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*Winter School on*  
Impact of Climate Change  
on Indian Marine Fisheries

*Lecture Notes*

Part 1

*Compiled and Edited by*

**E. Vivekanandan and J. Jayasankar**

Central Marine Fisheries Research Institute (CMFRI),  
(Indian Council of Agricultural Research)  
P.B. No. 1603, Cochin - 682 018, Kerala

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## ORGANIZATIONAL INITIATIVES FOR ADDRESSING CLIMATE CHANGE CHALLENGE



**Manjusha,U and Gopika, N**

*Central Marine Fisheries Research Institute, Cochin 682 018*

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### **Introduction**

Climate change, resulting from global warming, has been moving to the main stream administrative and political initiatives in the last two decades. To address humanity's biggest test, several organisations, institutions, panels, networks, universities and non-governmental organisations have turned the spotlight on the man made problem of climate change.

The following are the major international and national organisations addressing issues concerning climate change:

### **Intergovernmental Panel on Climate Change (IPCC)**

The IPCC is a scientific body tasked to evaluate the risk of climate change caused by human activity. The panel was established in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP), the two organizations of the United Nations. WMO and UNEP set up the IPCC Secretariat at WMO headquarters in Geneva. Rajendra Kumar Pachauri is an economist and environmental scientist who has served as the chair of the IPCC since 2002. The IPCC shared the 2007 Nobel Peace Prize with former Vice President of the United States, Mr. Al Gore.

The IPCC does not carry out research, nor does it monitor climate or related phenomena. One of the main activities of the IPCC is to publish special reports on topics relevant to the implementation of the UN Framework Convention on Climate Change (UNFCCC). The UNFCCC is an international treaty that acknowledges the possibility of harmful climate change; implementation of the UNFCCC led eventually to the Kyoto Protocol. The IPCC bases its assessment mainly on peer reviewed and published scientific literature. The IPCC is only open to member states of the WMO and UNEP. IPCC reports are widely cited in almost any debate related to climate change. National and international responses to climate change generally regard the UN climate panel as authoritative.

The summary reports (i.e. Summary for Policymakers), which draw the most media attention, include review by participating governments in addition to scientific review.

The principles of the IPCC operation are assigned by the relevant WMO Executive Council and UNEP Governing Council resolutions and decisions as well as on actions in support of the UN Framework Convention on Climate Change process.

The role of the IPCC is to assess on a comprehensive, objective, open and transparent basis the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts and options for adaptation and mitigation. IPCC reports should be neutral with respect to policy, although they may need to deal objectively with scientific, technical and socio-economic factors relevant to the application of particular policies.

Review is an essential part of the IPCC process. Since the IPCC is an intergovernmental body, review of IPCC documents should involve both peer review by experts and review by governments.

The Panel agreed to establish three working groups that would prepare assessment reports on:

- Available scientific information on climate change,
- Environmental and socio-economic impacts of climate change, and

- Formulation of response strategies.

Working Group I was chaired by the United Kingdom (Mr. John T. Houghton), Working Group II by the USSR (Mr. Yuri A. Izrael), and Working Group III by the United States of America (Mr. Fred M. Bernthal, later replaced by Mr. Robert Reinstein). Working Groups I and II had a core membership of 13 countries and WG III of 17 countries. Experts from other countries were welcome to participate and contribute. A small Bureau of 15 members was established to oversee the work of the Panel. The IPCC also established collaboration with various intergovernmental and non-governmental organisations such as FAO, IAEA, ITTO, OECD, IEA, IIASA, RIIA, SEI, TERI, WEC and WRI.

The IPCC published its first assessment report (FAR) in 1990, a supplementary report in 1992, a second assessment report (SAR) in 1995, and a third assessment report (TAR) in 2001. A fourth assessment report (AR4) was released in 2007. Each assessment report is in three volumes, corresponding to Working Groups I, II and III. Unqualified, “the IPCC report” is often used to mean the Working Group I report, which covers the basic science of climate change.

### **United Nations Framework Convention on Climate Change (UNFCCC)**

The United Nations Framework Convention on Climate Change (UNFCCC or FCCC) is an international environmental treaty produced at the United Nations Conference on Environment and Development (UNCED), informally known as the Earth Summit, held in Rio de Janeiro in 1992. The treaty is aimed at reducing emissions of greenhouse gas in order to combat global warming.

