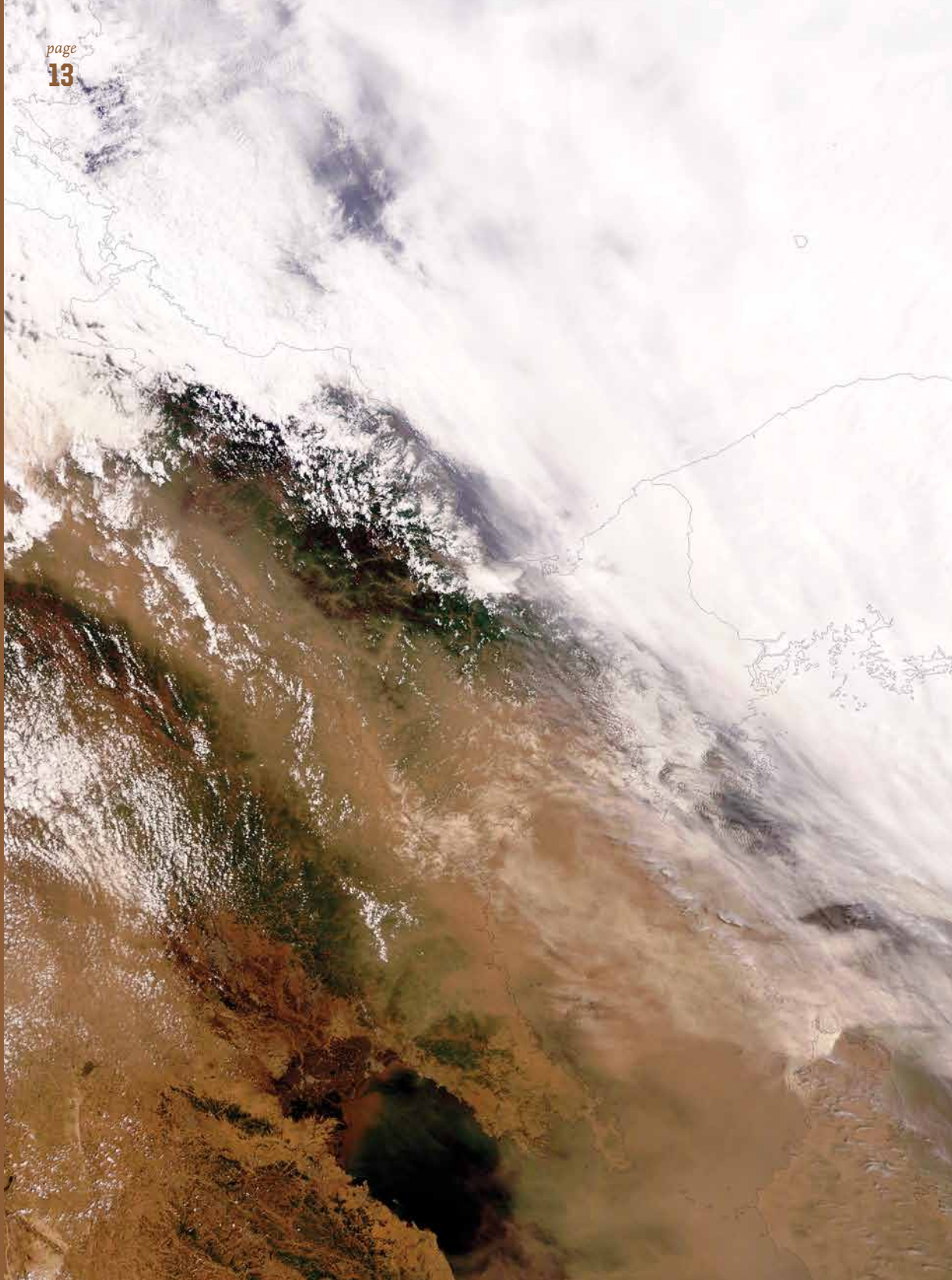




# Enabling Research for Action

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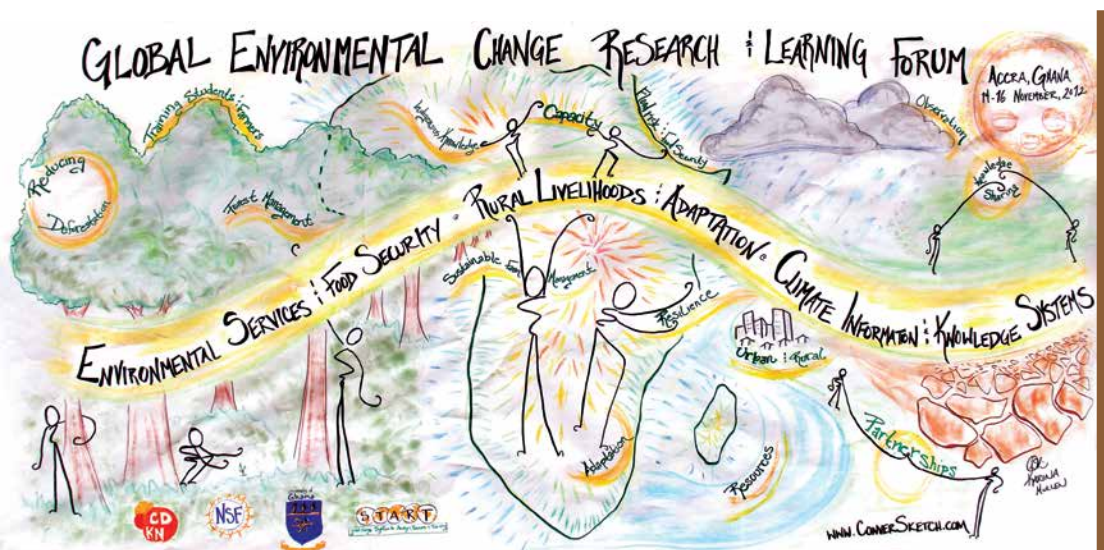
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# GRANTS FOR GLOBAL ENVIRONMENTAL CHANGE RESEARCH IN AFRICA

