial activities much easier access. Many institutions set up to involve citizens in ensuring sustainability in development, such as Ecologically Sensitive Area committees, are proposed to be dismantled.

The Ministry of Forest and Environment (MoEF) has made a mockery of participatory processes. Expert committees set up to provide independent advice on development projects are become weak. An analysis in 2004 revealed that there were only two wildlife experts and one non-governmental organisation amongst 64 members of six expert committees. Consultations for the formulation of the National Environment Policy and the remaking of the EIA notification were mostly held with government agencies and corporate houses, with a few token NGOs being called in as a greenwash. A nationwide participatory process to produce a national biodiversity action plan, earlier facilitated by the MoEF itself, was unceremoniously dumped. Of course, the MoEF itself was being sidelined by a government intent on catching up with a double-digit growth rate.

One major criticism of this paper is the Government of India, in its pursuit for speedy economic growth has withdrawn its early commitment for environmental protection directed by many international conventions.

In this paper, there are three important divisions. The division provides a more scientific like explanation to understand the seriousness of global warming and its both general and specific impact on India. In the second division mainly focuses on the kinds of action needed for future India. The last division shall make concluding observations.

Global Warming has attained a phenomenal proportion today and there is a need to take serious efforts in further destruction of the environment. Most climate scientists agree that climate change induced by human activity is occurring and that further change is inevitable. This poses a challenge to both the global environment and economic development. Recent studies indicate that human actions in the last 100 years have triggered an unprecedented rise in global surface temperatures and ocean levels, with a worrisome acceleration particularly over the last two decades. The consequences of these changes will affect billions of people, particularly in poor countries and in subtropical
regions, leading to water shortages and decreases in agricultural productivity. Another serious risk is a rise in mortality rates due to heat stress and increased range of waterborne diseases. Beyond these effects, if the global climate is pushed far out of balance, it may become launched on an irreversible course toward catastrophe, with worldwide repercussions. In this paper, the consequences of global warming in general and with particular reference to India are highlighted.

The greenhouse gases act like a blanket around the Earth, trapping too much of the heat that would otherwise have escaped into space. If the Earth warmed further by more than one degree C, it would be warmer than it has been in a million years. James Hansen, a doyen of the science of climate change, recently warned that if carbon dioxide emissions from fossil fuels continue rising at about two per cent a year (as in the past decade), the additional warming would be two to three degrees C this century, implying changes that would mean practically a different planet. Global warming is likely to trigger disastrous changes in rainfall and snowfall patterns. More violent storms, floods, and droughts could occur. Melting polar icecaps would raise sea-levels and inundate vast areas. Already, there are indications that glaciers in the mountains of all continents, which feed many important rivers, are receding.

An unprecedented rise in the amount of carbon dioxide in the atmosphere in the last two years has raised fears that the world may be on a brink of global warming, according to a prominent scientist. Between 2001 and 2002 the number of parts per million of carbon dioxide rose from 371.02 to 373.10, an increase of 2.08 over the year. Then it rose again in 2003 to 375.64 and increase of 2.54, according to scientists. Climate change will seriously threaten regional human security and national economies this century, according to a report by the Australian government's Commonwealth Scientific and Research Organization (CSIRO).

International efforts to address this problem have been ongoing for the last decade, with the Earth Summit at Rio in 1992 as an important launching point, and the Conference of Parties in Buenos Aires in 1998 as the most recent step. Although India as a developing country does not have any commitments or responsibilities at present for reducing the emissions of greenhouse gases such as CO2 that lead to global warming, pressure is increasing on India and other large, rapidly developing countries such as China and Brazil to adopt a more pro-active role.

**What is climate change?**

Climate change is a newcomer to the international political and environmental agenda, having emerged as a major policy issue only in the late 1980s and thereafter. But scientists have been working on the subject for decades. They have known since the 19th century that carbon dioxide (CO2) in the atmosphere is a ‘greenhouse gases, that is, its presence in the atmosphere helps to retain the incoming heat energy from the sun, thereby increasing the earth’s surface temperature. Of course, CO2 is only one of several such
greenhouse gases in the atmosphere. Others include methane, nitrous oxide and water vapor. However, CO2 is the most important greenhouse gas that is being affected by human activities.

