

Research-Driven Capacity Building for Global Change and Sustainable Development in Developing Countries

NAP EXPO 2014, Bonn

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Washington, DC



www.start.org



global change SysTem for Analysis, Research & Training

A ROADMAP OF PRESENTATION

- **About START:** SysTem for Analysis, Research, and Training
- **Perspectives on vulnerability and adaptation:** through illustrative examples of START's effort on building adaptive capacity and resilience to reduce vulnerability to the impacts of climate change
- **Distill lessons** on integration of climate change adaptation for development planning processes and strategies
- **Where we are headed**

START Vision & Mission

Vision:

Developing countries empowered with scientific capabilities to effectively motivate and inform societal action to manage risks and address opportunities of global environmental change and sustainable development

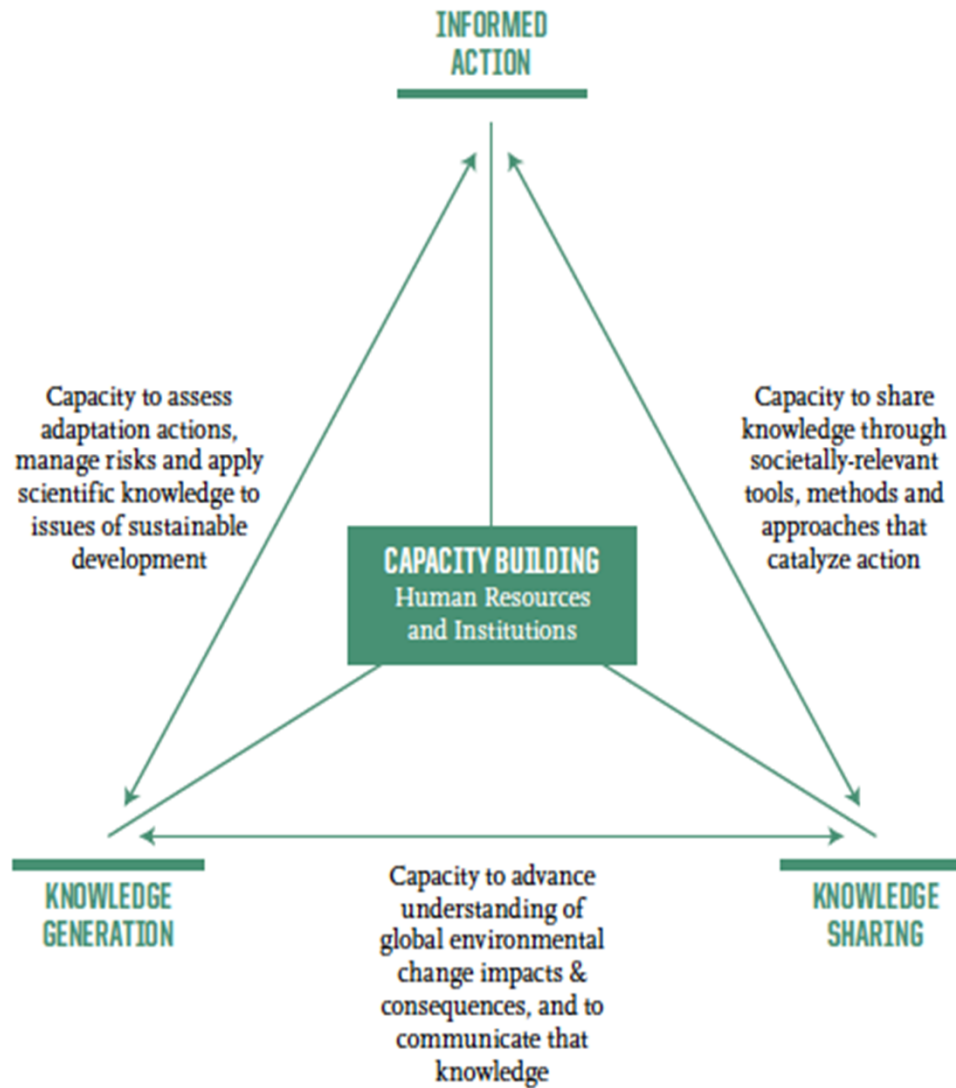
Mission:

- To **develop regional networks** of collaborating scientists and institutions that assess the causes and impacts of global environmental change and provide relevant information to policymakers and governments to assist in formulating adaptation strategies;
- To **enhance scientific capacity** in developing countries by strengthening and connecting existing institutions, training global change scientists, and providing them with better access to data, research, and communication technology skills; and
- To **mobilize resources** that will augment existing capabilities and actions on global environmental change in developing countries.



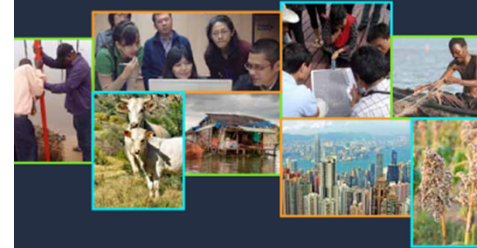
Enhancing scientific capacity to inspire informed action on global environmental change