Since 2004, START has promoted place-based integrated research through its program of *START Grants for Global Environmental Change Research in Africa*. START's GEC grants program seeks to (1) strengthen both individual and institutional capacity for interdisciplinary research; (2) contribute to enhancing knowledge of global change science; (3) create long-term, international collaborative research partnerships among African scientists and scientists in the US and Europe; and (4) provide outreach to policymakers and the public.



Graphic recordings were used to capture GEC grantee's ideas and synthesize complex concepts at the 2012 GEC Research & Learning Forum in Accra, Ghana.

During 2011-2012, the *START Grants for GEC Research in Africa* program supported 16 research projects in 14 African countries. The projects, all concerning the theme of climate change, agriculture, and food security, were topically and geographically diverse. They addressed food production and livelihoods in estuaries, river deltas, and lagoons in northern, western, and southern Africa; agriculture and conservation at the forest fringe in humid

areas; and livelihoods derived from agriculture and tourism in semi-arid areas. In addition to the principal investigator for each project, 48 co-investigators provided unique skills from varied disciplines within the natural sciences and social sciences. Many projects included graduate students and junior scientists who received hands-on training in research methodologies; several projects incorporated local stakeholders in research design and implementation. Such stakeholders included subsistence farmers, women leaders, local youth, tribal chiefs, and other community members whose homes, villages, and livelihoods are being affected by changing conditions and pressures.

START grantees consistently indicate that participation in the GEC grants program strengthens international collaborative partnerships and expands their African research networks. High-quality outputs of GEC grants-supported projects also inform follow-on actions at local, national, and regional levels.

### A BRIGHTER FORECAST IN A CHANGING WORLD

The 2011/2012 GEC Africa project *Engaging Farmers and Climatologists in Adaptation to Climate Variability and Change in the Okavango Delta of Botswana* promoted the integration of local/traditional weather forecasting knowledge with scientific knowledge gleaned from model-based seasonal climate forecasts. Throughout their research, project investigators Oluwatoyin Kolawole and Piotr Wolski facilitated social surveys and community discussions that indicated the extent to which information from meteorological services is not readily available in many parts of Botswana. Researchers held a two-day “Weatherman’s Workshop” that brought together community members and scientists for discussions around research results and recommendations to more closely link indigenous knowledge to science-based forecasting. One of the workshop participants, speaking through a local chief, noted:

“What you have done today is unprecedented in the history of researcher-farmer engagement in our communities. When people come to ask us questions about what affected us, they never came back to give feedback on their findings. But yours is totally different! Not only have you provided some feedback on your current study, you have also created a forum for us to interact with weather scientists. ... It is our hope that we, the farmers and community people, will continue to benefit from this kind gesture and that we will be able to enjoy our working relationship with weather scientists in addressing challenges posed by climate change.”

Key recommendations of the workshop were shared with the Botswana meteorological services in order that they could enhance the effectiveness and increase the use of weather forecasting by local communities. This project reflects START’s commitment to research that informs action.



## 2011/2012 ROUND OF GRANTEES:

Management of Ecosystems Services of the Forests of Southwest Nigeria in Support of Rural Livelihoods and Food Security

*Principal Investigator:* Victor Adekunle,  
Federal University of Technology, Nigeria

Reducing Tropical Deforestation and the Protection of Ecosystem Services to Support Food Security in Southwest Cameroon

*Principal Investigator:* Gordon  
Ajonina, Cameroon Wildlife  
Conservation Society, Cameroon

Sustainable Farmland Management in the Context of Climate Change in Inland Valleys of Southern Benin

*Principal Investigator:* Irenikatche  
Akponikpe, Universite de Parakou, Benin

Changes in Tree Reproductive Phenology: Causes and Implications in and around Budongo Forest Reserve, Uganda

*Principal Investigator:* Fred  
Babweteera, Budongo Conservation  
Field Station, Uganda

Impact of Climate Change on Water Resources, Agriculture and Food Security in the Ethiopian Rift Valley: Risk Assessment and Adaptation Strategies for Sustainable Ecosystem Services

*Principal Investigator:* Dagnachew  
Legesse Belachew, Addis Ababa  
University, Ethiopia

Improving Seasonal Forecast Information for Managing On-farm Decisions

*Principal Investigator:* Olivier Crespo,  
University of Cape Town, South Africa