The treaty as originally framed set no mandatory limits on greenhouse gas emissions for individual nations and contained no enforcement provisions; it is therefore considered legally non-binding.

Rather, the treaty included provisions for updates (called “protocols”) that would set mandatory emission limits. The principal update is the Kyoto Protocol, which has become much better known than the UNFCCC itself.

The FCCC was opened for signature on May 9, 1992. It entered into force on March 21, 1994. Its stated objective is “to achieve stabilization of greenhouse gas concentrations in the atmosphere at a low enough level to prevent dangerous anthropogenic interference with the climate system”.

One of its first achievements was to establish a national greenhouse gas inventory, as a count of greenhouse gas (GHG) emissions and removals. Accounts must be regularly submitted by signatories of the United Nations Framework Convention on Climate Change.

The UNFCCC is also the name of the United Nations Secretariat charged with supporting the operation of the Convention, with offices in Haus Carstanjen, Bonn, Germany. Since 2006 the head of the secretariat has been Yvo de Boer.

Signatories to the UNFCCC are split into three groups:

1. Annex I countries (industrialized countries)
2. Annex II countries (developed countries which pay for costs of developing countries)
3. Developing countries

On June 12, 1992, 154 nations signed the UNFCCC, that upon ratification committed signatories’ governments to a voluntary “non-binding aim” to reduce atmospheric concentrations of greenhouse gases with the goal of “preventing dangerous anthropogenic interference with Earth’s climate system.” These actions were aimed primarily at industrialized countries, with the intention of stabilizing their emissions of greenhouse gases at 1990 levels by the year 2000; and other responsibilities would be incumbent upon all UNFCCC parties. The parties agreed in general that they would recognize “common but differentiated responsibilities,” with greater responsibility for reducing greenhouse gas emissions in the near term on the

part of developed/industrialized countries, which were listed and identified in Annex I of the UNFCCC and thereafter referred to as “Annex I” countries.

On September 8, 1992, President Bush transmitted the UNFCCC for advice and consent of the U.S. Senate to ratification. The Foreign Relations Committee approved the treaty and reported it (Senate Exec. Rept. 102-55) October 1, 1992. The Senate consented to ratification on October 7, 1992, with a two-thirds majority vote. President Bush signed the instrument of ratification October 13, 1992, and deposited it with the U.N. Secretary General.

According to terms of the UNFCCC, having received over 50 countries’ instruments of ratification, it entered into force March 24, 1994. Since the UNFCCC entered into force, the parties have been meeting annually in Conferences of the Parties (COP) to assess progress in dealing with climate change, and beginning in the mid-1990s, to negotiate the Kyoto Protocol to establish legally binding obligations for developed countries to reduce their greenhouse gas emissions. The last COP was held at Bali, Indonesia in December 2007, which was attended by more than 10,000 delegates from about 189 countries.

### **NATCOM**

Various governments around the world, with a view to taking positive steps to combat climate change, adopted the United Nations Framework Convention on Climate Change (UNFCCC) in 1992. The mandate of the Convention is to stabilize greenhouse gas (GHG) concentrations in the atmosphere at a level that would mitigate human induced interference with the climate system. It is stipulated that Parties to the Convention protect the climate system according to their respective capabilities. Central to the Convention is the principle of “common but differentiated responsibilities”, underlined by the notion of equity.

In pursuance of the implementation of the provisions of the Convention, a project towards preparation of India’s Initial National Communication (NATCOM) to the UNFCCC was initiated, funded by the Global Environment Facility under its enabling activities programme through the United Nations Development Programme, New Delhi.

#### *Implementation arrangements*

The Ministry of Environment and Forests (MoEF) was the implementing and executing agency of the project. A National Steering Committee under the chairmanship of the Secretary (E&F) oversaw the implementation of the project. A Technical Advisory Committee advised on the scientific and technical aspects of the various components of the work programme. The NATCOM project has ensured a broad-based participatory approach.

#### *Work Programme*

Development of a comprehensive GHG inventory for 1994.

A description of national circumstances for addressing national needs and constraints arising from adverse impacts of climate change.

An assessment of likely vulnerabilities and developing adaptation strategies to combat impacts of climate change.

