START AND THE NAIROBI WORK PROGRAM

START (the global change SysTem for Analysis, Research, and Training), promotes research-driven capacity building to advance knowledge on global environmental change. START's work is carried out through regionally based centers in Africa and Asia-Pacific, together with the International START Secretariat based in Washington, DC. START promotes capacity building of individuals and strengthening of institutions through activities that include grants and fellowships for research and assessments, curricula development, advanced training institutes, and outreach to decision makers through activities such as multi-stakeholder dialogues. START's activities:

- 1. Advance science and strengthen interactions at the interface of science, policy, and practice;
- 2. Engage people and institutions on climatic and other global change issues that span disaster risk reduction, land-use/landcover change, biodiversity conservation, urban development, human health, water resources management, agriculture and food security and regional climate modeling and climate services; and
- 3. Integrate knowledge generation with knowledge sharing that leads to informed action that in turn strengthens knowledge systems, as depicted in the figure below.

For more information about START please visit: www.start.org

1. Cities at Risk

Background

Title of Initiative/ Programme/Project: **Cities at Risk** (http://start.org/programs/cities-at-risk)

Activity 1 Implemented in collaboration with the SEA-START Regional Research Center
(Bangkok), the East-West Center, Ibaraki University, United Nations University and Manila
Observatory, with funding from the APN and collateral support from the International START
Secretariat

Activity 2 Implemented in collaboration with East-West Center and CCaR (Canada)

- A Continued efforts to promote awareness raising and understanding of current and future climate risks through its support for education and capacity building, risk communication and assessment
- ▲ Continued support for activities that enhance the process of generating and disseminating information and knowledge on adaptation to relevant stakeholder communities

Activities undertaken and main outputs	
Activity	Outputs
	See: http://start.org/programs/cities-at-risk
Activity 1: Week-long International	Under preparation: A publication for peer-reviewed
Training Workshop on Climate Change	journal
Vulnerability Assessment and Urban	
Development Planning for Asian Coastal	
Cities. For scientists, urban planners,	
managers and researchers	

Background	
Activity 2: Second international	Under preparation: Conference recommendations
conference on Cities at Risk: Building	identifying priorities for CAR programming in Asia
Adaptive Capacities for Managing	for the next several years and next steps, to be
Climate Change Risks in Asian Coastal	published by the IRDR International Centre of
Cities (CAR II), held April 2011 in	Excellence later this year
Taipei, Taiwan	

<u>Scientists</u>, <u>academics</u>, <u>practitioners</u> and <u>decision makers</u>: Help develop their capacity in climate change vulnerability assessment and application to urban development planning and governance

If appropriate, plans for the next steps	
Planned activity	Expected output(s)
New city-specific CAR activities are being initiated in North Jakarta, Indonesia (supported by USAID). Activities to include training and communication opportunities that build upon previous CAR experiences and respond to identified city needs	

2. Global Observation of Forest and Land Cover Dynamics

Title of Initiative/ Programme/Project: Global Observation of Forest and Land Cover Dynamics (GOFC/GOLD) (http://start.org/programs/gofc-gold)

Implement with support from NASA and in collaboration with USGS Earth Resources Observations and Science (EROS) Center on earth observation data

Element of action pledge on which progress is reported here:

A Continued efforts to improve access to and use of observational climate and other data and to disseminate relevant findings to decision-makers across society

Activities undertaken and main outputs	
Activity Activity 1: GOFC-GOLD/START Regional	Outputs See: http://start.org/programs/gofc-gold In the past year, 6 data specialists from 3 regions of Asia received training on data Network Data Initiative Training availability and applications at the USGS EROS Data Center. Upon returning to their home institutions, they advertise availability of data and make it available to communities of users in their home regions.
Activity 2: Support for GOFC-GOLD Regional	Six meetings / workshops organized to promote

and Thematic Workshops	exchange of information among Regional Network members, to offer training on the use of remote sensing products and to provide opportunities to present, expand and build on ongoing data distribution and application efforts.	
	aptation community within and beyond the	
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Scientist and academics: Access to data and the cresearch	apacity to utilize this data for global change	
Practitioners: Access to data and the capacity to	tilize this data for natural resource management	
If appropriate, plans for the next steps		
If appropriate, pla	ns for the next steps	
If appropriate, pla Planned activity	Expected output(s)	
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Planned activity Extension of GOFC-GOLD/START Regional	Expected output(s)	