Integrating Indigenous Knowledge and Scientific Methods for Flood Risk Analyses, Responses and Adaptation in Rural Coastal Communities in Nigeria

*Principal Investigator:* Oluseyi Olubunmi  
Fabiya, Regional Centre for Training  
in Aerospace Surveys, Nigeria

Community-Based Management of Ecosystems and Natural Resources for the Improvement of Rural Livelihoods and Food Security in the Nigerian Savannah

*Principal Investigator:* Mayowa Fasona,  
University of Lagos, Nigeria

Engaging Farmers and Climatologists in Adaptation to Climate Variability and Change in the Okavango Delta of Botswana

*Principal Investigator:* Oluwatoyin  
Kolawole, Okavango Research  
Institute, Botswana

The Role of Urban and Peri-Urban Agriculture in Enhancing Food Security and Climate Change Resilience in East and West African Cities

*Principal Investigator:* Shuaib Lwasa, Makerere University, Uganda

The Application of Earth Observation Methods for Monitoring and Assessment of Agro-forestry in Senegal and Ghana

*Principal Investigator:* Cheikh Mbow, University Cheikh Anta Diop, Senegal

Climate Change Adaptation for Rural Communities Dependent on Agriculture and Tourism in Marginal Farming Areas of the Hwange District, Zimbabwe

*Principal Investigator:* Charles Nhemachena, Council for Scientific and Industrial Research, Zimbabwe

Assessing Adaptation Responses by Smallholder Farmers in Northern Ghana to Climate Change and Biodiversity Loss

*Principal Investigator:* Yaw Osei-Owusu, Conservation Alliance, Ghana

The Impact of Climate Change on Food Security Among Coastal Communities of Keiskamma, in the Eastern Cape, South Africa

*Principal Investigator:* Anthony Ribbink, Sustainable Seas Trust, South Africa

Sensitivity of Coastal Lagoon Ecosystems to Climate and Related Global Changes: Developing a North African Lagoons Network

*Principal Investigator:* Maria Snoussi, Institut de recherche pour le développement, Morocco and University Mohammed V-Agdal, Rabat, Morocco

Targeting Crop Yield Increases Under Future Climate for Greater Food Security in the Upstream Catchment of Lake Victoria Basin

*Principal Investigator:* John Wasige, Makerere University, Uganda



# PARTNERSHIP ENHANCEMENT AWARDS

**R**obust south-north research partnerships are critical for advancing knowledge about GEC processes, many of which occur across regions. In order to foster such partnerships, START provided opportunities for five African scientists to spend two to four weeks at US host institutions in 2012. The scientists were recipients of START's first round of the *Partnership Enhancement Awards*, which make available competitive small grants to African scientists to enable the development or strengthening of partnerships with US scientists and/or graduate students for collaborative GEC research. Activities supported by the program include, for example, collaborative proposal development, interactive training or analysis, preparation of joint publications, and related activities that stimulate Africa-US partnership in collaborative research. The program fosters greater integration of science and scientists from Africa with international research and assessment projects and, in doing so, aims to enhance research, training, and networking opportunities for awardees. The 2012 round of *Partnership Enhancement Awards* was specifically targeted toward climate change, agriculture, and food security research.

## FROM ONE GREAT LAKES REGION TO ANOTHER

One of the primary responsibilities of Dr. Ismael Kimerei, Research Scientist for the Tanzania Fisheries Research Institute, is to monitor the changing conditions of Lake Tanganyika, one of the Great Lakes of Africa. Supported by a *START Partnership Enhancement Award*, Kimerei spent two weeks in June 2012 at Illinois State University where he partnered with Dr. Catherine O'Reilly to build relationships and initiate cooperation with US researchers who are investigating pertinent issues affecting the US Great Lakes. Kimerei is pioneering an effort that would establish an integrated system of observation buoys across Lake Tanganyika—the first of its kind in Tanzania.

During his visit to Illinois State, he and O'Reilly participated in a workshop on the use of sensors and buoys for long-term monitoring of daily changes in lake conditions, made site visits to research facilities on the US Great Lakes, and met with potential donors for the Lake Tanganyika effort. Since the visit, Kimerei and O'Reilly have prepared collaborative proposals for two intensely competitive international Calls for Proposals. In addition, the scientists have jointly produced two manuscripts based on collaborative research that was initially developed during their time together in 2012.





## VISITING SCIENTISTS AND THEIR HOSTS FOR 2012:

### Land use change and the impacts on soils in farming areas of Mount Elgon

*Visiting Scientist:* Yazidhi Bamutaze  
Makerere University, Uganda

*Host:* Tonny Oyana  
Southern Illinois University, IL

### Decision Support System for Agro-technology Transfer (DSSAT) model training for the development of modeling climate changes impacts on maize culture in Ethiopia

*Visiting Scientist:* Yemenu Desta Fitsume  
National Institute of Agricultural  
Research, Ethiopia

*Host:* Gerrit Hoogenboom  
Washington State University, WA

“START brings together people, ideas, organizations and resources. It focuses these on critical questions about our future. The results are enhanced capabilities, relationships and dispositions for collaborative global change science. No one does this better.”

