

START ACTS TO SUPPORT THE NAIROBI WORK PROGRAMME

AN OVERVIEW OF STRATEGIC SUPPORT THROUGH
RESEARCH AND CAPACITY BUILDING ACTIONS





START and the Nairobi Work Programme

WHAT IS THE NAIROBI WORK PROGRAMME?

The UNFCCC Nairobi Work Programme on Impacts, Vulnerability, and Adaptation to Climate Change (NWP) was developed to assist Parties to the Convention – especially developing countries, including least developed countries and small Island developing states – to improve their understanding and assessment of climate change impacts, vulnerability, and adaptation and to make informed decisions on practical adaptation actions and measures to respond to climate change.

The NWP is structured around nine areas of work that are recognized as vital to increasing the capacity to adapt. Parties, intergovernmental and non-governmental organizations, the private sector, communities, and other stakeholders implement activities that support the objectives of the NWP. Expected outcomes include enhanced capacity for adaptation; improved information and advice to the Conference of the Parties to the UNFCCC; enhanced dissemination and use of knowledge; enhanced cooperation to manage climate change risks; and enhanced integration of climate change adaptation with sustainable development. More information about the NWP can be found at <http://www.unfccc.int/adaptation/items/4159.php>.

START'S ACTION PLEDGES

The UNFCCC Secretariat has invited pledges of actions to support the objectives of the NWP. START has responded by reviewing its research and capacity building programs and realigning them to provide maximum support for the objectives of the NWP. This booklet highlights START activities and pledges of new actions that support each of the 9 work areas of the NWP. Persons wishing more information about any of these activities should e-mail start@agu.org.

What is START?

START (the global change SysTEM for Analysis, Research, and Training) develops scientific capacity and generates knowledge to support decisions that build resilience to global environmental change and enable sustainable development. START's network consists of research centers, scientists and institutions throughout Africa, Asia, and the Pacific, and includes collaborations with scientists and institutions from Asia, the Caribbean, Europe, Latin America, and North America. Through this network, START promotes activities that:

- Generate and share knowledge, and enable transformation of this knowledge into action;
- Strengthen regional institutions and aid in the development of knowledge platforms to enable sharing of research, expertise and data; and
- Engage science, practitioner and policy communities in dialogues to promote effective decision-making related to environment and development issues.

START is sponsored by the International Geosphere-Biosphere Programme, the International Human Dimensions Programme on Global Environmental Change, and the World Climate Research Programme and is part of the Earth System Science Partnership. For more information about START, please visit <http://www.start.org>.



START and the NWP Areas of Work

AREA 1: METHODS AND TOOLS

NWP OBJECTIVE: Develop and disseminate methods and tools for impact and vulnerability assessments and for adaptation planning.

START ACTIONS: START is an established leader in developing methods and tools for vulnerability assessment and adaptation planning and in facilitating application and improvement of these methods by developing country organizations and researchers. Recent projects that have made important contributions to methods development include:

AIACC: The Assessments of Impacts and Adaptation to Climate Change project (2001-07), conducted in partnership with UNEP and TWAS, resulted in the development and demonstration of a variety of methods and tools for the assessment of climate change impacts, adaptation and vulnerability. The AIACC project took a 'second generation' approach to climate change assessment that used climate scenarios and also emphasized understanding the environmental, social, economic and institutional factors that shape the vulnerability of a system, place or population that is exposed to climate stresses, the capacity for coping with climate variability and adapting to climate change, and the processes by which adaptation decisions are made. Brief descriptions of some of the methods can be found in the UNFCCC compendium of methods and tools for assessment. Further information about the project can be found at <http://www.aiaccproject.org>.

ACCCA: The Advancing Capacity to Support Climate Change Adaptation project (a partnership of UNITAR, START, SEI, ENDA, and others) developed and tested different methods and tools for communicating climate risk

information to at-risk populations and decision-makers. These included training workshops targeted at community representatives, professionals and national agency representatives; participatory monitoring and evaluation, focus group discussions and participatory workshops; and dramas, folk music and videos presented to at-risk communities, as well as radio bulletins, posters and leaflets. Further information about the risk communication tools can be found at: <http://www.acccaproject.org>.