3. Climate Change and Biodiversity Conservation in the Albertine Rift Region

Background

Title of Initiative/Programme/Project: Climate Change and Biodiversity Conservation in the Albertine Rift Region (http://start.org/programs/biodiversity6)

Implemented in Collaboration with the Institute of Resource Assessment, University of Dar es Salaam; Funded by the MacArthur Foundation

- A Developing and disseminating methods and tools for vulnerability assessment and adaptation planning; facilitating application and improvement of these methods by developing country organizations and researchers
- A Promotes awareness raising and understanding of current and future climate risks through its support for education, capacity building, and risk communication and assessment.
- A Review future research and capacity building programs to enable the allocation of human and other resources to the development of technologies, know-how and practices for adaptation, and to their dissemination to relevant stakeholders.

Activities undertaken and main outputs		
Activity	Outputs See: http://start.org/programs/biodiversity6	
Activity 1: Phase 1 of Education and Training program in 2008 engaged 20 conservation practitioners, researchers and graduate students in theoretical learning at the University of Dar es Salaam (UDSM). Phase 2 in 2010 similarly engaged 29 individuals.	1. 49 Individuals trained to date on regional biodiversity conservation and climate change issues. 2. Master's level curriculum for the Education and Training Program developed in 2008 and updated in 2010. 3. Master's level curriculum officially incorporated into UDSM's Master's Program in Natural Resource Assessment and Management (NARAM) to include climate change related issues. 4. A report outlining the experience and lessons learned from Phase 1 is available at: http://start.org/publications/biodiversity-report.html 5. Active network of practitioners, faculty and researchers generated in the region	
Activity 2: Education and Training program participants engaged in in field-based externship research in Phases 1 and 2	Additional information: http://start.org/programs/biodiversity6 1. 39 participants received practical experience in assessing climatic and non-climatic risks to biodiversity, ecosystem goods and services and livelihoods. 2. 5 Summary papers from externship teams of Phase 2 are under preparation 3. A synthesis paper from the 5 teams' externship research is planned	
Activity 3: Training of Trainers module in Phase 2 for faculty from regional universities.	 Training of Trainers curriculum developed. 10 faculty trained in developing courses on climate change and conservation related issues 	
Activity 4: Distance Learning tools and resources Activity 5: Stakeholder Dialogue (November 2011)	Under preparation: Online Distance Learning resources Planned: Summary of recommendations for practitioners and decision-making community	
Potential application/implication for the ad	aptation community within and beyond the	
NWP network		
Academics and educators: Curriculum resources	tor teaching conservation and natural resources	

related courses can help inform the next generation of experts, practitioners and decision-makers on climate risks to biodiversity, ecosystem services and livelihoods and strategies for adaptation.

Practitioners and policy makers: Awareness and understanding of climate change related challenges to conservation, ecosystem services and livelihoods to inform response strategies and decision making

If appropriate, plans for the next steps	
Planned activity	Expected output(s)
Expanding the program within and beyond the Albertine Rift region	 Outreach and engagement of a greater number of participants Enhanced knowledge networks Research papers, reports and policy- briefs

4. START Grants for Global Environmental Change in Africa

Background

Title of Initiative/Programme/Project: **START Grants for Global Environmental Change in Africa** (http://start.org/programs/africangec)

Funding from the US National Science Foundation/ US Global Change Research Program

- A Promote and enable global environmental change research in the developing world through its networks in developing regions of the world and through its partners.
- A Review future research and capacity building programs to enable the allocation of human and other resources to the development of technologies, know-how and practices for adaptation, and to their dissemination to relevant stakeholders.

Activities undertaken and main outputs	
Activity Activity 1: Four rounds of grants were administered to individual African scientists (2006, 2007, 2008, 2009)	Outputs See: http://start.org/programs/africangec 1. Grant awards were issued to 61 scientists at African institutions in 19 countries to conduct one-year research projects on global environmental change in Africa. All projects have been completed. Further Information at: http://start.org/programs/africangec 2. 61 final reports have been submitted 3. Approximately 40 peer reviewed papers are either published or under review.
Activity 2: Two rounds of grants were administered to collaborative research groups of scientists in Africa including collaborators in	1. Grant awards were issued to 78 scientists who are part of 20 collaborative research teams (of three or more

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the US and Europe. (2010 and 2011)	scientists) at African institutions in 13
	countries to conduct one-year research
	projects on food security and sustainable
	livelihoods as impacted by global
	environmental change. Further
	Information at: http://start.org/news/2011-
	start-grants-gec-research-africa-
	announced.html
	2. Four projects have been completed and
	manuscripts are in preparation for
	submission to peer reviewed journals.

