

DEALING WITH CLIMATE CHANGE

SETTING A GLOBAL AGENDA FOR
MITIGATION AND ADAPTATION

Edited by
R K Pachauri



The Energy and Resources Institute

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Foreword

How did we get here and where do we need to go?

The habitability of the earth depends on the greenhouse gases that blanket our planet and ensure that it is not a cold rock but a warm and variable surface that can sustain life based on photosynthesis. The changes in climate, brought about, until modern times, mainly by natural causes like changes in the earth's orbit around the sun, variations in solar and volcanic activity, have also been a factor in the continuous variability of ecosystems that has stimulated the evolutionary development of life. Hence the source of our concern is neither the greenhouse effect nor the variability of climate. It is the evidence of human impact, the pace of change, and the capacity of human systems to adapt.

The risks of climate change that now confront us are largely of our own making. Moreover, the pace and extent of change now predicted by scientists exceed anything that human societies have had to cope with in the past. These risks are not a threat to the earth as such. They are a threat to us humans and to other species. If we fail to prevent runaway climate change, the earth will not disappear. We will.

The human impact on climate has been known since 1896, when the Swedish scientist Arrhenius put some numbers to a theory first propounded by Joseph Fourier in 1824. But a serious policy discussion first emerged in international discussions at the First World Climate Conference in 1979. Initially the international response focused on cooperative scientific work, a strand of activity that gathered pace with the establishment of the Intergovernmental Panel on Climate Change (IPCC) in 1988. In parallel, a policy dialogue began at the Second World Climate Conference held in Geneva in November 1990, when the Rio Earth Summit was in the early stages of preparation.

The scientific consensus on the magnitude of change which could be expected, the links with human impact, and the overall impact on ecosystems took time to evolve. In fact, a definitive statement that observed that likely changes were due to human actions and were, therefore, controllable by modifying these actions did not come till the *Third Assessment Report* issued in 2001. The same was asserted forcefully only in the *Fourth Assessment Report* issued in 2007, produced by the IPCC under the chairmanship of Dr R K Pachauri.

The political pressure for action pre-dates the scientific consensus. It came from some developing countries that were going to be severely affected by the one impact that was clear—the rise in the sea level. The then Presidents of Bangladesh and the Maldives raised the issue at the Commonwealth Summit of 1988 and later, at the United Nations. A Commonwealth Expert Group (of which I was a member) was set up and helped to mobilize concern and support for a global process at the governmental level. The growing concern of climate scientists and lobbying by vocal environmental groups led to a commitment to negotiate a framework convention to be ready for signature before the Rio Summit in June 1992.

The Rio Earth Summit and the Climate Convention were both launched during that narrow window of opportunity, when the Cold War was at an end, multilateralism was in the ascendant, with the successful UN sanctioned action in 1991 to undo Iraq's invasion of Kuwait; South Africa was being liberated from apartheid; and the Oslo process was under way, leading to an agreement in 1993 between the Palestine Liberation Organization (PLO) and Israel. As one involved in managing the diplomatic process for Rio, I can say that there were few spillovers from other areas of conflict into the Rio or the climate negotiating process. The main spillover was from North-South tensions on trade and aid, which affected the Rio process more than the climate negotiations.

The Convention that was opened for signature at Rio was merely a framework that did not impose any binding obligations of emission reductions on the parties. But it did enunciate some aspirations and basic principles like 'common but differentiated responsibility'. The attitude of the United States was a critical factor in limiting the scope of the agreement. The US, which hosted the first negotiating meeting for the Climate Convention, was, at this time, under the Bush administration, heavily influenced by skeptics like John Sununu,

the then White House Chief of Staff, and by powerful oil industry interests.

The main demand for strong action came from small island countries for the very understandable reason that they were singularly vulnerable to the consequences of global warming with some support from Western Europe, where a combination of North Sea gas and nuclear power facilitated low-carbon growth. The pressure built up, and soon after the Convention entered into force in March 1994, the process of developing a binding protocol began, culminating in the Kyoto Protocol in which the industrial countries accepted binding obligations on emission reductions by 2008–12 with some innovative flexibility mechanisms. In an indirect way, developing countries were brought into the mitigation effort by the Clean Development Mechanism (CDM), which evolved from a Brazilian proposal and allowed industrial countries to fulfil their obligations by undertaking emission reducing activities in developing countries.

In some ways, Kyoto was an experiment rather than a fully worked out mitigation plan. The numbers negotiated there for emissions reduction were not based on any assessment of the magnitude of mitigation required. Nor was the distribution of mitigation effort between the industrial countries based on any assessment of past liability or current ability. The targets set were more or less arbitrary. As one who observed the process from the management end, I believe that certain targets were accepted, even when they seemed out of sync with others, to ensure acceptance by holdouts who played hardball. .

Kyoto was a bazaar bargain, and even this remained incomplete when, with the election of a new administration, the US backtracked on its commitment. As I have stated elsewhere: ‘In terms of the classical narrative of the tragedy of the commons, what happened in the climate negotiations was that there was a general agreement that there are too many cows in the field. Then, instead of working out how many there should be, the agreement was that those of us who have the largest herds will withdraw some cows. Of course, the biggest cattle owner has simply refused to go along, saying that he will teach his cows to behave better.’

