



INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE



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PROGRESS REPORTS - TGCI

(Submitted by Richard H. Moss, Acting Chair, on behalf of the Task Group)

The Panel is invited to consider this background information relating to the role, mandate, membership and work programme of the Task Group on Scenarios for Climate and Impacts Assessment (TGCI).

Progress Report

Task Group on Scenarios for Climate and Impacts Assessment

Submitted by Richard H. Moss, Acting Chair
on behalf of the Task Group

1. Background

1.1 The Task Group on Scenarios for Climate and Impact Assessment (TGCIA) was established following a recommendation made at the IPCC Workshop on Regional Climate Change Projections for Impact Assessment (London, 24-26 September 1996), further considered by the IPCC Bureau at its Thirteenth Session (9-11 July 1997), and approved at the 13th IPCC Plenary (Maldives, 22-28 September 1997). Prof. Martin Parry (UK) was asked to assemble and chair the Group, which he did until his appointment as Co-Chair Working Group II in April 2002. At that time Bureau asked Dr. Richard Moss (USA) to assume acting chairmanship of the Group and report to the next Plenary.

1.2 The TGCIA facilitates development and sharing of data to support research on climate change and its potential implications. The TGCIA facilitates applications of scenarios and sharing of information across the three main IPCC working groups.

1.3 Specifically, the TGCIA disseminates information on

- anthropogenic forcing of climate
- future changes in climate
- other environmental and socio-economic factors

1.4 Within existing IPCC scenario frameworks, the TGCIA facilitates evaluation and development of enhanced scenario information by applying insights and knowledge from the published, peer-reviewed literature. Results of its activities are shared with the research community as well as with the IPCC and its working groups.

2. Actions to date

2.1 To date, the TGCIA has:

- (a) Developed a Data Distribution Centre (DDC) through which all researchers may retrieve climate data from GCM experiments. The data are used extensively in impacts studies, and increasingly for other areas of research. The DDC is a shared operation between the Deutsches Klimarechenzentrum (DKRZ) in Germany and the Climatic Research Unit (CRU) in the United Kingdom, with technical inputs from other centers or organizations. The DDC is now fully operational and makes data available to impacts researchers through a variety of media, including internet (<http://IPCC-ddc.cru.uea.ac.uk/>), tapes, and CD-ROM. Direct support and assistance is given to scientists regarding data structure, formats, application and wider issues;
- (b) Solicited and obtained participation of major modeling centers, and made recommendations to the climate modeling community (in consultation with the World Climate Research Programme) to encourage development of a range of climate projections for impacts research;
- (c) Developed inventories of GCMs and regional climate models and made these available through the DDC website;
- (d) Developed guidance for impacts researchers on a series of technical issues (e.g., selection of model outputs, construction of scenarios, interpretation of results and uncertainties, regional models, downscaling, pattern scaling) related to the interpretation and use of climate scenarios and other information for impacts research;

- (e) Provided advice on reporting standards in order to facilitate comparable results;
- (f) Made available the IPCC SRES scenarios through a parallel DDC hosted by the Consortium for Earth Science Information Networks (CIESIN) at Columbia University in the United States; and,
- (g) Recently held an expert meeting to examine the SRES scenarios and their potential use in research. Several aspects of the scenarios were reviewed with the intent of identifying data needs of the research community for using SRES scenarios in impact, adaptation and mitigation studies. A report from the expert meeting is currently under preparation.

3. *Budget and secretariat*

3.1 Most of the cost of the DDC and other TGCIA activities is borne through in-kind contributions from participating organizations and governments. The approximate annual cost of supporting the DDC is 250,000 SFRs and is contributed by organizations in Germany, the United Kingdom, and the United States. The main direct cost to the IPCC is for support of participation by scientists from developing countries in the meetings of the TGCIA (on average, two meetings/year). The current IPCC budget includes approximately 200,000 SFRs for developing country travel.

3.2 The Technical Support Unit of Working Group I currently serves as the secretariat for the TGCIA. The Working Group II and III Technical Support Units also generously provide support for the work of the Group as needed.

4. *Future work*

4.1 The primary future objective of the TGCIA is to support impacts and other researchers and other scientists during the AR4 process. To encourage research, there is a continuing need to provide datasets and advice through a robust framework and web site. Areas of TGCIA activity will include:

- (a) Maintaining the current level of DDC resource and, where required, enhancing and adding new features such as: incorporating new climate model datasets; expanding the guidance material; widening the accompanying climate, environmental and socio-economic datasets; and encouraging translation and development of additional "mirror DDC sites";
- (b) Facilitating evaluation and development of scenario information by applying new insights and knowledge from the peer reviewed literature to existing IPCC scenario sets. Three expected foci are: downscaling of SRES data for impacts and adaptation analysts; stabilization scenario support; and, elaboration of black carbon and tropospheric ozone precursor emission data;
- (c) Encouraging long-term research on additional issues associated with development and use of scenarios for research on climate change and its implications, including: evaluation of implications of multiple sources of uncertainty; development of capacity for extreme events analysis; further development of approaches for developing downscaled information for impacts analysis; development of additional data and approaches for analysis of adaptation; provision of climatological data to support research on observed effects in ecological and biological systems; and increased efforts to promote training for impacts and adaptation research in developing countries

5. *Membership*

5.1 Membership in the TGCIA was established in 1997 through nominations solicited by the Secretariat from governments and organizations. Members include:

T Carter, Finland
U Cubasch, Germany
X Dai, China
P Desanker, Malawi
M El-Raey, Egypt
F Giorgi, Italy
M Harrison, WG II TSU
M Lal, India
M Lautenschlager, Germany
M Manning, WG I TSU
L Mata, Venezuela
L Mearns, USA

J Mitchell, UK
T Morita, Japan
R Moss, USA (Acting chair)
D Murdiyarso, Indonesia
N Nghia, Vietnam
C Nobre, Brazil
M Noguer, UK
D Pabon, Colombia
H Pitcher, USA
C Rosenzweig, USA
L Meyer, WG III TSU
P Whetton, Australia

5.2 Throughout its history, the TGCIA has enlisted other experts as contributors to assist with its work.

5.3 As the TGCIA enters its second phase of work to support the AR4, it is proposed that the membership be refreshed through a process based on the lead author selection process of the IPCC. The Secretary of the IPCC will solicit nominations of experts known through their publications and works from governments and organizations. The Chair of the TGCIA and the Co-Chairs of the Working Groups will develop a slate of 20-25 members who will be selected by the three Working Group Bureau, under general guidance and review provided by the Panel. Membership shall reflect the need for a range of expertise and geographical representation (ensuring appropriate representation of experts from developing and developed countries and countries with economies in transition).