<u>Scientists and Academics:</u> Support regional research and foster regional scientific capacity related to sustainable development in the context of GEC

If appropriate, plans for the next steps

5. Assessments of Urban and Peri-urban agriculture and Climate Change

Background

Title of Initiative/Programme/Project: Assessments of Urban and Peri-urban agriculture and Climate Change (http://start.org/programs/upa)

In partnership with UNEP, WMO, IPCC, the University of Ghana, the University of Dar es Salaam and the Bangladesh Centre for Advanced Studies

- ▲ Continue to expand START research activities to support decision-making about climate change adaptation, environmental risk management and the integration of environmental risk management with sustainable development through workshops, science-policy dialogues, advanced institutes and other means.
- Develop research and assessment activities to determine economic/livelihood resilience, determine barriers to economic diversification and enable dissemination of information on strategies for action

Activities undertaken and main outputs	
Activity	Outputs See: http://start.org/programs/cordex-af
Activity 1: Assessments of urban and periurban agriculture and climate change to study impacts of urbanization and global environmental changes	1. 9 city assessments underway in Dakar, Senegal; Tamale, Ghana; Ibadan, Nigeria; Dar es Salaam, Tanzania; Kampala, Uganda; Addis Ababa, Ethiopia; Dhaka, Bangladesh; Kathmandu, Nepal; and Chennai, India.
Activity 2: Stakeholder workshops for diverse	4 stakeholder workshops conducted in

range of participants including urban agriculture researchers, researchers from related areas of expertise, NGO representatives, representatives of farmer-based organizations, city government officials, and ministerial representatives

Accra, Addis Ababa and Kathmandu

- 2. Communication strategies for reaching out to decision-makers developed.
- 3. Workshop reports available at: http://start.org/programs/upa

Potential application/implication for the adaptation community within and beyond the NWP network

<u>Scientists and academicians:</u> Broaden understanding of the climate-related risks to urban and peri-urban agriculture, the vulnerabilities of producers and those involved in the urban food system

<u>Practitioners:</u> Inform urban and peri-urban decision-making and planning relevant to sustaining urban and peri-urban agriculture

<u>Agricultural producers:</u> Enhanced understanding of risk from global environmental change and urbanization to livelihoods and strategies for adaptation

If appropriate, plans for the next steps

6. Integrated Research for Disaster Risk (IRDR)

Background

Title of Initiative/ Programme/Project: **Integrated Research for Disaster Risk (IRDR).** (http://www.icsu.org/what-we-do/interdisciplinary-bodies/irdr)

Co-sponsored by the International Council for Science (ICSU), the United Nations International Strategy for Disaster Reduction (UN-ISDR) and the International Social Science Council (ISSC)

- A Continued efforts to promote awareness raising and understanding of current and future climate risks through its support for education and capacity building, risk communication and assessment
- ▲ Continued support for activities that enhance the process of generating and disseminating information and knowledge on adaptation.

Activities undertaken and main outputs	
Activity START is designated as the organization that will support capacity building activities in conjunction with other partners under the IRDR program	Outputs
Activity 1: Cities at Risk initiative	Series of workshops (for details see separate table on Cities at Risk)
Activity 2: Forensic analyses of disasters	Planned reports detailing in-depth investigation of factors that contribute to exposure, vulnerability, resilience and recovery from disaster events to inform urban planning
Activity 3: Establish an International Center of	Center established at Academia Sinica

based in Taipei, Taiwan 2. Series of guest lecturer and visiting
research fellows, initially from
Southeast and East Asia, to be hosted
 Working papers and peer reviewed
publications

<u>Scientists and Academics:</u> Identification of priority themes for disaster risk research to reduce vulnerability of Asia's megacities to climate risk

<u>Practitioners and policy makers:</u> Inform decision-making and action to reduce exposure and vulnerability, build resilience and improve recovery from disaster events

Educators and journalists: Enhanced literacy in global environmental change and disaster risk

If appropriate, plans for the next steps	
Planned activity	Expected output(s)
Expand guest lecturer and fellows program to all regions of the developing world	Enhanced scientific understanding and scientific outputs on disaster risk relevant to multiple regions of the developing world.