Building African Capacity for Conserving Biodiversity in a Changing Climate: Through this capacity building project, in partnership with the Institute of Resource Assessment, at the University of Dar es Salaam, START is developing course modules targeted at conservation professionals. The modules focus on methods and tools for assessing risks to biodiversity conservation from a changing climate, examining impacts on the flow of critical ecosystem goods and services and developing strategies to adapt place-based conservation to address such risks. The focus of the project is on biodiversity in the Albertine Rift countries of Burundi, Democratic Republic of Congo, Rwanda, Tanzania and Uganda. The courses will be available online as distance learning modules for use by the broad community of practitioners, policy-makers, educators and other stakeholders engaged in the area of ecosystems and biodiversity conservation. Further information about the project can be found at <http://www.start.org/programs/biodiv.html>.

START PLEDGES NEW ACTIONS TO:

- Better document and disseminate information about methods and tools for vulnerability and adaptation assessment; and
- Seek opportunities and partnerships to build capacity for the use of vulnerability and adaptation assessment methods and tools through new education programs, advanced study institutes, fellowships and small grants.

AREA 2: DATA AND OBSERVATIONS

NWP OBJECTIVE: Improve collection, management, exchange, access to and use of observational data and other relevant information on current and historical climate variability and change.

START ACTIONS: START supports a number of activities to improve access to and use of observational climate and other data. These include:

The Miombo Network, established with assistance from START, IGBP and LUCC, provides remote sensing and other environmental data related to land use and land cover change for the Miombo region. The network has activities in Malawi, Botswana, Mozambique, Zambia, Zimbabwe, Tanzania and South Africa. The data is distributed on CD-ROM and is available on-line. For more information, see <http://www.geog.psu.edu/geclab/miombo/>.

GOFC/GOLD: START works with the US National Aeronautics and Space Administration (NASA) to facilitate the participation of developing country scientists in the Global Observation of Forest and Land Cover Dynamics (GOFC/GOLD) project (<http://www.start.org/programs/gofc.html>). START also contributes to the Group on Earth Observations (GEO).

DIVA: Starting in 2009, START in collaboration with other partners is sponsoring the Africa DIVA (Dynamic Impacts, Vulnerability and Adaptation) Project, an online collaborative platform for scientists and policymakers. In addition to compiling and synthesizing scientific assessments of climate change impacts, vulnerability and adaptation for Africa, DIVA will provide access to raw data and models for both national and regional scales, and allow scientists to contribute their own findings.

The Temperate East Asia START Regional Center (TEA-START), hosted by the Institute for Atmospheric Physics of the Chinese Academy of Sciences, maintains climatological data for the monsoon Asia region in support of the Monsoon Asia Integrated Regional Study (MAIRS), ACCCA and other projects (<http://www.tea.ac.cn/english/index.asp>).

The Climate Systems Analysis Group (CSAG) of the University of Cape Town, a research node in the START network, received support under the AIACC project to develop a database of long-term weather observations for stations across sub-Saharan Africa. The database was recently used by other stakeholder groups for planning adaptation, such as those actions facilitated under the ACCCA project.

The Southeast Asia START (SEA-START) Regional Center is implementing the International Waters IW:LEARN project, which promotes experience-sharing and learning among GEF International Waters projects and partners worldwide.

START PLEDGES NEW ACTIONS TO:

Seek support for and assist START research centers in continuing to collect and assess observational data, and to create opportunities to disseminate relevant findings to decision makers across society.

AREA 3: CLIMATE MODELING, SCENARIOS AND DOWNSCALING

NWP OBJECTIVE: Promote development of, access to, and use of information and data on projected climate change.

START ACTIONS: START continues to support a number of activities that enhance the capacity of developing countries to improve access to and use

of information and data on projected climate change.

