



## SysTem for Analysis, Research and Training

### Introduction

START (the SysTem for Analysis, Research and Training) is a non-governmental research organization that assists developing countries in Africa and Asia-Pacific to build the scientific expertise and knowledge needed to explore the drivers of and solutions to global and regional environmental change. Our goal is to reduce vulnerability through research-driven capacity building that informs decision-making. START's long-term commitment to building capacity through promoting multidisciplinary and multi-sectoral research and assessment activities and science-based communication has contributed significantly to enhancing the capabilities of individuals and institutions in Africa and Asia-Pacific to undertake global environmental change research.

### Program highlights

#### *Promoting adaptation research in Africa*

The *African Climate Change Fellowship Program (ACCFP)*, a collaboration between the University of Dar es Salaam and START, promotes innovative research and education on adaptation in Africa. The program supports African professionals, researchers, educators and graduate students to undertake activities that enhance their capacities for advancing and applying knowledge for climate change adaptation in Africa, through Policy Fellowships, Doctoral Research Fellowships, Post-Doctoral Fellowships and Teaching Fellowships. Through two rounds of the program, nearly 100 Fellows from over 25 countries in Africa have worked at over 15 African 'host' universities and research centers to complete their studies. The Fellowships cover areas of food security, human health, ecosystem services, and disaster risk reduction.

#### *Advancing knowledge about global environmental change, agriculture and food security*

*Assessments of urban and peri-urban agriculture and climate change.* START in partnership with UNEP, WMO, IPCC, USAID, the University of Ghana, the University of Daressalaam and the Bangladesh Centre for Advanced Studies recently launched a 9-city assessment on urban and peri-urban agriculture and climate change. Interdisciplinary teams of scientists are carrying out the assessment in Dakar, Senegal; Tamale, Ghana; Ibadan, Nigeria; Daressalaam, Tanzania; Kampala, Uganda; Addis Ababa, Ethiopia; Dhaka, Bangladesh; Kathmandu, Nepal; and Chennai, India. The assessment focuses on how rapid urbanization and global environmental change, including climate change, could affect food production systems in and around these cities. Such production systems generate much of the non-staple foods that contribute significantly to nutritional security for urban dwellers and are a key livelihood resource of the urban poor.

*African Grants Program on Global Environmental Change.* In 2011, START awarded grants to research teams in 16 African countries to examine how changes in ecosystem services affect livelihoods and food security, the potential for promoting adaptation through diversification of farming systems, and climate change impacts on staple food crops. In late 2012, START will convene a Learning Forum to bring together grantees from the 16 projects

and other specialists from Africa to share findings of their research, develop synthesis papers, and examine ways of more effectively communicating their findings to decision makers.

### ***Building skills for interpretation, analysis and application of climate model data in Africa***

START is partnering with the WCRP, the Climate Systems Analysis Group at the University of Cape Town, the International Center for Theoretical Physics and the Swedish Meteorological and Hydrological Institute, the Climate and Development Knowledge Network and the UNDP Africa Adaptation Programme to promote skill development for analyzing and interpreting data generated from the WCRP-led Coordinated Regional Downscaling Experiment initiative. The training program engages African hydro-meteorology and climate experts with vulnerability and adaptation experts. Thus far, over 40 Africans have been engaged. In 2012, START, the University of Cape Town's Climate Systems Analysis Group, ACMAD and UNDP-AAP will co-convene a workshop in West Africa on interpretation and analysis of downscaled climate model data for West Africa.

### ***Supporting adaptation planning in vulnerable cities***

START's ongoing, multi-year program "*Cities at Risk*" is promoting and supporting the development of urban adaptive capacities in Asian coastal megacities, with particular emphasis on integrating science and policy in managing and reducing risks and vulnerabilities brought on by climate change and urban growth. The program engages scientists, city planning professionals, representatives from policy and development organizations and other civil society practitioners in visioning exercises, training on vulnerability assessments and communication initiatives. This effort is in collaboration with START's Southeast Asia Regional Research Center, the East West Center, Asia-Pacific Network, and Academia Sinica based in Taipei.

The second international conference on "*Cities at Risk: Building Adaptive Capacities for Managing Climate Change Risks in Asian Coastal Cities (CAR II)*" held 11-13 April 2011 in Taipei, Taiwan engaged over 80 participants and consolidated a network of researchers, decision-makers and institutions in the region. More recent activities include organization of a national science policy dialogue for North Coastal Jakarta (Indonesia) that produced a two-year action plan for climate change training and communication activities for the city. Collaborative activities with Ho Chi Minh City and Mumbai will take place in 2012.

### ***Promoting research on disaster risk reduction and global environmental change***

*Integrated Research for Disaster Risk (IRDR) Program.* Over the next several years, START will be engaged in international capacity building activities to support the Science Plan of the Integrated Research for Disaster Risk (IRDR) program— a global initiative co-sponsored by ICSU, the United Nations International Strategy for Disaster Reduction, and the International Social Science Council. The three IRDR priority themes are characterization of hazards, vulnerability and risk; understanding decision-making in complex and changing risk contexts; and reducing risk and curbing losses through knowledge-based actions.

During the past year START collaborated with the IRDR to establish an International Center of Excellence for IRDR at the Academia Sinica based in Taipei, Taiwan. In March 2012, START in collaboration with the Taipei Center, conducted an advanced institute on forensic investigations of disasters to train 25 Asian scientists and practitioners on factors that contribute to exposure, vulnerability, resilience and recovery from disaster events. A follow-up advanced institute will be held late in 2012. In addition, START is organizing a series of senior level international guest lecturers and visiting research fellows to contribute to the IRDR effort in Asia.

*Disaster risk research in South Asia.* START is collaborating with CDKN to promote policy relevant research on disaster risk reduction and climate change adaptation in South Asia. The two-year program funds interdisciplinary investigations on DRR and climate change with an emphasis on research to inform policy and decisions concerning governance at local/regional scales. A learning forum will be held near the end of the project to share results among the researcher teams, the regional scientific community, and regional policy makers and practitioner groups.

***Building African Capacity for Conserving Biodiversity in a Changing Climate***

This education and training program addresses the challenge of managing emerging risks to biodiversity from climate change in the biodiversity-rich Albertine Rift region of eastern Africa. The International START Secretariat and the Institute of Resource Assessment (IRA) at the University of Dar es Salaam are jointly implementing this effort with funding from the MacArthur Foundation.

The program, hosted at IRA, offers MS-level course for conservation practitioners from the region coupled with externships that allow program participants to apply knowledge from the courses to field-based conservation efforts. The MS-level course focuses on climate change risks to ecosystems and biodiversity, and explores strategies for conserving biodiversity under a changing climate. In the second round of the program, START added a training component aimed at educators from regional universities. The training component includes on-line distance learning course modules (currently under development) that will help faculty at regional universities to develop courses that fit their teaching needs.

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