7. Coordinated Regional Downscaling Experiment (CORDEX)

Background

Title of Initiative/ Programme/Project: Coordinated Regional Downscaling Experiment (CORDEX) (http://start.org/programs/cordex-af)

In partnership with 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

Element of action pledge on which progress is reported here:

A Continued efforts to improve access to and use of observational climate and other data and to disseminate relevant findings to decision-makers across society.

Activities undertaken and main outputs	
Activity	Outputs
-	See: http://start.org/programs/cordex-af
Activity 1: Training workshops for core group	Series of workshops planned
of African experts on interpretation and	2. Core group of experts will be
analysis of the World Climate Research	generated within Africa to train and advise
Program's CORDEX results	a future expanded effort on CORDEX
	analysis, interpretation, and application.
	3. Reports detailing the analysis and
	interpretation of CORDEX data sets for
	different regions in Africa to be prepared
	4. Peer reviewed contributions to the
	Africa chapter of the IPCC Fifth
	Assessment Report and to policy briefs

	planned
Activity 2: Engage with a range of decision makers through focused consultative meetings to examine priorities for analysis and application of CORDEX results	Series of dialogues with scientists, policy-makers and the vulnerability impacts and adaption community planned Generation of knowledge networks expected Peer reviewed contributions to the Africa chapter of the IPCC Fifth Assessment Report and to policy briefs planned
Activity 3: Special session for the CORDEX-Africa Fellows at the Durban COP-17	Networking and interactions with the official delegations from African countries anticipated

<u>Scientist and academics:</u> Improve knowledge and skills of African scientists working with climate model outputs. New publications on climate modeling, contribution to IPCC AR5 and engagement with other relevant stakeholders

<u>Practitioners and policy-makers:</u> Enable climate-aware decision-making and development through outreach between science, policy and practice

Educators and Journalists: Enhanced climate literacy

If appropriate, plans for the next steps	
Planned activity	Expected output(s)
Planned expansion to Asia	 Similar to those planned for Asia South-South and North-South science knowledge networks

8. African Climate Change Fellowship Program

Background

Title of Initiative/ Programme/Project: **African Climate Change Fellowship Program** (http://start.org/programs/accfp1)

Implemented in partnership with the Institute of Resource Assessment at the University of Dar es Salaam (IRA-UDSM) and the African Academy of Sciences (AAS)

- A Continued support for a number of activities that enhance the process of generating and disseminating information and knowledge on adaptation.
- A Promote and enable global environmental change research in the developing world through its networks in developing regions of the world and through its partners.
- A Strategically plan future education, fellowship and capacity building programs to develop the next generation of vulnerability and adaptation researchers

Activities undertaken and main outputs	
Activity	Outputs
	See: http://start.org/programs/accfp1

Activity 1: Fellowships for 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	 ACCFP Fellowships were awarded to 45 individuals from 40 institutions in 18 African countries in Round 1 45 individually designed projects implemented. Tangible and sustained networks of institutions and individuals in Africa 21 Peer reviewed publications and more than 40 manuscripts either submitted or under preparation
Activity 2: Program workshops with targeted training sessions to added value to the research experience	1. Outputs and details available in: Details available in the ACCFP Round 1 report: http://start.org/download/2011/technical- report-accfp-8.2007-12.2010.pdf
Activity 3: ACCFP Round 1 Culmination Conference, held 8-10 December 2010 in Dakar, Senegal	1. Key lessons learned from the ACCFP experience recorded, including opportunities for and potential challenges to building on the success of the Round 1 effort in promoting adaptation science in Africa. Details available in the ACCFP Round 1 report: http://start.org/download/2011/technical-report-accfp-8.2007-12.2010.pdf

<u>Scientists and academics:</u> Enhanced scientific research capacity. Fellows received small grants that enabled them to visit other institutions – "Host Institutions" – 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 projects, consider approaches for integrating adaptation with planning and practice and/or develop and implement curriculum that promotes integration of climate change and climate change adaptation into graduate level education.

<u>Practitioners and policy makers:</u> Many Fellowship projects directly supported adaptation decision-making

If appropriate, plans for the next steps	
Planned activity	Expected output(s)
Phase II of the ACCFP was initiated in early 2011 and includes two, overlapping rounds of Fellowship awards and supporting activities	A total of 50 Fellowships will be awarded, distributed across the following categories: Adaptation Science Fellowships, Adaptation Policy Fellowships and Adaptation Teaching Fellowships

9. Forum on Education, Capacity Building, and Climate Change: A Strategy for Collective Action in Africa and the Africa Climate, Research and Education Network (ACRE-Net)

Background

Title of Initiative/ Programme/Project: Forum on Education, Capacity Building, and Climate Change: A Strategy for Collective Action in Africa and the Africa Climate, Research and Education Network (ACRE-Net)

Implemented in partnership with the Pan-African START Secretariat, University of Dar es Salaam. Financial support by the Open Society Institute.