Through the project on Integrating Climate Change Mitigation and Adaptation into Development Planning START, UNEP, WMO and the IPCC will support the training of regional scientists in West and East Africa and South Asia on the use and interpretation of climate model outputs for regional scenarios and the construction of ‘envelopes’ of potential changes in future climate that reflect uncertainties. The training will be carried out by the Bangladesh Centre for Advanced Studies, the University of Dar es Salaam, and the University of Ghana, in their respective regions.

START provides small research grants and doctoral fellowships to individuals from Africa who participate in the African Monsoon Multidisciplinary Analysis (AMMA) project. The project seeks to improve knowledge and understanding of the West African monsoon for prediction and decision-making.

TEA-START, a center of regional climate modeling expertise, led the Regional Model Intercomparison Project to evaluate and improve regional modeling of monsoon climate in Asia and is now providing support for climate change scenarios for the MAIRS and ACCCA projects.

CSAG, the leading regional climate modeling center in Africa, received support under the AIACC project to develop and disseminate climate change projections for sub-Saharan Africa and to assist other researchers in Africa to use and interpret climate change projections. A partner in the ACCCA project, CSAG is developing a tool for constructing envelopes of future climate exposures using statistical downscaling techniques, is making the tool available to others and providing technical support for its use.

The Laboratory for Atmospheric Physics at Cheik Anta Diop University in Senegal received support through the AIACC project to improve their capabilities for regional climate modeling of West Africa.

START PLEDGES NEW ACTIONS TO:

- Continue to support START's African Climate Change Fellowship Program (see Area 6) and the activities of the Temperate East Asia and Southeast Asia START centers to promote capacity building for the generation, interpretation, and utilization of climate modeling, scenarios and downscaling across Africa and Asia.
- Work with IPCC-TGICA to identify and promote regional mechanisms for building institutional capacity for providing access to climate data and projections and assisting users to interpret and apply climate data and projections.

AREA 4: CLIMATE RELATED RISKS AND EXTREME EVENTS

NWP OBJECTIVE: Promote understanding of impacts of and vulnerability to current and future climate variability and extreme events, and the implications for sustainable development.

START ACTIONS: START promotes awareness raising and understanding of current and future climate risks through its support for education and capacity building, and risk communication and assessment. Relevant activities include:

Cities at Risk: A START-implemented workshop 'Cities at Risk' was held in February 2009 in Bangkok, Thailand. The workshop examined stresses generated by climate change and variability and estimations of past, current and future climate-related risks (e.g., sea level rise, extreme climate events, intensification of storms and storm surges) for Asia's coastal megacities. The Cities at Risk workshop was an initial step of a longer-term set of activities by START aimed at developing adaptive capacities and integrating science and policy in managing climate risks in Asia's coastal megacities. For example, START and the World Bank Institute recently developed and

tested a training program that allows urban planners to integrate climate risk management into long-term development planning.

AIACC: The AIACC project made substantial advances in the understanding of impacts of and vulnerabilities to climate change, climate variability and extreme events. All 24 of the AIACC assessments examined climate related risks, including extremes, to promote better understanding of climate risks and adaptation options. Flood risks were examined for urban dwellers of Buenos Aires, rice farmers in the lower Mekong River basin, townships of Fiji, and economies of Central America. Drought risks were assessed for subsistence farmers in Botswana, Nigeria and Sudan. Risks to human health related to climate variability and change were investigated for the Caribbean and Lake Victoria region of East Africa. Current practices for coping with and managing climate risks were examined and lessons derived for enabling adaptation to future climate change. Traditional knowledge was an important factor in several of the assessments (e.g. Botswana, Sudan and Nigeria). A synthesis of findings from the AIACC project about vulnerability to climate risks is provided by For Whom the Bell Tolls, Vulnerabilities in a Changing Climate (http://www.aiaccproject.org/working_papers/working_papers.html, AIACC Working Paper No. 21).

ACCCA: The recently-completed ACCCA project investigated appropriate methods for climate risk communication across a wide variety of decision-making contexts in Africa and Asia, including community-led adaptation for sustainable livelihoods in coastal south-western Nigeria, water management in Mali, strengthening community management of malaria risk in a changing climate in Ghana and Kenya, improving the resilience of subsistence farming in Malawi, adapting fisheries management in Lake Victoria, reducing risks from weather related disasters in Nepal, improving rangeland management in Mongolia, and integrating development and adaptation policies in India.

