

**WMO/ICSU/IOC
WORLD CLIMATE RESEARCH PROGRAMME**

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**START'S PROPOSAL TO COLLABORATE WITH THE WCRP TO SUPPORT CLIMATE
CHANGE EDUCATION AND TRAINING IN THE DEVELOPING WORLD**

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Rationale: Swift and substantive action is needed to assist highly vulnerable areas of the developing world to adapt to climate change. Adaptation planning in these regions is handicapped by the lack of understanding and awareness of the impacts of climate change on livelihoods and development, and from low institutional capacities and lack of resources to support adaptation. Innovative approaches for learning and problem solving need to be developed that enable the research community and institutions of higher learning to provide effective support for societal efforts to understand and act on climate change. Building more robust endogenous systems for generating, interpreting, and disseminating information about climate change risks will require significant and well-targeted investments in education and training: a process that is in itself an adaptation response, given large capacity gaps in research and education on understanding impacts, vulnerability and adaptation.

For the past two decades, START has been at the forefront of efforts to promote research-driven capacity building that addresses issues related to climate change adaptation in the developing world. START's work is carried out by networks of regional research centers, as well as scientists and institutions in Africa, Asia, and Oceania in collaboration with scientists and institutions worldwide. START's research, capacity building, and education portfolio includes research grants and fellowship programs, curriculum development and implementation, regional science-policy dialogues, advanced institutes, and young scientists conferences.

In all of its efforts, START seeks to develop collaborative, synergistic actions with its sponsor organizations that enhance outcomes that generate new knowledge, build capacity, and inform decision-making. The recent call from the climate science community to develop climate services, and recognition by the WCRP of the need to strengthen its capacity building and communication efforts, provides an opportune time for sustained engagement between START and the WCRP around common issues of climate change education and capacity building in the developing world.

Proposed action: START proposes a collaborative partnership with the WCRP to develop a climate change education and training program designed to meet the capacity building needs envisioned in the Global Framework for Climate Services¹, and to more broadly enhance two-way communication between the climate research community and end user groups, including policymakers, members of civil society organizations, and various scientific communities engaged in IAV research. CORDEX, in addition to the climate services framework, could provide a potential programmatic focus around which such capacity building could coalesce.

START proposes that capacity building efforts supported by a START-WCRP collaboration include the following:

- Fellowships for graduate (Masters and PhD) and post-doctoral research, and research grants for early to mid-career scientists affiliated with universities and research centers. Such a research fellowship program would be thematically based and provide for south-south and north-south institutional exchange to foster the development of research networks.
- Development and implementation of climate change curricula. Curricula would integrate climate change and sustainability topics into existing courses, develop new courses on climate change topics as well as design innovative learning mechanisms such as service learning courses aimed at professionals, such as resource managers and government agency representatives, outside of academia. Such service learning courses would aim to increase the general level of 'climate literacy' among key decision makers.
- Faculty exchange in support of both research and education.
- Advanced institutes on such topics as regional downscaling, generation and interpretation of climate change scenarios, impacts modeling, and approaches to conducting integrated assessments.
- Training workshops for compiling and centralizing country-scale data on ancillary effects of climate on the range of stressors affecting socio-economic systems.
- Science-policy dialogues that involve researchers, parliamentarians, government agency representatives, development professionals, resource management experts, and representatives of civil society. The dialogues would serve to both disseminate scientific information and knowledge to the public and to give voice to public concerns in order to develop more demand-driven processes for generating and disseminating information and knowledge.

¹ Major recommendation from the World Climate Conference 3, 2009.

- Accreditation programs with universities in the industrialized world that allow participants of advanced institutes to receive certification from external universities.

In developing this collaborative effort, WCRP and START should seek to form partnerships with, or at least encourage outreach to 1) key individuals, such as WCRP members and other experts from US and European Universities and research centers who would be willing to become directly involved in the capacity building components described above, 2) universities that are seeking partnerships with research and capacity building initiatives in the developing world (START is currently engaged in discussion with some US-based universities on this issue) and 3) international organizations such as the IPCC, which is in the process of establishing a scholarship/climate change education fund with the Nobel Peace Prize award funds.

Regarding the IPCC, START's experience in developing networks of individuals and institutions in the developing world, including those that involve administering multi-country, multi-institutional fellowship programs, and WCRP's expertise in climate modeling and applications science make the two organizations ideal partners for helping the IPCC develop and execute its scholarship program. Through a partnership arrangement with the IPCC, START and WCRP could advise the IPCC on strategic and programmatic aspects of the scholarship program, related climate change education and capacity building, and could support administrative aspects of the program.

Relevant initiatives: START is currently collaborating with the WMO on the *Integrating Climate Change Mitigation and Adaptation Knowledge in Development Planning* project, which is a joint collaboration between these two organizations, IPCC, and UNEP. The program aims to promote communication at the science-policy interface on issues of climate change risks, adaptation, and mitigation in Sub-Saharan Africa and South Asia in collaboration with the Bangladesh Centre for Advances Studies, the University of Ghana and the University of Dar es Salaam.

Additionally, START has a number of current and recently completed programs and activities through which they have built active networks of scientists and institutions that could contribute to a START/WCRP collaboration on capacity building. These activities include:

- *The African Climate Change Fellowship Program (ACCFP):* This first-of-its-kind program in Africa provides fellowships for PhD students, post-docs, teachers and members of the policy community from Africa to pursue research or develop courses on climate change adaptation within universities and research centers in Africa. The emphasis on south-south network building inherent in this program is helping to bolster endogenous scientific capacity to address climate change. ACCFP Fellows are currently pursuing studies at 19 host institutions (universities and research centers) in Africa.
- *Global Environmental Change Grants Program:* START supports African scientists to conduct research on understanding global environmental change impacts in Africa, and to identify and examine options for adaptation. This program has helped to foster long-term, international collaborative research partnerships among African scientists and scientists in developed countries.
- *The Assessments of Impacts and Adaptation to Climate Change:* Over a 5-year period (2002-2007), the AIACC conducted 24 sub-regional climate change assessments in Africa, Asia, Latin America, and small island states, involving over 300 scientists, experts, and students from more than 50 developing countries. The assessments investigated a wide range of topics, including biodiversity conservation and ecosystem resiliency, water resources, agriculture, food security and rural livelihoods, human health, and tourism. The assessments provided critical input to the Fourth Assessment Report of the IPCC on issues of impacts, adaptation, and vulnerability in the developing world.
- *The Building African Capacity for Conserving Biodiversity in a Changing Climate* project is a collaboration between START, the University of Dar es Salaam, and the MacArthur Foundation to educate conservation professionals from the Albertine Rift countries of Tanzania, Uganda, Rwanda, Burundi and Congo about climate change risks to biodiversity. The project features intensive training courses and field based research projects to understand climate change risks to biodiversity conservation and examine options for risk management. A second phase of this project includes distance-learning modules of the training courses and a training of trainers program.