The concentration of CO2 in the earth’s atmosphere was about 280 parts per million by volume (ppmv) in 1750, before the Industrial Revolution began. By 1994 it was 358 ppmv and rising by about 1.5 ppmv per year. If emissions continue at the 1994 rate, the concentration will be around 500 ppmv, nearly double the pre-industrial level, by the end of the 21st century.4

The concentrations of other greenhouse gases such as methane and nitrous oxide have also been rising at a fairly rapid rate. The effect is that the atmosphere retains more of the sun’s heat, warming the earth’s surface. Of course, not all man-made additions to the atmosphere increase warming. For example, aerosols, tiny particles of solid or liquid suspended in the air, which result from the emissions of soot and sulphur dioxide from power plants tend to reflect heat and diminish warming. But aerosols are mostly short-lived while the CO2 released into the atmosphere will stay there for decades.

At the same time, concern about local air quality is driving many countries to impose stringent controls on emissions of substances such as sulphur dioxide. As a result, many scientists feel that even as these emissions decrease in the future, the full effect of the greenhouse gases will be unmasked, leading to an even more rapid warming pattern.

While the pattern of future warming is open to debate, it is indisputable that the surface of the earth has warmed, on average, 0.3 to 0.6 degrees Celsius since the late 19th century when reliable temperature measurements began. Recent decades appear to be the warmest since at least 1400, according to the fragmentary information available.5

Unlike many other environmental issues, such as local air or water pollution, or even stratospheric ozone depletion caused by chlorofluorocarbons (CFCs), global warming poses special challenges due to the spatial and temporal extent of the problem – covering the globe and with decades to century’s time scales. Again, in this particular issue, science has played, and continues to play, a critical role in defining the structure and basis of the debate. The following three dimensions of the issue illustrate the vexing features of the science underlying the problem:

4 For example, over 700 billion tons of CO2 cycle annually through the biosphere. The anthropogenic contribution in this cycle is around 24 billion tons. Though the natural cycles are finely balanced, this is still a significant perturbation as it leads to an accumulation of CO2 in the atmosphere.

i) Cumulative effect of the historical emissions. The climate system acts as a large integrator, that is, the response of the system is a result of the entire history of the forcing being applied.

ii) Lags in the system. The response of the ocean-atmosphere system occurs several decades to centuries after the changes in the atmospheric greenhouse gas concentrations. As a result, even if emissions of greenhouse gases were stabilized immediately, it would take many years for the climate system to reach a new quasi-steady state, and some changes (such as sea level rise) would continue to happen.

iii) The actual consequences of climate change are likely to exhibit considerable spatial and temporal variability – thus some regions may actually experience a transition to a milder, warmer, wetter, and overall better climate regime. As a result, there are costs as well as benefits associated with climate change; although the scientific consensus is clearly that the overall effects are likely to pose a significant burden.

International political implications have proven significant. By far the majority of greenhouse gases are emitted by sources in industrial and transportation sectors (especially automobiles) that are concentrated in developed countries. These countries have shown concern not only about their own emissions, but about increased emissions from poorer countries as they expand their economies. Friction has been evident in the debates over which actions by developed and developing countries should be undertaken, on what schedules, and which parties should pay incremental costs for mitigation measures. Developing countries generally have argued that the financial burden of change should be borne by developed countries, which are mainly responsible for current atmospheric change due to human activity.

**Impacts for India**

**Coastal Area**

A major consequence of global warming is a rise in the sea level. This happens mainly because of thermal expansion of water as its temperature increases. Already the average sea level has risen by about 10-15 cm since the middle of the 19\textsuperscript{th} century. The coastal areas of India will face intrusion of sea water, particularly in the eastern coastline affecting the livelihood of fishing community and other commercial activities. A one meter rise of sea level will inundate up to 5000 Sq.km in India, displacing many coastal line dwellers. The sea water intrusion will also affect drinking water making it more salty and not potable. The impact of the temperature increase on water resources is perhaps the most important connection with sustainable development. The state like Tamil Nadu can face increased frequency of coastal storm, higher mean temperature, more frequent drought and sudden flash flood.