Identification of national policies and programmes, including programmes related to sustainable development that helps in the implementation of the Convention.

Identification of financial, technological, capacity needs and constraints for Climate change research and communication of information to UNFCCC on a regular basis.

Creation of a web site for dissemination of relevant information.

Development of a reliable and comprehensive database for all the outputs produced.

Capacity enhancement through training, thematic and awareness workshops.

Preparation of a 'Targeted Research Proposal' for developing a medium- to long-term action plan for climate change research in the country.



The NATCOM submitted the first report in 2004 and has started preparing the second report for submission in 2011.

#### World Meteorological Organization (WMO)

The WMO is a specialized agency of the United Nations. It is the UN system's authoritative voice on the state and behaviour of the Earth's atmosphere, its interaction with the oceans, the climate it produces and the resulting distribution of water resources.

WMO has a membership of 188 Member States and Territories (since 24 January 2007). It originated from the International Meteorological Organization (IMO), which was founded in 1873. Established in 1950, WMO became the specialized agency of the United Nations in 1951 for meteorology (weather and climate), operational hydrology and related geophysical sciences.

As weather, climate and the water cycle know no national boundaries, international cooperation at a global scale is essential for the development of meteorology and operational hydrology as well as to reap the benefits from their application. WMO provides the framework for such international cooperation.

#### Climate Change Science Program (CCSP)

It was created by the U.S. government in February, 2002 to address unresolved questions regarding climate change and global warming. The CCSP's goal is to "integrate federal research on global change and climate change" across thirteen federal agencies. The CCSP incorporates and integrates the U.S. Global Change Research Program (USGCRP) with the Administration's U.S. Climate Change Research Initiative (CCRI). More than 20 CCSP Synthesis and Assessment Product reports (SAPs) are scheduled to be produced with the intent of providing decision support information to policymakers and the public.

In announcing the CCRI, the USA directed the reestablishment of priorities for climate change research, including a focus on identifying the scientific information that can be developed within 2 to 5 years to assist the nation's evaluation of optimal strategies to address global change risks.

The US Climate Change Science Program has five goals:

1. Extend knowledge of the Earth's past and present climate and environment, including its natural variability, and improve understanding of the causes of observed changes
2. Improve understanding of the forces bringing about changes in the Earth's climate and related systems
3. Reduce uncertainty in projections of how the Earth's climate and environmental systems may change in the future
4. Understand the sensitivity and adaptability of different natural and managed systems to climate and associated global changes
5. Explore the uses and identify the limits of evolving knowledge to manage risks and opportunities related to climate variability and change

### **Non- Governmental Organisations**

#### *Climate Change Knowledge Network (CCKN)*

The Climate Change Knowledge Network provides a forum for rigorous research on the issues within the international climate change structure and a means to further the dialogue between nations in their efforts to address climate change.

#### *GHG Protocol Initiative*

The initiative brings together many leading experts on greenhouse gas emissions. The participants, drawn from business, governments and non-governmental organizations are working in partnership to design, disseminate and promote the use of an international corporate protocol for measuring and reporting business greenhouse gas emissions.

#### *Climate Network Europe*

Climate Network Europe (CNE) is a coordinating office, based in Brussels, for environmental groups in Western Europe working on climate change issues. It is a non-profit organisation receiving funding in the present financial year from Commission of the European Communities, the Danish Government, the Stockholm Environment Institute and the Swiss Government. The CNE runs an information service on climate change and coordinates policy on climate change at a European level as well as liaising with other groups in the global organisation of Climate Action Network.

#### *The Climate Group*

The Climate Group is an independent, non-profit organization with 50 (as of November 2007) full-time staff and a network of associates based in the US, Europe, Australia, China and India. Its aim is to act as a catalyst to amplify the work of pioneering companies and governments who are leading the way on addressing global warming. The Climate Group will actively seek out those organizations that fulfill these criteria. Launched in April 2004 by the England Prime Minister Tony Blair and a group of 20 VIPs/CEOs, The Climate Group has now recruited a coalition of 29 member companies, sub-national governments, and NGOs. Collectively this coalition is responsible for some 8% of world emissions of greenhouse gases. Research carried out by The Climate Group shows that many Fortune 500 companies and city governments have achieved significant reductions in their greenhouse gas emissions. In some cases the reductions are in excess of 60%, the generally accepted target for the industrialized world to avert the worst impacts of

climate change. Contrary to commonly held belief, reports from these organizations indicate that their actions, which include energy efficiency, fuel switching and process reengineering, have in fact been beneficial to the bottom line. The Climate Group's mission is to use these examples to build a leadership coalition and to boost confidence for wider action. They employ targeted research, strategic advice, the facilitation of best practice development, and communications. Their positive approach centers on the encouragement of solutions based on sound business and economic analysis.

