

Assessments of Impacts and Adaptations to Climate Change in Multiple Regions and Sectors (AIACC)

In the past year, twenty-four regional and national scale studies have been initiated under the project *Assessments of Impacts and Adaptations to Climate Change (AIACC)*. Participating in these studies are 235 developing country scientists and more than 60 graduate and undergraduate students who will investigate climate change vulnerabilities and adaptation responses in 46 countries of the developing world. Another 40 scientists from developed countries will collaborate with developing country colleagues in these studies.

The AIACC studies are diverse in their objectives, scientific methods and in the sectors and systems to be investigated, which include food and food security, water resources, human health, livelihood security, climatic hazards, coastal vulnerabilities, rangeland ecosystems, aquatic and wetland ecosystems, and biodiversity conservation. Yet, despite the diversity, the studies share a common purpose of strengthening the information base for making decisions about adaptation to climate change.

The AIACC studies are expected to make a significant contribution to what has been called a “second generation” of climate change assessment (see START Network News, Issue No. 7, May 2002, pg 1). Second generation assessments differ from earlier assessments by placing vulnerability and adaptation at the center of the assessment and by engaging stakeholders in the assessment process. They seek to understand present vulnerabilities to climate variability, how and why vulnerabilities differ for different populations within a region, and how vulnerabilities may change over time as a result of changes in climate and other factors. They examine the resources presently or potentially available to a community, assess its capacity to adapt to change, and evaluate adaptation opportunities, impediments, efficacies and costs.

AIACC Background

The AIACC project is funded primarily by the Global Environment Facility (GEF), which approved a grant of \$7.5 million in November 2000. Additional funding has been provided in 2002 by the Canadian International Development Agency, the United States Agency for International Development, and the United States Environmental Protection Agency. The home institutions of many of the regional study teams that have received AIACC awards also provide significant collateral funding. The AIACC project is implemented by the United Nations Environment Programme (UNEP) and is co-executed by START and the Third World Academy of Sciences (TWAS).

The AIACC proposal to GEF was sponsored by and developed in collaboration with the Intergovernmental Panel on Climate Change (IPCC). The proposal was motivated by recognition that developing countries are highly vulnerable to climate change, that substantial gaps continue to exist in understanding the nature of this vulnerability and effective adaptations, and that scientific capacities to assess vulnerabilities and adaptation options are deficient in developing countries. AIACC is designed to overcome the

capacity deficiencies and strengthen the information base for adaptation decisions in developing countries. Specifically, the objectives of AIACC are to:

- Advance scientific understanding of climate change impacts, adaptations and vulnerabilities in developing country regions;
- Build and enhance scientific and technical capacity in developing countries, particularly among young researchers, to investigate climate change impacts, adaptation, and vulnerability; and
- Generate and communicate information useful for adaptation planning and action.

Anticipated outcomes of the AIACC project include:

- Publication of peer reviewed scientific articles and books by participating scientists that significantly expand the published literature on climate change impacts, adaptations and vulnerabilities in developing countries.
- Increased numbers of developing country researchers, particularly young researchers, who are actively engaged in global change research, both during and following the AIACC project.
- Increased participation of developing country scientists in future assessments of the IPCC.
- Information generated by AIACC regional studies is used in National Communications on climate change vulnerability and adaptation, in National Adaptation Plans of Action, and other processes related to adaptation decision making.

The project is managed by an AIACC Science Director and an AIACC Project Coordinator based at the START Secretariat in Washington DC with the support of staff at START, TWAS and UNEP, and is overseen by the AIACC Implementing Committee. A Steering Committee, chaired by the IPCC Chairman and composed of representatives from IPCC, GEF Secretariat, UNFCCC, World Bank and other organizations provides general advice to the AIACC project as well as links with other international activities related to climate change. A Technical Committee and Scenarios Advisory Group, composed of internationally recognized experts, provide guidance on project design, assessment methods, scenario development, training, and award decisions for AIACC grants.