**Indian River System**
An impact assessment on the hydrology of Indian River systems suggests that conditions may deteriorate in terms of severity of droughts in some parts of the country and enhances intensity of floods in some parts of the country. There would be an overall reduction in the quantity of the available runoff. Kutch and Saurashtra which occupies about one-fourth of the area of Gujarat and 60 percent of Rajasthan would face acute water scarcity. The river basin of Mahi, Pennar, Sabarmathi and Tapi would also face water shortage conditions. River basin belonging to Cauvery, Ganga, Narmada and Krishna would experience seasonal or regular water-stressed conditions. While river basins belonging to Godavari, Brahmani and Mahanadi would not have water shortages but are predicted to face severe flood conditions.

Himalayan Glaciers
The retreat of Himalayan glaciers attributable in part to global warming will have a profound impact on the hydrology of India Rivers. Sixty seven percent of Himalayan glaciers are retreating at a starting rate. Accelerated melting of glaciers will cause an increase in river levels over the few decades, initially leading to higher incidence of flooding and landslides. But, in the longer period, such flooding will be reduced and it will affect the livelihood of 500 million people and 37 percent of Indian irrigation land.

Agricultural Productivity
The impact of change in the precipitation and the river water regimes on agricultural productivity will depend on the counter influence of higher carbon dioxide on the plant growth. Crop productivity is projected to increase slightly at mid- to high latitudes for local mean temperature increase of 1-3 C depending on the crop and then decrease beyond that in some region. At lower latitudes, particularly seasonally dry and tropical regions, crop productivity is projected to decrease for even small local temperature increases, (1-2C) which would increase risk of hunger. Due to slight temperature rise, India will face a shortage of 30 percent food production in the next decade.

Natural Ecosystem
Further, the change in temperature and precipitation will also affect natural ecosystem. Coral deposits under the sea will be affected because of the increase of temperature of the sea water. The sea plants and other species would likely to adjust with changing condition. However, the change cannot happen in a faster pace and therefore the sea life faces a serious risk of total destruction. There will be imbalances of the ecosystem and cause a serious of negative chain reactions.

Human Health
There is growing evidence that change in the global environment will have profound effect on the human health in India. Climate change will reduce food production which may lead to hunger and malnutrition. Global warming and the consequent change in climate also affects the incidence of disease quite directly as it affects the breeding
environment of disease vectors. In India, the rise in temperature is expected to make malaria endemic throughout the area in a much larger area than at present.

International Pressure

For India, the climate change issue has several ramifications: First, although India does not currently have any obligations under the Convention to reduce its greenhouse gas emissions, international pressure will keep increasing in this regard. It is therefore important for us to develop a clear understanding of our emission inventory. We also need to document and analyze our efforts in areas such as renewable energy, wasteland development and afforestation – all of which contribute towards either reducing CO2 emissions or increasing CO2 removal from the atmosphere. Considering that these efforts may often be undertaken for a variety of reasons not directly related to global warming, but yet have benefits as far as climate change is concerned, we may be able to leverage such efforts in the international context.

Second, we need to develop a clear and well articulated position on each of the three basic questions indicated earlier. This position needs to be supported by appropriate analysis. The Indian research community could contribute substantially in this regard.

Finally, we need to recognize that even if countries do undertake immediate and rapid action to reduce their emissions, some degree of climate change is inevitable. If we consider the fact that we have very limited abilities to deal with weather extremes in the present day, the situation may get worse in the future. Therefore, we need to significantly improve our ability to plan and adapt to extreme events such as floods, droughts, cyclones and other meteorological hazards. Any robustness that we build into the system in this regard will always stand us in good stead, no matter what climate change actually transpires.

Agendas for Future

India’s environment is in fact in a state of severe decline. While our natural resources take a beating, the institutions and agencies that are supposed to safeguard them, including the Union Ministry of Environment and Forests, are not taking effective steps for combating environmental degradation.