The Kyoto Protocol came into force on 16 February 2005, more than seven years after it was adopted, which is an indication of how much foot-dragging there was once the US dropped out of the agreement. The actual performance by most of those who did ratify

has been significantly short of what they had promised, and this has called into question the usefulness of a process where multilaterally agreed upon caps on emissions are laboriously negotiated. But the cap on emissions is essential if cross-border trade in carbon emission credits is to be promoted. Carbon trading matters because it creates a market for carbon efficiency and instills carbon consciousness at the point where it really matters—in the investment and production decisions of enterprises. The purchase of carbon emission credits from developing country partners in the CDM and the trading of emission allowances between industrial country parties subject to caps have helped to promote greater carbon efficiency at the margin.

The end of the first period of the Kyoto Protocol meant that a negotiating process for the next phase of the protocol had to be launched. But this could not be done without bringing the US into the tent. Moreover, there were growing concerns about the rising emissions from China, India and other developing countries. This led to a two-track process in the Bali mandate, with one track dealing with the commitments under the Kyoto Protocol and the second track dealing with what was called Long Term Cooperation (LCA). The mandate for the LCA called for a long-term vision and a global goal for emissions reduction, though no specific target was stated and there was only a preambular reference to the need for deep cuts. The Annex I industrial countries were required to undertake commitments or actions that are ‘measurable, reportable and verifiable’; but there was some ambiguity on whether these have to be multilaterally agreed upon. Mitigation actions by developing countries were tied to the provision of finance and technology. The mandate also required agreements on a vaguely defined sectoral approach, on credits for deforestation avoided, on finance and technology transfer and, most importantly, for meeting the costs of adaptation that will be incurred by countries.

The Copenhagen process ran into difficulties because of incompatible expectations. Europe wanted that the legal form of its commitment and that of the US was similar. The US refused to join the Kyoto Protocol, the continuation of which is implicit in the Bali mandate, and wanted China and India to be put on the same legal basis and take on similar commitments. China and India, for their part, were firmly wedded to the United Nations Framework Convention on Climate Change (UNFCCC) principles, which in their

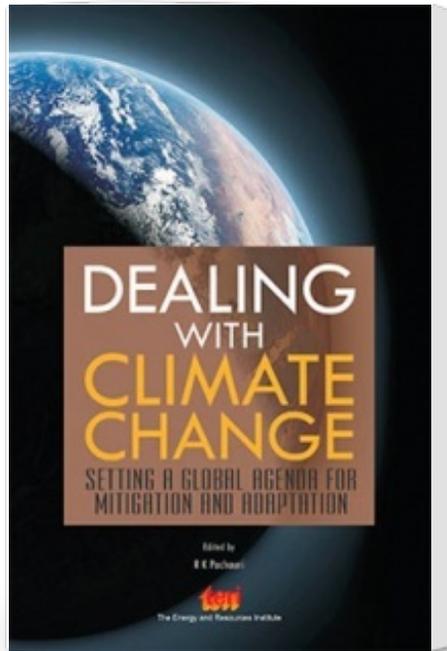
view did not require them to take on obligations comparable to those for the Annex I countries. At the same time, the demand for strong action from the vulnerable small island states and African countries became more insistent. The alarms rung by IPCC's *Fourth Assessment Report* became louder.

The actual outcome at Copenhagen is the outcome of these incompatible expectations. The Copenhagen Accord is a statement of intent, which still requires a further process of negotiation. The endgame at Copenhagen showed that a global agreement on climate depends on the willingness of two key players, USA and China, to offer significant concessions. The other larger players acquire some influence because one or the other of the big two needed their support. The people who were left out of the endgame altogether were the smaller countries, which include many of the most vulnerable ones. It may be premature to mourn the end of the multilateral climate process. But the fact is that the UNFCCC process is badly in need of repair. We must also recognize that much of the action on climate will now come as much from unilateral action by countries under public pressure and from bilateral and plurilateral agreements as from the UNFCCC process.

The contentious issue now is not the science, though there has been some criticism of the IPCC lately. The work of the IPCC, and more particularly its *Fourth Assessment Report*, has convinced most decision-makers that the time for action has come and that we can no longer say that we need to study the problem a little further before doing anything. The economic case for action has been made by the IPCC and the *Stern Review of the Economics of Climate Change*. The real challenge is the lack of agreement on how the principle of 'common but differentiated responsibility' should be implemented. In determining who should do what and when, what is the role of culpability as measured by past cumulative contributions, which determines the present risk of climate change? Should mitigation obligations be specified in terms of targets for annual emissions or on some principle of fair sharing of cumulative emissions in the decades to come? We do not have even the beginnings of a global consensus on this issue of burden sharing.

A global agreement on climate change may be a long time in coming. But the processes of climate change will not wait while we wrangle. Therefore, coping with the risks of climate change

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