START: an international NGO



Dedicated to capacity building

ADVANCING SCIENCE FOR RESILIENT FUTURES



RESEARCH FOR ACTION
INNOVATIONS IN LEARNING
COMMUNICATION & NETWORKING



Enhancing scientific capacity to inspire informed

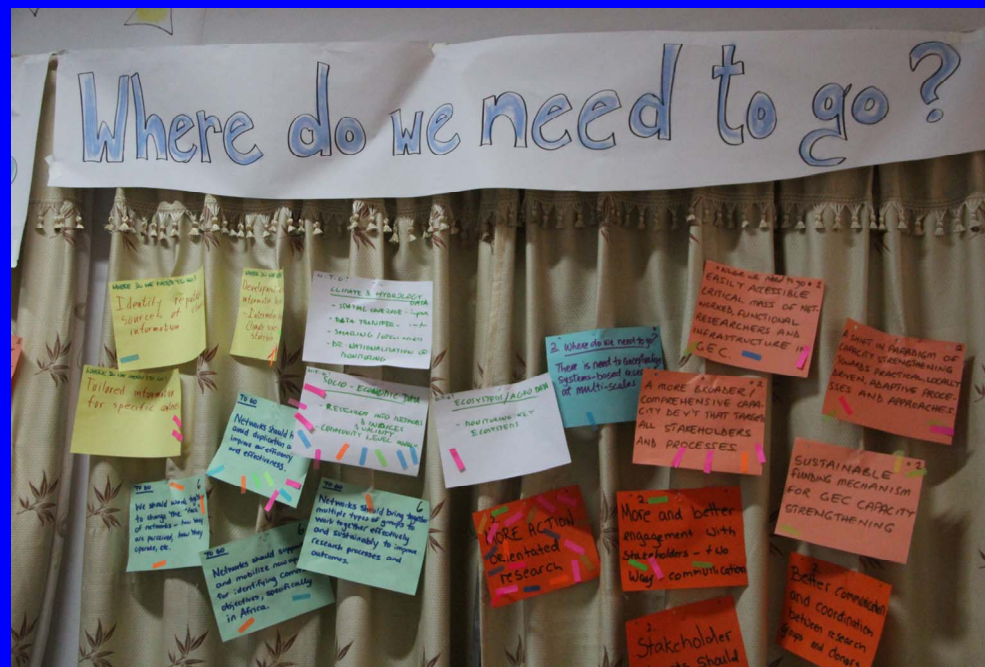
SCIENCE
for the
FUTURE
and a
FUTURE
for
SCIENCE

START Biennial Report 2012–2013



global change SysTem for Analysis, Research & Training

Illustrative examples of START's significant Capacity building actions for adaptation and risk management in Africa and the Asia-Pacific



- **AIACC:** Assessments of Impacts of and Adaptation to CC
- **CBA:** Adaptation to CC in the Greater Mekong Basin
- **CCaR:** Coastal Cities at Risk
- **ACCFP:** African Climate Change (Adaptation) Fellowship Program

Illustrative Example 1: Completed Project

AIACC: Assessments of Impacts of and Adaptation to CC

Global Program

Multiple sectors and Scales

GEF-funded with supplementary funding
from US Agencies and EU



Assessments of Impacts and Adaptation to Climate Change (AIACC)

- Enhance scientific understanding of climate change science in underrepresented regions
- Develop links between science and stakeholder communities
- Build scientific capacity in the developing world

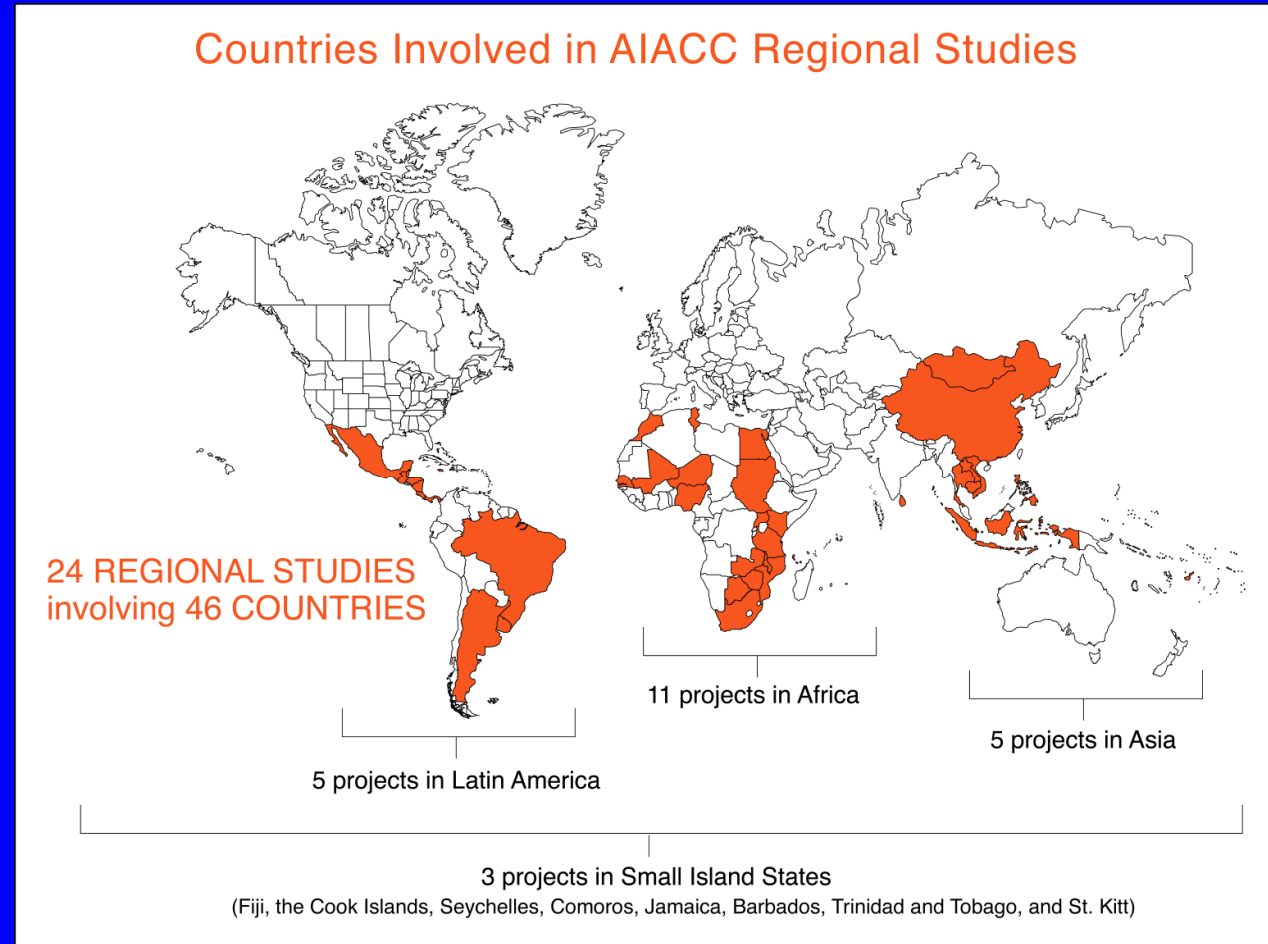
Using:

Climate and coupled crop-climate models down to household surveys, focus group discussions, and participatory dialogues.

Capacity building and networking under AIACC

Learning-by-doing

- Training
- Technical assistance
- Networking



- Empowerment through Learning-by-doing: learning essential skills for integrated assessments in a multi-disciplinary/sectoral and multi-stressor environment... and coordinating activities across disciplinary...
- Technical advisors provided guidance on project design, implementation, tools and methods, provided review and feedback.
- Training: broad overview of assessment methods, methods and tools for designing and applying climate scenarios, on V and A assessment methods and tools.
- south-south training workshops on regional climate modeling and hydrologic modeling
- Networking: link scientists across disciplines, institutions across boundaries, scientists with stakeholders... inter-country collaborations: Eastern, Southern and Northern Africa, Southeast Asia, and South America

Agriculture

Water

**Ecosystems, land
use change &
biodiversity**

Health

Sea level rise

Tourism

Botswana

Egypt

The Gambia

Kenya

Malawi

Mali

Morocco

Mozambique

Niger

Nigeria

Senegal

South Africa

Sudan

Tanzania

Tunisia

Uganda

Zambia

Zimbabwe

China

Indonesia

Laos

Mongolia

Philippines

Sri Lanka

Thailand

Vietnam

Caribbean

Comoros

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Zimbabwe

China

Indonesia

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Zimbabwe

China

Indonesia

Laos

Mongolia

Philippines

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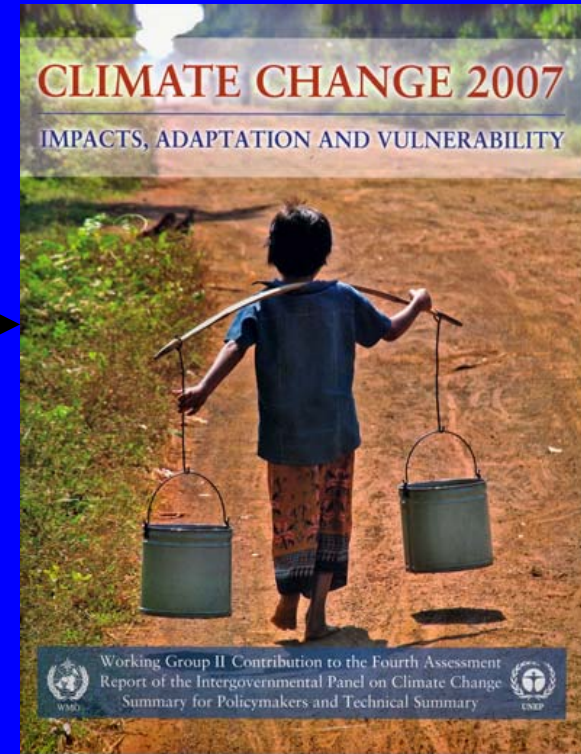
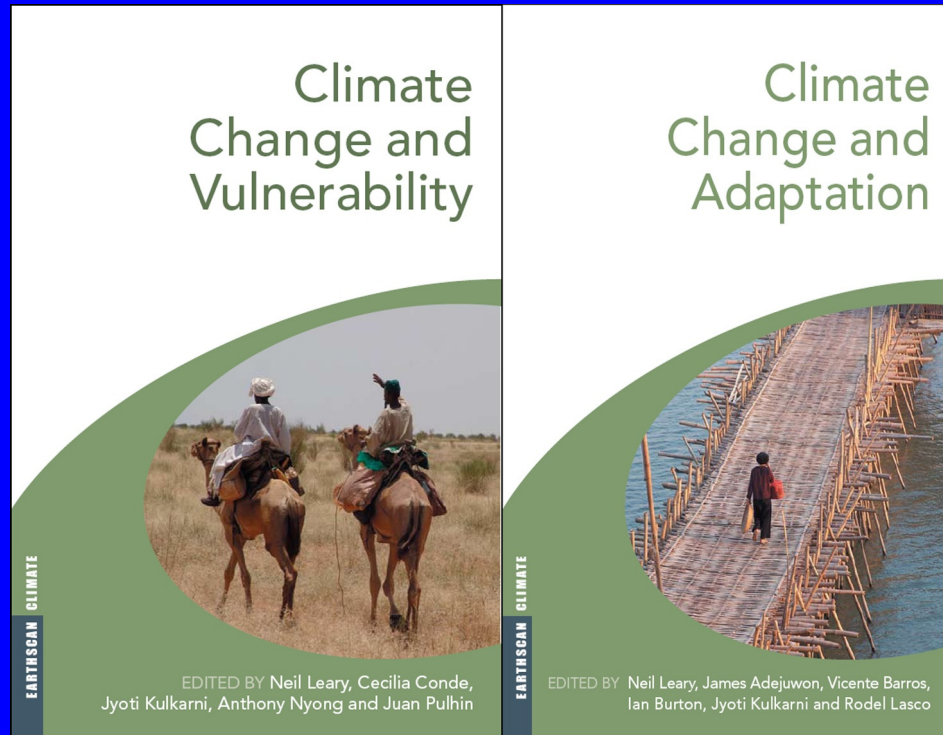
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Outputs of the AIACC