Element of action pledge on which progress is reported here:

- A Strategically plan future education, fellowship and capacity building programs to develop the next generation of vulnerability and adaptation researchers
- A Continue to support a number of activities that enhance the process of generating and disseminating information and knowledge on adaptation.

Activities undertaken and main outputs	
Activity	Outputs
Activity 1: Forum on Education, Capacity Building, and Climate Change: A Strategy for Collective Action in Africa, Dar es Salaam, Tanzania	 Strategy for near, medium and longterm actions to support education, research, and outreach on adaptation in Africa. Development of the <i>African Climate Research and Education Network</i> (<i>ACRE-Net</i>) to develop and implement actions to support this strategy

Potential application/implication for the adaptation community within and beyond the NWP network

<u>Academics and educators:</u> Forum explored the role of African universities in promoting education on climate change adaptation in the areas of research, curriculum development and teacher training.

<u>Practitioners</u>, <u>policy makers and civil society</u>: Forum also explored examined issues of how to more fully engage civil society on adaptation through education aimed outside the university

If appropriate, plans for the next steps	
Planned activity	Expected output(s)
START and African university partners are working together to strongly promote ACRE-Net, and inaugural activities of the network are expected in 2011 and beyond	Targeted inventory of universities, NGOs/CSOs and other organizations and institutions involved in climate change related activities in Africa. Identify existing partnerships and opportunities for expansion

10. National Level Science-Policy Dialogues on Climate Change and Development

Background

Title of Initiative/ Programme/Project: National Level Science-Policy Dialogues on Climate Change and Development (http://start.org/programs/ccmap)

In partnership with the WMO, UNEP, IPCC, the University of Ghana, the University of Dar es Salaam, and the Bangladesh Center for Advanced Studies

Element of action pledge on which progress is reported here:

A Continue to support a number of activities that enhance the process of generating and disseminating information and knowledge on adaptation.

Activities undertaken and main outputs		
Activity	Outputs	
	See: http://start.org/programs/ccmap	
Activity 1: National Science- Policy dialogues	 9 dialogues organized for scientists, policy-makers and other stakeholders Ghana, Nigeria, Senegal, Tanzania, Rwanda, Burundi, Bangladesh, Nepal, and Bhutan. Reports from the dialogues available at: http://start.org/programs/ccmap 	

Potential application/implication for the adaptation community within and beyond the NWP network

<u>Scientists and academicians:</u> Identify priority areas for research and assessment of climate change risks to development

<u>Practitioners and policy makers:</u> Dialogue outcomes intended to enable decision-makers to better integrate climate change issues in development planning and poverty reduction measures.

If appropriate, plans for the next steps

11. START's Partnership with Asia-Pacific Newtwork for Global Change Research (APN)

Background

Title of Initiative/Programme/Project: START's Partnership with Asia-Pacific Newtwork for Global Change Research (APN) (http://start.org/programs/apn)

- A Promote and enable global environmental change research in the developing world through its networks in developing regions of the world and through its partners.
- Continued support for a number of activities that enhance the process of generating and disseminating information and knowledge on adaptation.

Activities undertaken and main outputs	
Activity	Outputs See: http://start.org/programs/apn
Activity 1: Secure and administer support from the USGCRP to provide grant awards to collaborative research groups in Asia-Pacific Region	1. START supported 74 one-year grant sub-awards to 63 collaborative research groups during 2006, 2007, 2008 and 2009. All projects have been completed. The grant sub-awards supported through START can be found at: http://start.org/programs/apn. Further information is available on the APN

website (www.apn-gcr.org). 2. START supported 26 one-year grant sub-awards to 95 scientists in 22 countries in the Asia-Pacific region and the USA during 2010 and 2011. The projects are currently in progress.
sub-awards to 95 scientists in 22 countries in the Asia-Pacific region and the USA during 2010 and 2011. The projects are

<u>Scientists and Academics:</u> Support regional research and foster regional capacity related to sustainable development in the context of GEC

If appropriate, plans for the next steps	
Expected output(s)	
APN National Focal points and associated national government agency representatives will be engaged in a 2-3 day session	
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