Reflections on Capacity Building under GOFC GOLD

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Presentation outline

1. *Context for START's engagement in GOFC-GOLD*

2. *Current suite of modalities, recent activities, and outputs-outcomes*

3. *Looking Forward - Challenges for enhanced and impactful capacity building within GOFC GOLD*

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1. Context for START's engagement in GOFC-GOLD

- Global effort to ensure continuous program of space-based and in situ forest and other land cover observation to better understand global change; support international assessments and MEAs; and contribute to NRM

- Created originally as a pilot project of CEOs; graduated into a broader-themed organization to accommodate growing interest in forest and land-cover related issues

- The 1997 GOFC Workshop at START initiated a targeted effort on Capacity Building

(Aim: *foster capacity and collaboration on forest & land cover dynamics through regional networks*)

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START's Role in GOFC-GOLD

- Cooperative agreement with NASA – *focus on capacity building in developing regions since 1997*
  - Enhance **access to existing data and tools**
  - **increase human resource capacity to utilize data** in research and NRM
  - foster **regional and international networks of scientists** engaged in forest cover and land dynamics.
    - *Broaden engagement of network members in other START programs*, including fellowships on adaptation to change and research grants
    - Regional network coordinators: *Krishna (previously Olga)*

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2. Current suite of modalities, recent activities, and outputs-outcomes

- Data and tools access and use (partnership with EROS, BU)
- Partnership Enhancement visiting scientists program (in partnership with U. MD)
- Regional Network Workshops including training for young scientists (in partnership with NASA; NOAA; UMD; Universities and government/civil society agencies in host countries)
- Support network scientists participation in Intl. Conferences
- Cross-regional and thematic Learning Forum to distill added-value outcomes (input to GEO, SBSTA, …)
- GOFC-GOLD Conference

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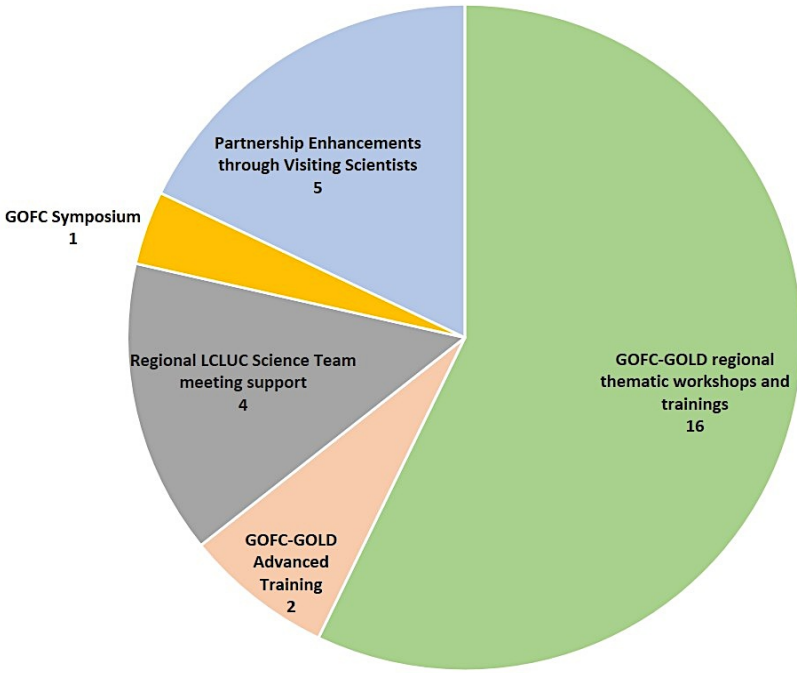
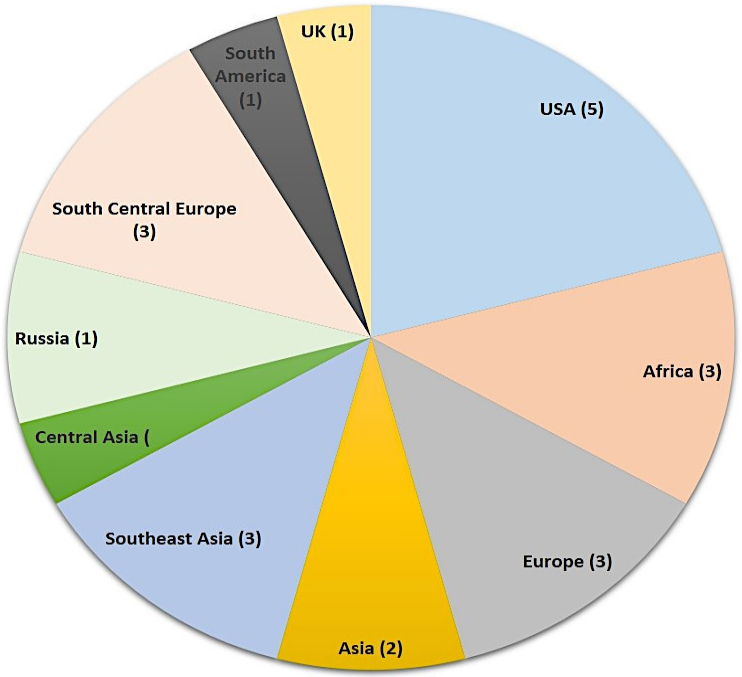
Snap shot: START/GOFC-GOLD 2011-2014