—Neil Leary, *Director of the Centre for Sustainability Studies,  
Dickinson College / Former Program Director at START*



### Development of sensing systems for measuring climate variables in Lake Tanganyika

*Visiting Scientist:* Ismael Kimerei  
Tanzania Fisheries Institute, Tanzania

*Host:* Catherine O'Reilly  
Illinois State University, IL

### The influence of ocean changes on the climate of the Sahel

*Visiting Scientist:* Seyni Salack  
University Cheikh Anta Diop, Senegal

*Host:* Alessandra Giannini  
IRI, Columbia University, NY

### The impacts of climate change on groundwater in the Volta River Basin

*Visiting Scientist:* Sandow Yidana  
University of Ghana, Ghana

*Host:* Duke Ophori  
Montclair State University, NJ



United States  
Global Change  
Research Program



# DISASTER RISK REDUCTION & CLIMATE CHANGE ADAPTATION IN SOUTH ASIA

South Asia’s rapid development, while providing opportunities for economic growth, has increased the region’s vulnerability to natural disasters. START supports collaborative research in the areas of climate change adaptation and disaster risk reduction in South Asia through grants to interdisciplinary teams of researchers in Nepal, Pakistan, and India.

START, with support from the Climate and Development Knowledge Network (CDKN), awarded six interdisciplinary research projects for integrating disaster risk reduction and climate change adaptation into resilient development in South Asia. Under this broad research theme, scientists are investigating institutional arrangements and governance structures, policy innovations that promote convergence of disaster risk reduction and climate change adaptation into policy and practice, and the changing nature of development factors, all of which shape vulnerability to disasters.

Mountainous regions in South Asia are prone to mudslides that cut off remote villages from resources and assistance.



## DISASTER RISK REDUCTION RESEARCH PROJECTS

Getting Smart for Disasters	<i>Principal Investigator:</i> Sumana Bhattacharya, Intercooperation Social Development, India
Disaster Risk Reduction and Climate Change Adaptation in Koshi River Basin, Nepal	<i>Principal Investigator:</i> Laxmi Devkota, Nepal Development Research Institute, Nepal
Linking DRR, CCA and Sustainable Landscape Development Goals in the Eastern Himalaya	<i>Principal Investigator:</i> Sarala Khaling, Ashoka Trust for Research in Ecology and the Environment, India

Main streaming disaster risk reduction and climate adaptation in the Indus Ecoregion, Pakistan

*Principal Investigator:* Rab Nawaz, WWF—Pakistan, Pakistan

Ability of Local Multi-Stakeholder Action to Catalyze Shifts in Program and Policy Environment towards Mainstreaming DRR & CCA

*Principal Investigator:* Anshu Sharma, Sustainable Environment and Ecological Development Society, India

Towards Integrating Disaster Risk Reduction and Climate Change Adaptation: Understanding Flood Risk and Resilience in Eastern India

*Principal Investigator:* Shiraz A. Wajih, Gorakhpur Environmental Action Group, India



## CATALYZING COMMUNICATION ON BARMER'S CHANGING CLIMATE

Girls from a remote desert village in Barmer, Western India, are stepping out with microphones in their hands to run a community radio program on local issues. They are finding that a large number of local hardships get worse due to climate variability, but are also realizing that local action is key. The pilot community radio group is part of a SEEDS-led and START/CDKN-funded research project in the area. It is being piloted in partnership with the NGO UN-NATI, active in the area and able to provide sustainability to the initiative. Field results highlighted the need for better awareness on climate change risks and possible solutions. Such radio programs can provide the platform for issues, debates, and messages, including on government schemes that many people are unable to access.



SEEDS, [www.seedsindia.org/](http://www.seedsindia.org/) Sarika Gulati

## CITIES AT RISK

**G**lobal environmental change, including climate change, is expected to exacerbate the risks and vulnerabilities inherent to the multistressor context of urban systems. Indeed, climate change will aggravate existing urban challenges and likely add layers of risk that will continue to threaten urban well-being and growth. Cities also offer opportunities, however—opportunities for innovative collaboration and policy responses to climate change. For these reasons, climate risk management and adaptation in urban areas, particularly in coastal cities at risk, is one of the fastest growing parts of START's portfolio in Asia and Africa.

Through its *Cities at Risk* initiative, START carries out a number of activities each year with the aim of enhancing adaptive capacities for managing and reducing risks and vulnerabilities brought on by the combined effects of climate change and rapid urban growth. In Asia, START convenes international conferences, organizes intensive training institutes, and supports city-specific research, communication, and outreach activities. These activities encourage coordinated action among scientists, policymakers, and the public and the integration of scientific information about vulnerabilities, impacts, and adaptation into planning and policy.

### PLANNING INTEGRATED COASTAL ADAPTATION STRATEGIES FOR NORTH JAKARTA SECURITY



Efforts initiated in early 2012 in Jakarta, Indonesia, are supporting collaborative urban planning by researchers, provincial government, and communities at high risk for flooding. The project is uniquely promising for the city of nearly 10 million inhabitants, where much research has been conducted to highlight flood risks but where lack of integration between planning strategies has led to little action on the ground. Indeed, a science-policy dialogue organized in 2011 by the Indonesian Association of Planners (IAP), with START

support, emphasized that the greatest challenge in managing climate change and related impacts in Jakarta is “the lack of collaboration among stakeholders to manage the strategic area.”