- More than 100 peer review publications, 2 books, > 100 citations in IPCC 4AR
- Outputs used in national communications
- More than 30 participants were 4AR authors
- Many participants engaged in preparation of NAPAs, national communications

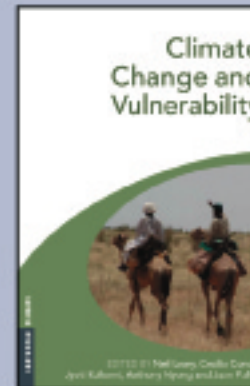
AIACC Outcomes

Capacity Building

- 24 assessment teams established
- >300 participants from 50 developing countries gained experience in climate change assessment
- >100 persons trained in AIACC training workshops
- 5 teams organized South-South training workshops
- 25 student theses supported and completed
- 30 participants are authors of IPCC 4th Assessment Report
- Participants taking leadership roles in international science activities
- Successful new grant applications by many of the teams

Scientific Knowledge

- 24 climate change assessments completed
- >100 peer-reviewed publications
- 2 books published
- >100 other publications
- >100 citations of AIACC publications in IPCC AR4

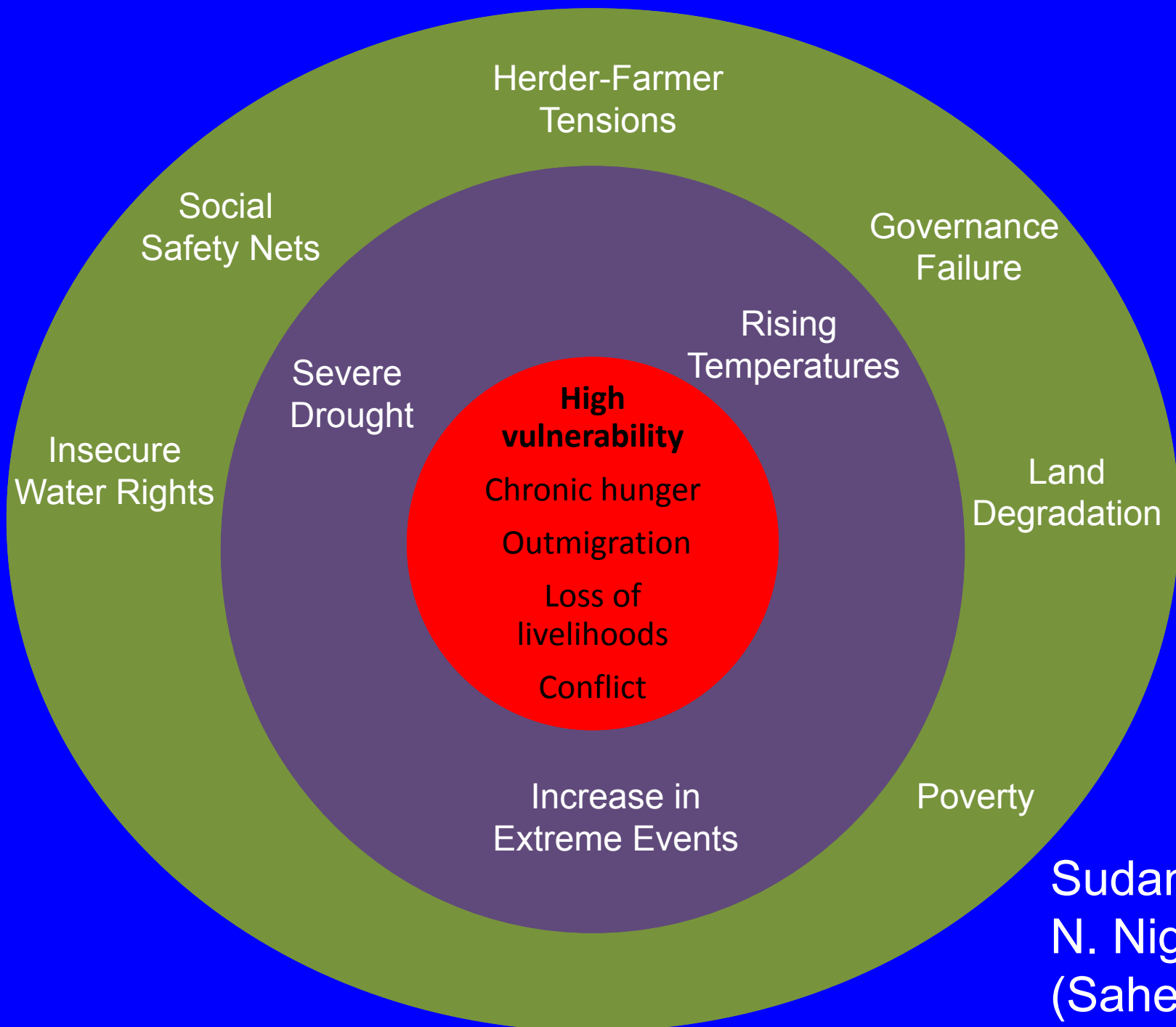


Links Between Science and Policy Communities

- Working relationships established by all 24 teams with stakeholder organizations
- Scientific outputs being used in National Communications to the UNFCCC
- Most teams engaged in National Communications activities, including the development of NAPAs
- AIACC teams contributed to numerous national and international policy activities

Reflections on lessons learned from the AIACC — vulnerability

- Climate risks are increasing
- Vulnerability has multiple climate and non-climate drivers
 - Poverty, poor governance, lack of social safety nets, access to resources, and resource base degradation
 - Climate impacts on biodiversity and ecosystem integrity are amplified by existing stressors