Review of Proposals and Award Decisions

The twenty-four regional studies were selected for AIACC awards through a competitive peer review process based on their scientific merit and regional significance. More than 140 proposals were submitted to AIACC in response to a call for proposals in early 2001. The proposals were reviewed by the AIACC Technical Committee and eighty external experts recruited from all parts of the world. Endorsements of the GEF focal points of the

relevant countries were required for proposals to be considered for an award. Award decisions were made and announced in November 2001.¹

Awards were made to 11 studies in Africa, in which 17 countries are participating, 5 in Asia, with 9 countries participating, 5 in Latin America, with 11 countries participating, and 3 in Small Island States, with 8 countries participating.

A list of all AIACC regional studies, with short abstracts, can be found on the AIACC website: http://www.start.org/Projects/AIACC_Project/aiacc.html.

Regional Studies, Training and Mentoring are Launched

96 scientists, including three investigators from each of the AIACC regional studies plus additional experts from IPCC and other organizations, attended a meeting in February 2002 at UNEP headquarters in Nairobi to launch the studies. Participants were introduced to the AIACC project objectives and methodologies, planned for the implementation of their studies, discussed training and technical support needs, and identified opportunities for cross-study collaborations. The discussions provided input to plans for subsequent workshops held in 2002, a mentoring program, a web-based information network for sharing information across studies, and several cross-study ventures.

Two additional workshops held in 2002 assisted the regional study teams with further development and refinement of their work plans and provided training in relevant scientific methods. The first of these workshops, co-organized with the Tyndall Centre and held at the campus of the University of East Anglia in April, focused on climate change scenarios. The workshop included presentations and group discussions of different methods and tools for development of scenarios, criteria for selecting methods and tools to match research objectives, and hands-on practice with climate scenarios tools. One investigator from each of the AIACC regional studies attended the workshop, gave a presentation on his/her intended approach to scenario development, and worked with assembled experts to improve his/her knowledge of and skills with selected methods and tools.

The second workshop, co-organized with SEI-Oxford and hosted by TWAS in June at the campus of the International Center for Theoretical Physics in Italy, focused on methods for assessment of climate change vulnerabilities and adaptation. More than 100 participants from 45 countries attended the vulnerability and adaptation workshop. The format of the workshop was a mixture of plenary lectures given by invited experts, case studies presented by AIACC study team members, computer lab work with selected modelling tools, small group discussion, and one-on-one work with mentors. The workshop emphasized the “second generation” approach to climate change assessment.

¹ Twenty proposals were selected for awards in November 2001. Another four groups were invited to revise and resubmit their proposals and were awarded grants in June 2002.

The regional study teams have been aided in their early efforts to plan and initiate their projects by a team of AIACC mentors. The mentors, drawn from both developing and developed countries, will assist the study teams throughout the AIACC project.² The mentors will advise regional study teams on the selection and application of data, methods, models and scenarios for climate change assessment, help study teams to troubleshoot problems as they arise, and direct teams to other sources of expertise as needed. An important function of the mentors will be to encourage and facilitate publication of AIACC study results in peer-reviewed journals. In addition to the mentoring program, regional study team members will also provide technical support to each other through an active AIACC list-serve discussion group as well as through interactions at AIACC workshops.

Upcoming Activities in 2003

Regional workshops being planned for early 2003 in Africa, Asia and Latin America will bring together AIACC study participants from the region, other researchers from the region, relevant stakeholders, and AIACC mentors.³ Participants will present papers from their first year's research, provide each other advice for next steps, collaborate across study teams to solve common problems, plan for joint products (e.g. collections of AIACC papers for publication in special issues of scientific journals), and consult with mentors and other experts about their projects. Additional training activities might also be incorporated in the workshop programs.

² The AIACC mentors are Ian Burton, Max Campos, Paul Desanker, Tom Downing, Bruce Hewitson, Saleemul Huq, Roger Jones, Xianfu Lu, Jose Morengo, and Anand Patwardhan.

³ The dates and venues for the regional workshops were not decided at press time for this report.