The current START-supported project in Jakarta, *Planning Integrated Coastal Adaptation Strategies for North Jakarta* (PICAS), responds directly to this challenge by designing and facilitating a collaborative process for integrating previous recommendations on climate related risk and disasters in Jakarta; assessing the priorities, feedback, and additional ideas of at-risk populations; and leading collaborative development of a risk management and adaptation action plan for selected study sites in the city.

IAP is the lead organizer for PICAS and has successfully garnered active engagement in the project by eight other Jakarta urban planning and development institutions. One key player is the Provincial Government of DKI Jakarta as a fully committed, collaborative partner in both project design and implementation. PICAS activities and emerging results are receiving significant media attention in Indonesia and the region. A conference marking culmination of the project is scheduled for November 2013.



## BUILDING ADAPTIVE CAPACITY FOR MANAGING CLIMATE CHANGE IN COASTAL MEGACITIES

The International START Secretariat and the Southeast Asia START Regional Research Center (SEA-START) support capacity building efforts for this initiative, commonly called the *Coastal Cities at Risk* (CCaR) project. CCaR promotes research and knowledge exchange among cities in Southeast Asia, West Africa, and Canada. The primary objective of the project is to develop the knowledge base and enhance the capacity of mega-cities to successfully adapt to and cope with risks posed by the effects of climate change, including sea level rise, in the context of urban growth and development.

Work on the “City Resilience Model” has included an original systems framework for quantifying resilience and a Generic System Dynamics Simulation Model guide. Knowledge on hazard characterization, health and economic systems, and developing and validating a System for Bangkok and an exchange between Canada and Bangkok led to Bangkok’s City System Simulator. Parallel work on adapting the city simulator framework in Manila and Lagos is ongoing.





## IMPROVING INTEGRATION OF SOCIAL VULNERABILITY INTO URBAN PLANNING



New 2013 *Cities at Risk* activities in Ho Chi Minh City (HCMC), Vietnam, aim to integrate social vulnerability considerations into the city's decision-making and policy processes. Robust decision making (RDM) is an iterative decision analytic framework that offers a means to evaluate urban plans over a wide range of plausible futures, identify ways to make those plans more robust, characterize the vulnerabilities of such plans, and facilitate discussions with stakeholders. A three-day workshop organized by START and the RAND Corporation in June 2013 brought together practitioners, technical specialists, decision makers, and academics from the region to review and discuss an RDM analysis recently completed for the

“START leverages limited resources to build up leadership, relationship and partnership for facilitating cross-cutting capacity building.”

—Wei-Sen Li, *Deputy Executive Secretary, National Science and Technology Centre for Disaster Reduction, Taiwan*



city. Participants generated a list of measures of social vulnerability, potential policy interventions, and relevant uncertainties to consider for HCMC. Discussions focused on how social vulnerability indices could be quantified as an input to the risk model and add richness to model outputs. This initial workshop will inform future analysis that considers tradeoffs and tipping points and helps identify creative new policies that meet the needs of a broader range of groups.



OBJECTIVE ANALYSIS. EFFECTIVE SOLUTIONS.



## CITIES AT RISK WORKSHOP–AFRICA



START is expanding its cities-related program to Africa. A March 2013 *Cities at Risk Workshop–Africa* brought together scientists, municipal representatives, and other practitioners to identify priority knowledge and capacity needs for urban risk management and resilience in Africa. Priority messages from the workshop emphasized the following:

- More work needs to be done in bridging gaps in knowledge on climate change impacts and the vulnerability of African cities.
- There is a strong need for scaling up targeted training for urban planners on how to incorporate climate change in their works.
- There is a dire need for “climate translators”—climate information must be presented in terms that are accessible to urban planners as well as the broader public.
- Good governance contributes to resilience in urban areas by enabling effective and integrated action on climate change by all stakeholders.
- Vulnerability of infrastructure and communities in many cities in Africa cannot be meaningfully tackled without addressing urban poverty.
- There is a need to engage African cities in a sustained dialogue on low carbon growth through various initiatives, including the Durban Adaptation Charter.