Herder-Farmer
Tensions

Social
Safety Nets

Governance
Failure

Rising
Temperatures

Severe
Drought

Land
Degradation

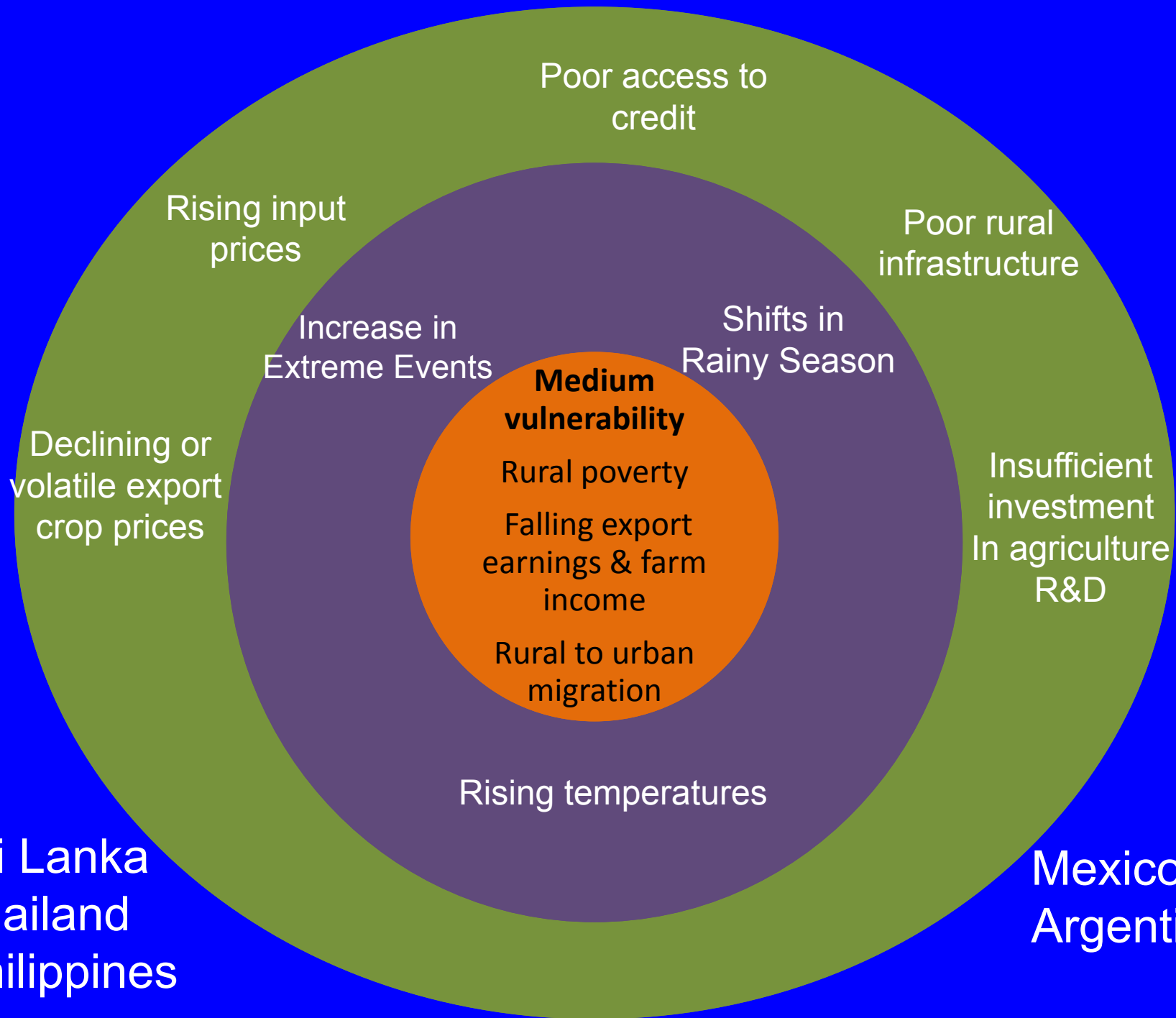
Insecure
Water Rights

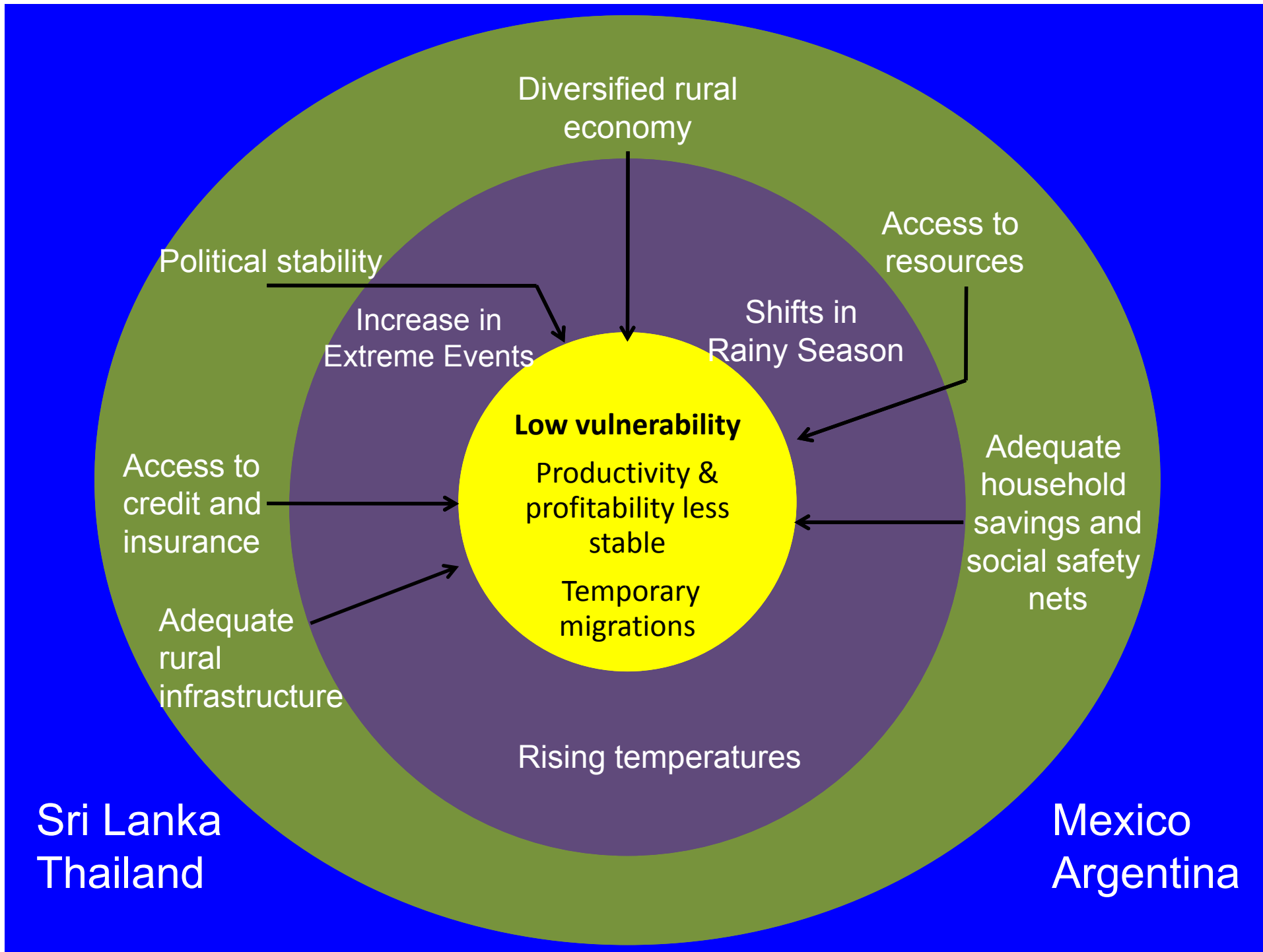
**High
vulnerability**
Chronic hunger
Outmigration
Loss of
livelihoods
Conflict

Increase in
Extreme Events

Poverty

Sudan
N. Nigeria
(Sahel)





Diversified rural economy

Political stability

Access to resources

Increase in Extreme Events

Shifts in Rainy Season

Low vulnerability

Productivity & profitability less stable

Temporary migrations

Access to credit and insurance

Adequate household savings and social safety nets

Adequate rural infrastructure

Rising temperatures

Sri Lanka
Thailand

Mexico
Argentina

Reflections on lessons learned from the AIACC — adaptation

1. Address the ‘adaptation deficit’
2. Create conditions that enable adaptation
3. Strengthen institutions
4. Develop place-specific strategies
5. Development under a changing climate

Elements of success in capacity building and networking

- Empowerment of teams through a flexible and bottom-up process
- Multiple, reinforcing activities that helped to consolidate progress in building scientific capacity
- Multidimensional network building important for sustaining the effort beyond the project
- Project scientists able to engage in international fora: IPCC, MEA, and IAASTD

Illustrative Example 2: Ongoing Project

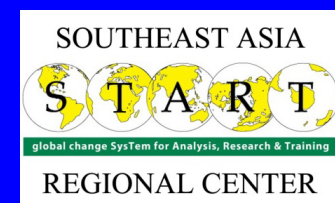
Mainstreaming Climate Change into Community Development Strategy and Plan in the Greater Mekong Basin



Mainstreaming Climate Change into Community Development Strategy and Plan

Southeast Asia START Regional Center and regional capacity building: Mainstreaming Climate Change into Community Development Strategy and Plan

- Capacity building program under Asian Development Bank (GMS-EOC) initiative
- Enhance capacity of local practitioners / planners in Cambodia, Lao PDR and Vietnam to conduct community climate change adaptation planning
- Pilot phase: 2014-2016
 - Develop framework, process and technical support platform
 - Training for local practitioners / planners to conduct pilot assessment at 20 communities in each country