START PLEDGES NEW ACTIONS TO:

- Make widely available lessons from AIACC, ACCCA, Cities at Risk and other START projects about climate related risks through new publications and the weADAPT platform (<http://www.weADAPT.org>);
- Work with UNEP and the IPCC to plan and develop donor support for a successor to the AIACC project that will build on the achievements of AIACC to address remaining knowledge gaps and target Least Developed Countries for scientific and technical capacity building.
- Collaborate with the International Council for Science (ICSU) to provide capacity building for the Integrated Research on Disaster Risk (IRDR) initiative.

AREA 5: SOCIO-ECONOMIC INFORMATION

NWP OBJECTIVE: Improve knowledge of the socio-economic aspects of climate change and promote the integration of socio-economic information into impact and vulnerability assessments.

START ACTIONS:

Financial flows assessment: The Pan-African START Secretariat (PASS) is providing technical backstopping for a UNDP-led assessment of investment and financial flows to address climate change in developing countries. PASS is working with country teams in Algeria, Gambia, Namibia, Niger, Liberia, Togo, Mozambique, Morocco and Benin and the assessments target the following sectors: health, water resources, forestry, energy, agriculture and/or land-use. PASS and its colleagues will provide training for key national stakeholders in the use of a new UNDP User Guidebook for conducting financial flows assessments.

The AIACC project pioneered the use and integration of socio-economic information in assessments of impacts and vulnerability and demonstrated that social, economic, institutional and governance processes strongly

shape the character and degree of vulnerability to climate hazards. Similar methods are being applied in the ACCCA project.

The Monsoon Asia Integrated Regional Study (MAIRS) project is emphasizing the development and use of socio-economic scenarios to analyze the driving forces of environmental change in Asia. (<http://www.mairs-essp.org>)

START PLEDGES NEW ACTIONS TO:

- Seek support for and assist START research centers to expand efforts to build upon and consolidate insights and best practices from START's vulnerability and adaptation portfolio.

AREA 6: ADAPTATION PLANNING AND PRACTICES

NWP OBJECTIVE: Collect, analyze, and disseminate information on past and current practical adaptation actions and measures, including projects, short and long-term strategies, and local and indigenous knowledge.

START ACTIONS: START continues to support a number of activities that enhance the process of generating and disseminating information and knowledge on adaptation. Relevant activities include:

ACCFP: The African Climate Change Fellowship Program (ACCFP) offers fellowship opportunities to African professionals, researchers and graduate students to enhance their capabilities to advance and apply knowledge for climate change adaptation. The grants enable participants to undertake experiential learning, education, research and training in Policy, Post-Doctoral, Doctoral or Teaching Fellowships. The Fellows visit other institutions – Host Institutions – to implement a project of their own design that enhances their understanding of climate risks, vulnerabilities

and adaptation strategies, assesses current practices for designing and implementing adaptation projects and/or promotes integration of adaptation with planning, policy and decision-making. START collaborates with the Institute of Resource Assessment at the University of Dar es Salaam and the African Academy of Science to manage the ACCFP. The project is funded under the IDRC/DFID CCAA program (<http://www.start.org/programs/africanCCFP.html>).

CCCP: The Climate Change Challenges Programme (CCCP) is a long-term commitment by the CGIAR and partners within the Earth System Science Partnership to address the pressing and complex issues of food production and food security under a changing climate. START and the CCCP are exploring opportunities for START to engage in capacity building in support of the CCCP research themes of diagnosing vulnerability and analyzing opportunities, unlocking the potential of macro-level policies, enhancing decision-making, adaptation pathways for managing current climate risks and under progressive climate change, and poverty alleviation through climate change mitigation. START will do this through such activities as offering advanced institutes and developing university curricula on agriculture and climate change, promoting science-policy dialogues on key food production and security issues, utilizing risk communication methods and tools developed through the ACCCA project, and mobilizing the network of START scientists who work in the CCCP's target regions of West and East Africa and South Asia.