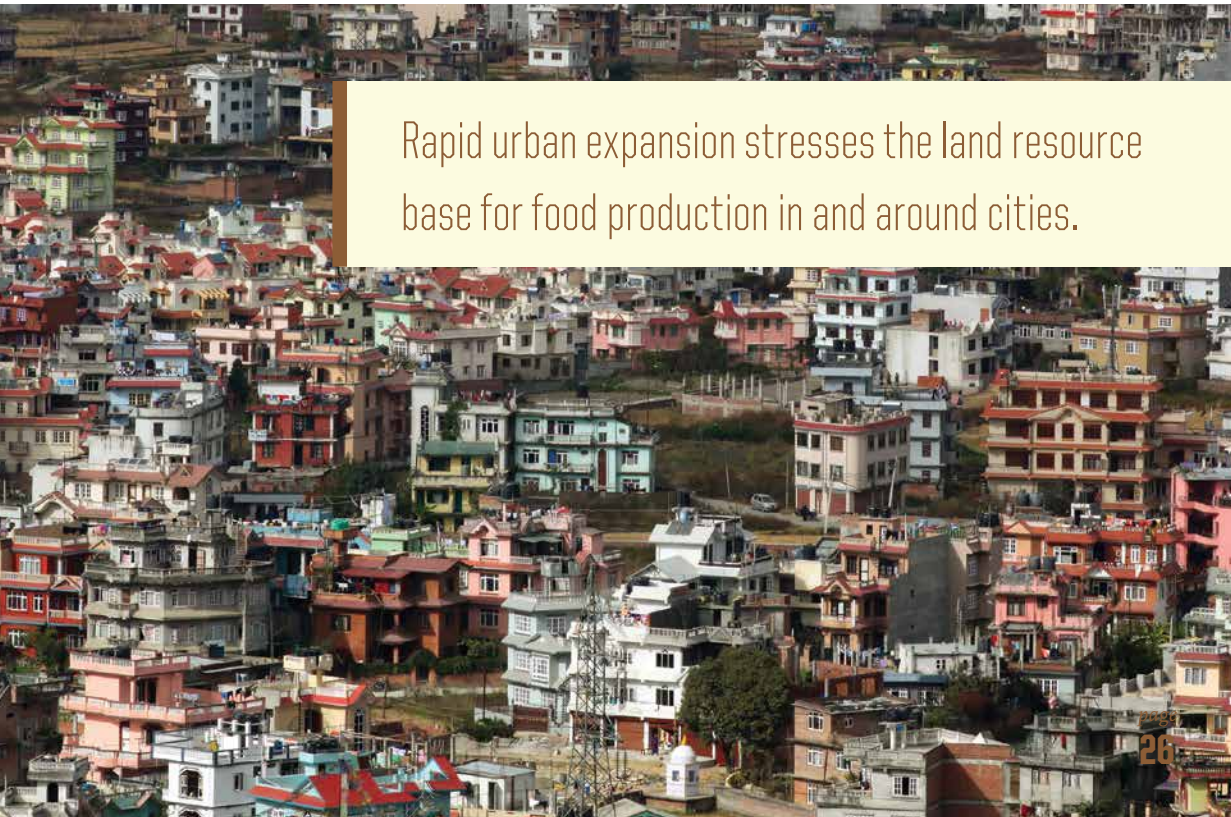
The four-day workshop included expert presentations, several facilitated discussions, and participatory activities that challenged participants to view urban development from multiple, interwoven perspectives and a one-day “Climate Change Green Tour” that enabled participants to experience examples of mitigation and adaptation activities in and around Durban. Workshop recommendations will inform a new three-to-five-year program of *Cities at Risk* research, education, and training for Africa.



# ASSESSMENTS OF URBAN AND PERI-URBAN AGRICULTURE

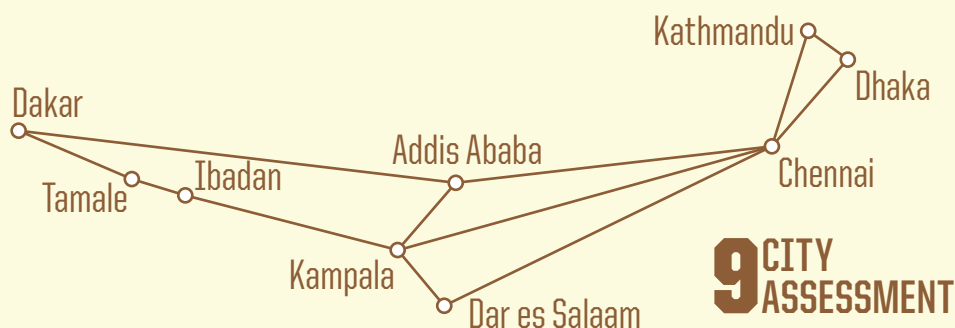
Urban and peri-urban agriculture (UPA) provides an important source of fresh vegetables, poultry, eggs, dairy, and nonstaple foods to cities, thus contributing to dietary diversity in urban areas and stimulating economic activity in the urban food system. However, UPA systems are under pressure because of rapid urban growth, weak governance over land and water allocation in peri-urban spaces, urban pollution, and climate change. START is partnering with several organizations to undertake a nine city assessments on urban and peri-urban agriculture for the purpose of better understanding and characterizing threats to UPA and to identify appropriate actions to ensure its long-term sustainability.

The assessments examine UPA through the lens of intensifying urban pressures and increasing climate risks, with the objective of identifying how these two key drivers could potentially interact to undermine the long-term sustainability of UPA, and what response options are needed. The assessments are intended to examine (1) the current state of knowledge and where key knowledge gaps exist; (2) climate trends and projections in the context of important nonclimate stressors that, if addressed, could reduce exposure to climate risks and build adaptive capacity; and (3) critical areas for strengthening scientific capacity in order to better inform decision making on risk management and adaptation that have direct implications for UPA and urban food systems.



Rapid urban expansion stresses the land resource base for food production in and around cities.