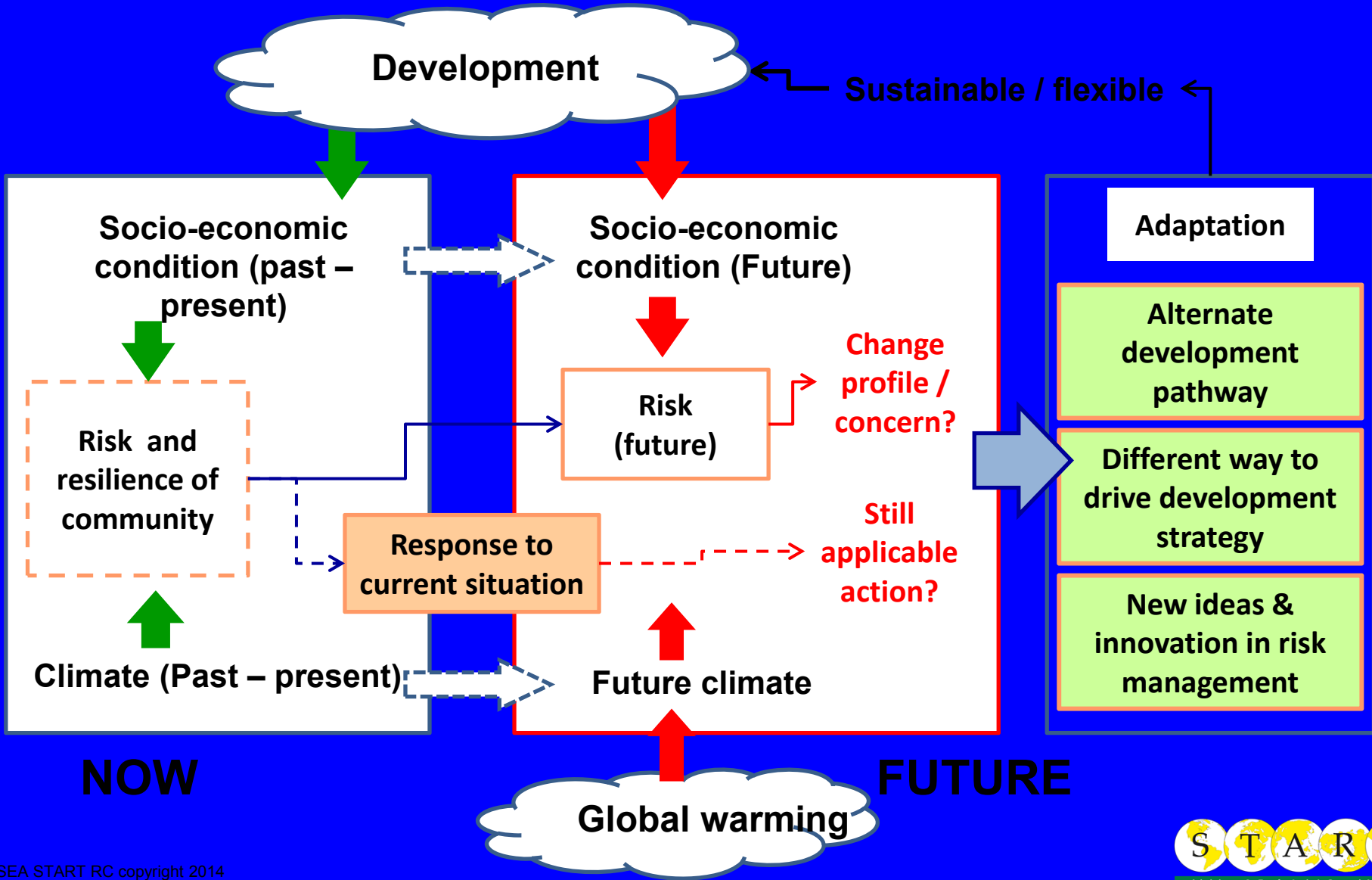
Mainstreaming Climate Change into Community Development Strategy and Plan

Concept and framework:

- Shifting paradigm
 - Climate change is not entry point but focus on current risk from climate threats and community's coping strategy
 - Shifting from minimizing impact of climate change and focus on resilience of community and robustness of development plan to future climate
- Focus on socioeconomic dynamic to understand shifting in community's risk profile and risk management strategy
- Seek for strategy/option that will still function under future climate
- Justify investment with present benefit



Mainstreaming Climate Change into Community Development Strategy and Plan



Illustrative Example 3: Ongoing Project

Lagos

Bangkok

Assessing the Vulnerability of Cities in a Changing Climate

Coastal Cities at Risk – CCaR

Building Adaptive Capacity for Managing Climate Change in Coastal Megacities

Vancouver

CCaR



Social Sciences and Humanities
Research Council of Canada

Conseil de recherches en
sciences humaines du Canada

Canada

Manila

Coastal Cities at Risk (CCaR): Building Adaptive Capacity for Managing Climate Change in Coastal Megacities



- G. McBean, Western University, London, Canada
- A. Snidvongs, Chulalongkorn University and R. Cooper, Southeast Asia START Regional Research Center (SEA-START)
- **Mega-cities in coastal zone and on river deltas:
Vancouver, Bangkok, Manila, Lagos**
- **Natural, socio-economic, health, engineering
studies**
- **2011-2016**

www.coastalcitiesatrisk.org



Social Sciences and Humanities
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Canada

CCaR Strategy

- **Interdisciplinary - natural, engineering, socio-political-economic and health scientists**
- **Cities - Bangkok, Lagos, Manila, Vancouver - and partnering with other city research teams – Shanghai, +++**
- **Building on Strategic Canadian and International Partnerships**



Overall Objective of Coastal Cities at Risk (CCaR)

- To develop the knowledge base and enhance the capacity of mega-cities to successfully adapt to and when necessary cope with risks posed by the effects of climate change, including sea level rise, in the context of urban growth and development.
- The research program integrates climate change adaptation and disaster risk reduction approaches towards building disaster resilient cities.