Science-policy dialogues: START in partnership with the IPCC, UNEP, WMO, the University of Ghana, the University of Dar es Salaam, and the Bangladesh Centre for Advanced Studies, will be conducting climate change science-policy dialogues during 2009-10 under the Integrating Climate Change Mitigation and Adaptation into Development Planning project. The national dialogues will take place in Ghana, Nigeria, Senegal, Tanzania, Rwanda, Burundi, Nepal, Bhutan, and Bangladesh, with the objective of broadening support for the integration of climate change

mitigation and adaptation knowledge into national strategies for sustainable development and poverty reduction. The dialogues are intended to inject the best available scientific knowledge from the IPCC Climate Change 2007 report and other sources into policy processes and decision-making in the targeted countries, and to engage the science and policy communities of the targeted regions to develop a shared vision of research and assessment needed to serve climate change decision-making needs.

Building Long Term Capacity for Managing and Adapting to Climate Change in Africa and Asia: START, together with SEI, recently implemented the first phase of a SIDA-funded program. The program aims to enhance capacity in least developed countries across Africa and South and Southeast Asia to better understand and manage risks associated with global change, particularly climate change and variability. The first phase of the program assessed targeted countries' current education and training capacities for improving research and understanding of vulnerability, adaptation and resilience to climate risks and relevant capacity building priorities. During its next phase, the program plans to convene and enhance the capacity of national level interdisciplinary resource groups that include representatives from universities, scientific research institutes, government, industry, NGOs, and others. Future activities also include regional workshops and training seminars, development of curricula and training materials, and support for traveling faculty and research fellowships.

Adaptation was also a major focus of the AIACC project and practices and recommendations for adaptation planning are synthesized in 'A Stitch in Time, Lessons for Climate Change Adaptation from the AIACC Project' (available at http://www.aiaccproject.org/working_papers/working_papers.html). More detailed analysis can be found in Climate Change and Adaptation (2008; from Earthscan). Many of the institutions, investigators and stakeholders that participated in the AIACC project are working together to apply some of the lessons in planning and promoting adaptation actions.

START PLEDGES NEW ACTIONS TO:

- Strengthen our partnership with weADAPT by contributing information about methods, tools, experiences and lessons to the knowledge base; weADAPT is a new web-based platform developed by the Stockholm Environment Institute and others to enhance the knowledge base of the adaptation community (<http://www.weADAPT.org>);
- Explore ways to expand opportunities for education on global environmental change, including through the African Climate Change Fellowship Program;
- Reinforce capacity building and outreach activities with key policy and decision-making communities through additional actions; and
- Support World Bank Institute efforts to develop and disseminate e-learning modules on climate change and development.

AREA 7: RESEARCH

NWP OBJECTIVE: Promote research on adaptation options.

START ACTIONS: START will continue to promote and enable global environmental change research in the developing world through its networks of regional science committees, research centers, research nodes, and secretariats in Africa, Asia and Oceania. START activities engage more than 1000 developing country scientists annually in climate change and other global change research through major multi-institutional research initiatives; advanced study institutes and training workshops; small research grants; doctoral fellowships; awards to young scientists, visiting scientists and senior scientists; and scientific conferences and workshops.

In START's first decade, our research emphasized physical and biological aspects of climate change and other global environmental changes to improve understanding of their causes and consequences. In our second decade, social sciences and the integration of social and natural sciences

have figured more prominently in START research as we have sought to support decisions for adapting to climate change and global environmental change, building resilience and enabling sustainable development. Additionally, START is increasingly promoting enhanced communication between scientific and decision-making communities. START's Advanced Study Institutes provide an example of recent or on-going support for research on such topics as:

- Global environmental change and the vulnerability of water resources in the context of Millennium Development Goals in Africa;
- Monsoon prediction and predictability in support of the Monsoon Asia Integrated Regional Study;
- Vulnerability to Global Environmental Change, with the International Institute for Applied Systems Analysis (IIASA) and the International Human Dimensions Programme (IHDP);
- Climate Variability and Food Security, with the International Research Institute for Climate and Society, Columbia University (IRI); and
- Urbanization, emissions and the carbon cycle, with NCAR, IHDP and IGAC.