## URBAN GROWTH AND CLIMATE CHANGE— CHALLENGES FACING UPA IN DAKAR, SENEGAL

Dakar, Senegal is one of the nine cities in this UPA assessment. Dakar has a strong urban/peri-urban agriculture sector that provides a major source of vegetables for its urban residents, and livelihoods for farmers and those involved in transport, processing and marketing. Most of the vegetables are produced in the Niayes, a verdant strip of land that runs through the Cape Verde peninsula. Land around and within the Niaye depression is being rapidly converted from permeable surfaces, many of which supported agriculture, to impermeable surfaces in order to meet housing needs, and aquifers that support agricultural and non-agricultural water needs has become highly degraded. The land and water challenge will become increasingly acute with climate change, given Dakar's peninsular location, as rising sea levels further degrade the already stressed aquifers that provide water for Dakar homes and industries and its large UPA sector. This assessment, to be released in late 2013, is helping to make these connections so that comprehensive adaptation planning will be able to more fully encompass urban food systems in which is placed urban and peri-urban agriculture.

Image courtesy of Madeline Bair





# AFRICAN CLIMATE CHANGE FELLOWSHIP PROGRAM

The African Climate Change Fellowship Program (ACCFP) program promotes innovative adaptation research in Africa. Alumni of the program represent a cadre of climate change specialists who are promoting and facilitating adaptation research, education, and decision making across Africa. Since the program's inception in 2008, nearly 100 ACCFP Fellows have been matched with universities, research centers, and other host institutions across Africa where they collaborate with mentors to implement individually designed projects that, for example, assess and prioritize climate risks, investigate current practices for designing and implementing adaptation actions, and consider approaches for integrating adaptation with planning and practice.

During 2012–2013, two rounds of ACCFP Fellowships were awarded. By design, the 2012/2013 ACCFP Fellowships supported projects that directly responded to and advanced knowledge on one or more critical questions identified with input from experts across Africa. The 2012/2013 questions follow:

- Q1: What **institutional innovations** are required to advance development goals and improve the resilience of vulnerable communities in Africa so that they are more able to cope with current and future climate variability and change?



- Q2:** What **economic, political, cultural, and/or social incentives** are needed in the short and longer term to motivate collections action on climate change?
- Q3:** To what extent does the **integration of knowledge systems** through **co-generation** of knowledge and **co-learning** provide an opportunity for understanding climate variability and change and related actions?
- Q4:** What **approaches to policy development** are needed to generate policies that are well grounded in relevant priorities and needs, address current risks and vulnerabilities, and are supported by strong governance systems that ensure implementation and accountability?
- Q5:** How can climate change science and adaptation planning help to address other **development challenges**, including poverty, hunger, conflict, justice, illiteracy, and human security?

By requiring that every Fellowship project somehow respond to one or more of the questions, the ACCFP also aims to link Fellowship projects that address critical issues and contribute in meaningful and innovative ways to local, national, regional, and international climate change adaptation discourses.

“The time is here for everyone to collaborate in developing effective and efficient climate change adaptation strategies, including through more sustainable approaches in the educational sector such as curriculum reforms.”

—Nicholas Ozor, *ACCFP Alumnus, Nigeria*



The ACCFP is unique in that it offers Fellowships to not only researchers, scientists, and academics but also to professionals directly responsible for decision making and management of climate-sensitive resources. The rich mix of perspectives, interests, and responsibilities that characterize ACCFP Fellows and the institutions that support them engenders an engaged community dedicated to building scientific capacity in Africa to manage climate change risks. ACCFP projects are directly supporting adaptation decision making, and many program participants collaborate even after their initial ACCFP engagements.

The next phase of the ACCFP, expected to kick off in late 2013, will include additional rounds of 6-to-12-month Fellowship awards as well as intensive adaptation short courses for practitioners and graduate students. Day-to-day management of the ACCFP is now led by the ACCFP Secretariat based at the Institute of Resource Assessment at the University of Dar es Salaam.

## ACCFP ROUND II FELLOWS

ADAPTATION SCIENCE			
Amidu Owolabi Ayeni, Nigeria	University of Lagos	Georges Djohy, Benin	University of Parakou
Koulou Jeremie Fontodji, Togo	Université de Lomé	Martial Gapia, Centrafrican Republic	Université de Bangui
Bernard Kibet Kirui, Kenya	Kenya Marine and Fisheries Research Institute	Yao Etienne Kouakou, Ivory Coast	Centre suisse de recherche scientifique
Adnew Mekonnen, Ethiopia	Addis Ababa University	Grace Mudombi, Zimbabwe	University of Zimbabwe
Tolo Casim Umba, Uganda	Mbarara University of Science and Technology	Francis Opiyo Omondi, Kenya	University of Nairobi
Hodabalo Pereki, Togo	University of Lomé	Armél Sambo, Cameroon	Institut Supérieur du Sahel
Galine Yanon, Tchad	University Cheikh Anta Diop, Dakar	Bamutaze Yazidhi, Uganda	Makerere University
ADAPTATION POLICY			
Happison Chikova, Zimbabwe	Help Initiatives for People Organisation	Charlotte Enjoh Fonoch, Cameroon	Consultants and Intermediaries in Mining, Energy and Environment
Seth Kayomba, Uganda	Biodiversity Conservation for Rural Development	Bessie Madziwa, Zimbabwe	Zvishavane Water Project
Luc Lango Mumbere, RD Congo	Tanya Center for Conservation Biology	Rutendo Nhongonhema, Zimbabwe	Ministry of Agriculture
Godfrey Oluka, Uganda	Kampala Capital City Authority	Comlan Médard Ouinakonhan, Benin	Ministère de l'Environnement
Mahlalele Eunice Thlali, Lesotho	Department of Water Affairs		