Illustrative Example 4: ongoing The African Climate Change Fellowship Program (ACCFP)

- 4-types of related Fellowship awards: research, teaching, practitioner, policy
- Over 200 Fellows from 40 Home Institutions, matched with 18 Hosts
- Fellowship projects, seminars & conference
- ACCFP Alumni Network
- The START Family
- Management devolved to U. of Daressalaam
- AAS has now CIRCLE Fellowships (5 Year program)



AFRICAN CLIMATE CHANGE FELLOWSHIP PROGRAM

The Fellowship Program

The African Climate Change Fellowship Program (ACCFP) offers experiential learning, education, research and training opportunities to African professionals, researchers and graduate students that enhance their capabilities for advancing and applying knowledge for climate change adaptation in Africa.

Participating Fellows receive small grants that enable them to undertake Policy Fellowships, Teaching Fellowships, Doctoral Fellowships and Post-Doctoral Fellowships. The Fellowship grants enable fellows to visit other institutions – Host Institutions – for 2-18 months to learn what others are doing to manage climate risks and adapt to climate change and how they assess and prioritize climate risks, current practices for designing and implementing adaptation projects, and approaches for integrating adaptation with program planning and policy. Some Fellows also undertake research projects that support adaptation decision-making and/or develop and implement curricula for integrating climate change and climate change adaptation into graduate level education.

In November 2009, the ACCFP selected its inaugural round of Fellows. After extensive review of nearly 300 applications, 45 Fellows from 18 African countries were selected to receive awards. The Fellows' Home Countries are highlighted below. More information about their projects and plans is provided on the inner page of this publication.

2009/2010 ACCFP Fellows - Home Countries

- Burkina Faso (1)
- Burundi (1)
- Burkina Faso (4)
- Cameroon (7)
- Cent. African Republic (1)
- Chad (1)
- Cote d'Ivoire (2)
- Ethiopia (2)
- Ghana (1)
- Kenya (1)
- Madagascar (1)
- Morocco (1)
- Nigeria (8)
- Senegal (2)
- South Africa (2)
- Tanzania (1)
- Uganda (1)
- Zimbabwe (1)

4 Fellowship Types

Policy Fellowships are awarded to early to mid-career candidates who are leaders in Africa and are currently working in organizations that play a role in or have the potential to influence policy and decision-making in climate-sensitive sectors in Africa. Policy Fellowships last 6 months or less and offer a maximum award of \$8,000 USD.

Teaching Fellowships are awarded to educators from African universities. The aim of the Teaching Fellowships is to make requests to develop and implement new courses, revise courses on climate change related topics, or to integrate climate change topics into existing courses. Priority is given to design and development of interdisciplinary courses and those that fit logically within an existing program. Teaching Fellowships last for 2 months or less and carry a maximum award of \$5,000 USD.

Doctoral Research Fellowships are awarded to students who are studying in a doctoral program and conducting research related to climate change risks and adaptation at an African university. Doctoral Fellows receive an award that enables them to visit a suitable host institution for training in innovative methods, models or analytic tools, to participate in supervised research, and/or to secure data, models, or tools that would meet their capacities as a researcher and significantly improve the quality and value of their dissertation research. The Home Institution, and the host, grants the doctoral degree. Doctoral Fellowships last for 12 months or less and carry a maximum award of \$15,000 USD.

Post-Doctoral Fellowships are awarded to Africans with doctoral degrees in fields relevant to climate change and climate change adaptation. The aim of the Post-Doctoral Fellowships is to enable recipients to participate in research and teaching under the supervision of a more established mentor and to become more productive researchers and teachers in fields that will contribute to improved management of climate risks and climate change adaptation. Post-Doctoral Fellows receive an award that enables them to visit a suitable institution to work with an established, highly qualified researcher/teacher on a well-defined project. Post-Doctoral Fellowships also involve and help to supervise other ACCFP Fellows placed at their host institution. Post-Doctoral Fellowships can last for up to 18 months and carry a maximum award of \$16,000 USD.

Logos: IDRC, CRDI, START, AAS, DFID

New Directions

- Pan-Asia Risk Reduction Fellowship Program (PARR)
- Adaptation at Scales in Semi-Arid Regions (ASSAR)
- PROVIA-START Fellowships

TAKE HOME MESSAGES

1. Adaptation is a dynamic socio-ecological process that requires continuous innovation, experimentation, and change to meet the challenge of climate change

Hence, M&E is an essential facet of effective Adaptation practice

2. Capacity development, in and of itself, is a win-win adaptation response

3. START's approach for building scientific and technical capacity for adaptation in developing countries through support of research, entraining young cohorts is a successful good practice that can contribute significantly to NAP Process
4. START Alumni who participated in AIACC and other programs are a useful resource that must be engaged in NAP Process
5. START is ready to engage in the NASP process
6. Consider an AIACC-style capacity building effort for NAP

Thank you