#### ***The Climate Trust***

The Climate Trust is a non-profit working towards a more stable climate. The mission is to promote climate change solutions by providing high quality greenhouse gas offset projects and advancing sound offset policy. To realize its vision, The Climate Trust provides greenhouse gas offsets to power plants, regulators, businesses and entities of all sizes, and individuals.

#### ***Future International Action on Climate Change Network***

This website has been developed by Ecofys upon the initiative and with the support of the Federal Environmental Agency of Germany. The purpose of this website is to provide an interactive international platform for discussion on future international action on climate change, including evolving approaches of a post 2012 commitment regime under the UNFCCC and the Kyoto Protocol.

#### ***Earth Council***

The Earth Council is an international non-governmental organization (NGO) created in 1992 as a direct result of the Earth Summit. Their mission is to support and empower people in building a more secure, equitable and sustainable future.

#### ***EcoEquity***

EcoEquity is a new US organization and a part of the emerging international Climate Justice network. Their principal goal is a phased transition to a climate treaty based on equal rights to the atmospheric commons.

#### ***World Resources Institute: Climate and Atmosphere***

##### ***Safeclimate***

Safeclimate is a project of the Environment and Business program at World Resources Institute. It provides the tools, products, and connections to help you to take positive action in your home, organization, and local community.

##### ***Climate Change Organisation (CCO)***

It is a non-profit and non-government body formed in July 2005. Their passion is to champion the course of raising environmental awareness particularly on issues such as climate change and global warming. They strive to build a strong bridge between the public, private parties and individuals so that issues can be discussed at all levels. CCO hope that citizens of the world can be actively involved in protecting the environment so that literacy of climate change can be achieved.

##### ***Climate Strategies***

Climate Strategies is funded by the SHELL Foundation (Sustainable Energy Programme) and has been formed as a network of senior researchers on climate change policy, initially in Europe. It aims to connect leading applied research on international climate change issues to the policy process and public debates. It seeks thereby to raise the level of debate and the quality and coherence of advice to policy formation, including in the new context created by the current US Administration position in the international negotiations.



### ***Climate Neutral Network***

The Climate Neutral Network is an alliance of companies and other organizations committed to developing profitable products and enterprises that minimally impact the earth's climate. This is achieved by reducing and offsetting associated greenhouse or global-warming gases.

In addition, the following organizations, clubs, and networks are also concerned with climate change: 1) European Business Council for a Sustainable Energy Future, 2) Kyoto Club, 3) Global Climate Coalition (GCC), 4) BP Amoco, etc.

In India the Indian Council of Agriculture Research commenced a network project "Impact Adaptation and Vulnerability of Indian Marine Fisheries to Climate change" in 2003. About 15 research institutions and state Agricultural Universities are addressing researchable issues concerned with agriculture, livestock and fisheries

Several other institutions, universities and non-governmental organizations have also initiated programmes and projects on climate change in India.

### **Suggested reading**

[www.natcomindia.org](http://www.natcomindia.org)

[http://en.wikipedia.org/wiki/Intergovernmental\\_Panel\\_on\\_Climate\\_Change](http://en.wikipedia.org/wiki/Intergovernmental_Panel_on_Climate_Change)

[http://en.wikipedia.org/wiki/United\\_Nations\\_Framework\\_Convention\\_on\\_Climate\\_Change](http://en.wikipedia.org/wiki/United_Nations_Framework_Convention_on_Climate_Change)

[http://en.wikipedia.org/wiki/World\\_Meteorological\\_Organization](http://en.wikipedia.org/wiki/World_Meteorological_Organization)

[http://en.wikipedia.org/wiki/Category:Climate\\_change\\_organizations](http://en.wikipedia.org/wiki/Category:Climate_change_organizations)