START PLEDGES NEW ACTIONS TO:

- Continue to expand START research activities that support decision-making about climate change adaptation, environmental risk management and integration of environmental risk management with sustainable development through workshops, science-policy dialogues, advanced institutes and other means; and
- Strategically plan future education, fellowship and capacity building programs to develop the next generation of vulnerability and adaptation researchers.

AREA 8: TECHNOLOGIES FOR ADAPTATION

NWP OBJECTIVE: Promote development and diffusion of technologies, know-how, and practices for adaptation; address identified adaptation priorities; and build on lessons learned from current adaptation projects and strategies.

START ACTIONS: START's actions to support the other eight areas of work – methods and tools • data and observations • climate modeling, scenarios and downscaling • climate related risks and extreme events • socioeconomic information • adaptation planning and practices • research • economic diversification – are contributing to the development and diffusion of technologies, know-how and practices for adaptation. These are exemplified by the achievements obtained through the AIACC, ACCCA, Biodiversity Conservation Under a Changing Climate, Cities at Risk Program, Integrating Climate Change Adaptation and Mitigation Knowledge in Development Planning, and the African Climate Change Fellowship Program.

START PLEDGES NEW ACTIONS TO:

- Review future research and capacity building programs to assure that they allocate human and other resources to the development of technologies, know-how and practices for adaptation, and to their dissemination to relevant stakeholders.

AREA 9: ECONOMIC DIVERSIFICATION

NWP OBJECTIVE: Promote understanding and the development and dissemination of ways to increase economic resilience and decrease reliance on vulnerable economic sectors.

START ACTIONS: Diversification of livelihoods and economic activities emerged from the AIACC project as a key strategy for building resilience and reducing risks where economies are highly dependent on climate sensitive natural resources. Diversification strategies for managing current climate risks are in use in settings as varied as subsistence agricultural communities in northern Nigeria, Sudan, Mexico, Lao PDR, and the Philippines; smallholder commercial farms in Argentina, Mexico, and Thailand; and pastoral systems in Mongolia. Recommendations from these and other studies urge further economic diversification as important for future adaptation to climate change. However, there are significant constraints on diversification that are identified in several AIACC studies. Success will require integration of development strategies with adaptation planning. Findings related to economic diversification are included in AIACC Working Paper No. 48, 'A Stitch in Time, Lessons for Climate Change Adaptation from the AIACC Project.'

START PLEDGES NEW ACTIONS TO:

- Develop research activities to explore the barriers to economic diversification as an adaptation strategy and strategies that have proven effective in diversifying economic activities.

START'S Partners

START works with numerous partners, including:

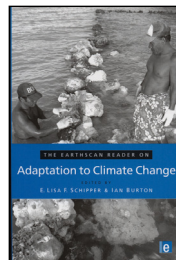
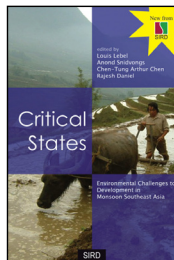
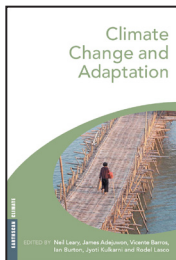
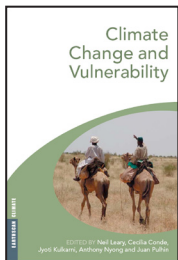
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START'S Financial Sponsors

Current and recent financial support for START includes grants from:

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This booklet was created to complement the UNFCCC booklet entitled, *The Nairobi Work Programme on Impacts, Vulnerability and Adaptation to Climate Change*. Some description of the NWP areas of work and objectives provided herein are reproduced from that booklet.

Additional information about the Nairobi Work Programme may be found on the web at:

http://unfccc.int/adaptation/sbsta_agenda_item_adaptation/items/3633.php.