## ACCFP ROUND III FELLOWS

ADAPTATION SCIENCE			
Issa Diedhiou, <i>Senegal</i>	<i>Université Cheikh Anta Diop de Dakar</i>	Pauline Noah Makula, <i>Tanzania</i>	<i>University of Dar es Salaam</i>
Nkulumo Zinyengere, <i>Zimbabwe</i>	<i>University of Cape Town</i>	Saloua Rochdane, <i>Morocco</i>	<i>University of Cadi Ayyad, Morocco</i>
Aichata Sako, <i>Mali</i>	<i>University of Bamako, Mali</i>	Emmanuel Zziwa, <i>Uganda</i>	<i>Makerere University, Uganda</i>
ADAPTATION POLICY			
Serge Djohy, <i>Benin</i>	<i>ONG Benin Espoir 2003</i>	Patrick Gwimbi, <i>Zimbabwe</i>	<i>National University of Lesotho, Lesotho</i>
Hilaire Lubweme Nkwe, <i>RD Congo</i>	<i>Régie d'Assainissement et des Travaux Publics de Kinshasa</i>	Jairos Joel Mahenge, <i>Tanzania</i>	<i>Tanzania Coastal Management Partnership, Bagamoyo, Tanzania</i>
Peter Zeddy Matata, <i>Tanzania</i>	<i>Tumbi Agricultural Research Institute Tabora, Tanzania</i>	Victoria Gervas Mwaifunga, <i>Tanzania</i>	<i>Ministry of Water, Mwanza, Tanzania</i>
Nicole Sarah, <i>Benin</i>	<i>LARES, Parakou, Benin</i>	Mireille Zebsa, <i>Cameroon</i>	<i>Centre Régional de la Récherche Scientifique et de l'innovation de l'Est, Cameroon</i>
ADAPTATION TEACHING			
Emiru Birhane Hizikias, <i>Ethiopia</i>	<i>Mekelle University, Ethiopia</i>	Dalitso Richard Kafumbata, <i>Malawi</i>	<i>Chancellor College, Malawi</i>
Julius Bunny Lejju, <i>Uganda</i>	<i>Mbarara University of Science and Technology</i>	Francis Mwaura, <i>Kenya</i>	<i>University of Nairobi</i>
Shakirudeen Odunuga, <i>Nigeria</i>	<i>University of Lagos</i>	Madaka Tumbo, <i>Tanzania</i>	<i>IRA—University of Dar es Salaam</i>



THE AFRICAN  
CLIMATE CHANGE  
FELLOWSHIP PROGRAM

**Adaptation**  
IDRC \* CRDI DFID

IDRC \* CRDI





# PAN-ASIA RISK REDUCTION FELLOWSHIP PROGRAM

**S**TART is committed to expanding the *African Climate Change Fellowship Program* model of adaptation research fellowships to Asia and beyond. In September 2013, START organized a planning meeting for the proposed *Pan-Asia Risk Reduction (PARR) Fellowship Program*. The program aims to build research and scientific communication skills, and to develop interdisciplinary curricula and bolder teaching capacities for understanding



complex interlinkages inherent to GEC across the Asia-Pacific region. The two-day PARR Planning Meeting brought together a small group of regional experts for serious discussion of PARR program design, objectives, and expected outcomes as well as evaluation criteria and funding possibilities. During the second day of the meeting, feedback on evolving ideas was sought from a larger group of representatives from US agencies and DC-based research, nonprofit, and funding organizations. The second day closed with a debriefing by the original group of participants, including synthesis of ideas and planning for follow-on roles and responsibilities. The pilot round of the PARR Fellowship Program is expected to kick off in 2014.



## GLOBAL ENVIRONMENTAL CHANGE AND GOVERNANCE—AFRICA

In furtherance of its long-standing GEC-related research and capacity development programs and activities in Africa, the International START Secretariat organized a *Global Environmental Change and Good Governance Workshop—Africa*, held in Accra, Ghana, September 23–24, 2013. A collaborative effort of START, the Earth System Governance Project, and the Institute for Environment and Sanitation Studies at the University of Ghana,

### COMMON GOALS AND A TEAM APPROACH: THE UNIVERSITY OF GHANA AND START

The University of Ghana, a START Affiliate in West Africa, continues to advance climate change research on several fronts. This includes recent investigations on the political economy of climate-compatible development, enhancing resilience to climate and ecosystem changes in semi-arid Africa, and identifying climate-smart investment strategies for the coastal zone. The University of Ghana also hosted a stakeholder workshop in July 2013, the first step in a collaborative project aimed at developing a prototype of an early warning system for climate change (CLIM-WARN). The project, sponsored by United Nations Environment Programme (UNEP) is jointly implemented by the Division of Early Warning and Assessment (DEWA) and brings together stakeholders from various sectors within Ghana, Burkina Faso and Kenya.

na, this workshop convened a select group of experts and thought leaders from varied disciplines to explore priority knowledge, capacity, and networking priorities in (good) governance dimensions of vulnerability to adverse impacts of climate change in Africa.



Earth  
System  
Governance



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Global Change  
Research Program