Continued exploitation of natural resources for increasing economic growth brought with it associated environmental and social problems. However, these problems were not addressed by the government until 1971, when the Planning Commission wrote a report on the state of India's environment in preparation for a 1972 United Nations Conference on the Human Environment. It was only after India signed the resulting declaration from this U.N. conference did the government take any serious action addressing environmental issues in developmental planning. Subsequently, a National Committee on Environmental Planning and Coordination (NCEPC) was formed in 1972 to act as an apex advisory body in all the matters relating to environmental protection and improvement. The Fifth Five year plan (1974-79) stated that the NCEPC should be
involved in all major industrial decisions, so that development can be balanced with environmental management.

In India, the central government has claimed sole jurisdiction over environmental matters based on the fact that environmental rules were derived from international obligations, as India was a signatory to the 1972 U.N. declaration. The 1976 42nd amendment to the Indian Constitution moved the subjects of "forests" and "protection of wild animals and birds" from the State List to the Concurrent List. It was under these legal bases that the Air Act of 1981 and the Environment Protection Act of 1986 were enacted with no public debate or state role.

The Sethusamudram Ship Canal Project (SSCP), which is bound to change the face of regional shipping and affect the lives of thousands of fishermen, should not be put through without an informed and many-sided debate is a rule of developmental prudence. For whatever reason, politicians and the Government seem to be in a great rush to execute a project that was conceived not less than 144 years ago. There may be unanimity among political parties in Tamil Nadu on the need for the SSCP; and a sense of righteous indignation that it has taken so long for the Centre to clear it. But that does not justify the way in which the public hearings are being handled in the coastal districts, and opposition to the project is being dealt with. There may be a host of advantages flowing from the SSCP for the State, yet the centrality of the social and environmental concerns is undeniable.

Concluding Observations

Thus there is an urgent need to develop an effective approach to adapting to a world in which a changing climate is affecting livelihoods, especially of the poor. For that a global framework is needed, one that matches long-term global development needs with the necessary technical innovation and with the financial tools that will support consistent progress toward a low-carbon global economy.


The Convention has few binding requirements. It calls for nations to limit carbon dioxide and other greenhouse emissions, by ‘addressing anthropogenic emissions by sources and removals through sinks of greenhouse gases….’ It does not set out specific targets or timetables for reducing emissions. It only requires the developed country signatories to formulate and adopt policies that aim at stabilizing greenhouse gas emissions at 1990 emission levels, recognizing that ‘the return by the end of the present decade to earlier levels of anthropogenic emissions… would contribute to… modifying longer term trends in anthropogenic emissions consistent with the objective of the Convention… to
achieve... stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.’

The Convention adopted the notion of common but differentiated responsibility, recognizing that the global climate was a common resource and responsibility, but that there were clear asymmetries between the developed and the developing countries in terms of both the past and present contributions to the problem as well as the resources to respond to it. That is, the developed countries are, by far the largest emitters of CO2 and other greenhouse gases. At the same time, they also have the technical and financial resources to try and reduce their emissions. Two broad groupings of countries emerged after the Convention, the countries listed in Annex-1 of the Convention, or the developed countries, and the others. Countries such as Russia or Ukraine (parts of the former Soviet Union) although a part of the Annex-1 countries are placed in a special category as Economies in Transition.

This process resulted in the negotiation of a protocol, the final details of which were completed at the third meeting of the Conference of the Parties to the Framework Convention held 1-12 December 1997, in Kyoto, Japan. The Kyoto Protocol to the United Nations Framework Convention on Climate Change commits industrialized nations to specific, legally binding emission reduction targets for six greenhouse gases: carbon dioxide, methane, nitrous oxide, hydro fluorocarbons, perfluorinated compounds, and sulfur hexafluoride. The protocol was opened for signatures on 16 March 1998.

There is a need to change life style and consumption pattern to develop and developing country to combat global warming impacts. World community should generate political consensus to mitigate greenhouse gases. Climate change and global warming is no more an environmental issue but it is related to global security and survival. India must adopt new energy efficient technologies to reduce CO2 level. We should give emphasis to use renewable source of energy like, wind, solar, biomass, and ocean geothermal energy. A coordinated action plan by the government, community and individuals could combat global warming.

References