Summary of the Activities supported (2011-2014)



Total Activities supported: 24 over 3-yr period



Outcomes

- Engaged around 1000 persons in various GOFC-GOLD related events (Regional network, training participants in the 3-year grant period (i.e. 2011-2014
- Distributed data products
- Fellows conducted further training

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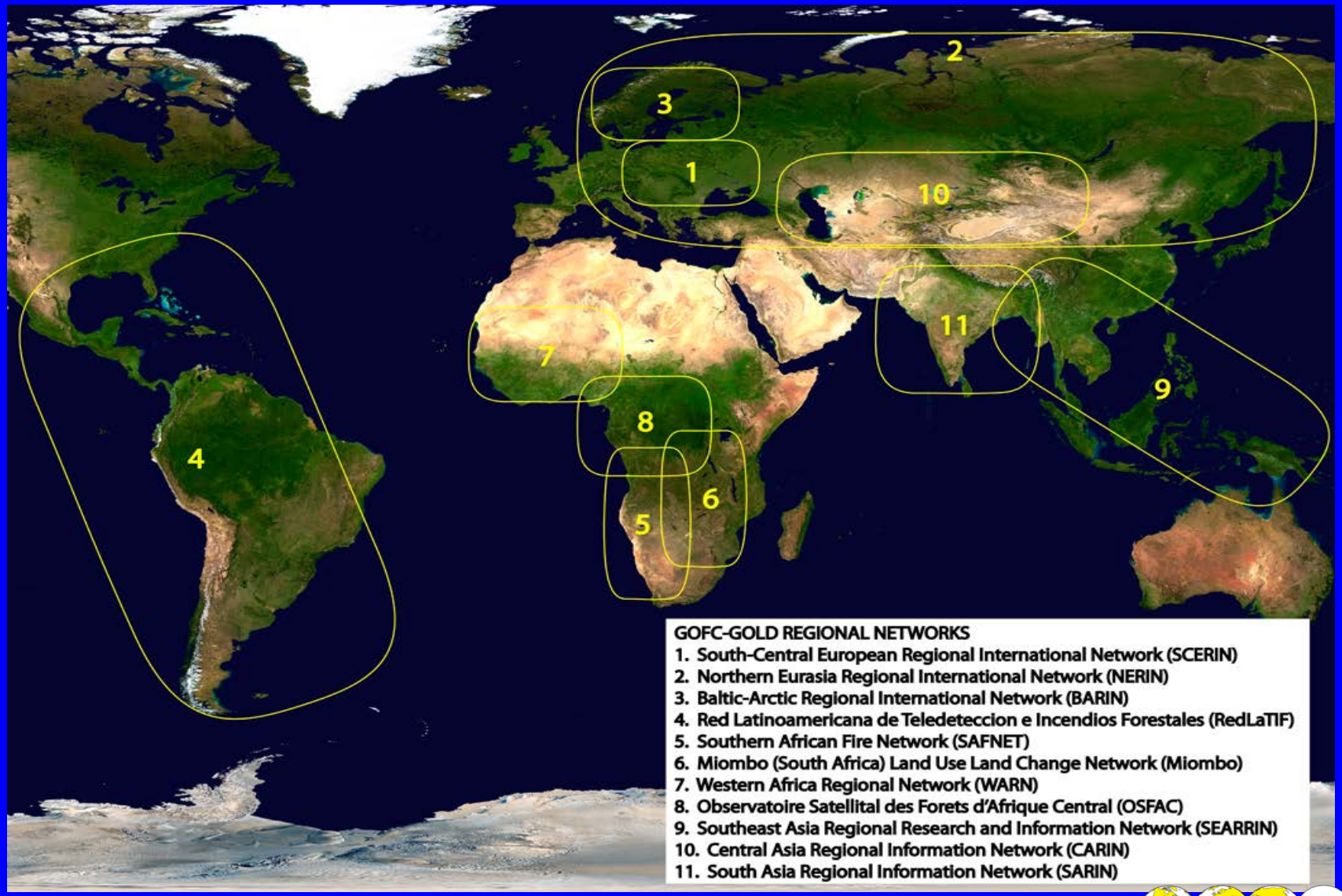
11 active GOFC-GOLD Regional Networks:

A significant outcome



100s of active members on ongoing basis

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Some network people…

Natasha Ribeiro

Currently Professor at Universidade Eduardo Mondlane, Mozambique active GOFC Gold member/leader. Member of the Miombo RN, helped establish SAFINET

I have been involved with START activities since 1995 when I got involved with the miombo network. As part of this network I have participated in several workshops and meetings in the region. In 2011 I took over a more proactive role in the network by preparing the activities to relaunch this important network in southern Africa. In this context, one of the main tasks was the organization of the MN relaunching meeting, which I coordinated together with a team of international, regional and national members. Organizing the meeting was challenging as it involved a lot of communication and coordination of activities, which was very demanding but of interest for my professional career. It took a lot of perseverance, patience and willingness from my side and the all team to carry it to an end. This has changed my professional life as it allowed me to get in touch with other professionals in the region and abroad as well as to develop the network further.

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Mercy Mwanikah Ojoyi

Currently ACCFP 3 fellow and working with START and BU to develop proposal on training related to applications with open access software. Helping establish RN for East Africa

The training at USGS Centre in the Sioux Falls was very productive. I personally had access to data such as surface temperature, LANDSAT products, Modis Products and GLC data. In addition, I was trained about bulk downloading of data sets online which saves a lot of time. I was fortunate to understand how different satellites operate, including the current Landsat 8. In addition, the presentations given at USGS-EROS Centre gave me the opportunity to learn about different applications and how could integrate it in my work.

- At Boston University, I learnt processing of data using open source softwares (QGIS) which makes it easily transferable to my networks and other developing country researchers due to the free access. This was software that I personally had not utilized before. The ability to work with QGIS and the Virtual machine concurrently is a new development in addition to availability of current algorithms such as support vector machines and random forest which are in put in these open source software. I am glad I can comfortably now use these softwares in processing the data we got at USGS-EROS Centre and in future climate monitoring projects. Overall, I rank the training at Boston University as excellent

Ilina Kamenova

Member of SCERIN Network completeing her PhD

The training was an invaluable contribution to my PhD and professional development as research assistant at the Space Research and Technology Institute in Bulgaria. The first part of the training took place at the EROS Center, where I had the opportunity not only to download a massive data set for my region of interest and the whole Bulgaria, but also learn how to do this on my own and very efficiently. Furthermore the lectures given at EROS, the conversations with lead scientists are invaluable.

The second part of the training at Boston University, was logically training of dealing all the gained data. It was very innovative for me, because of the open source experience and the first steps with Ubuntu Mate. The lectures were very well structure, despite they started at a basic level, the learning curve was steep. It was one in time experience to be close to the team, actually 'cooking' the Landsat mission.

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Synthesis and publications: an example

Important

EARTH OBSERVATIONS FOR SUSTAINABLE DEVELOPMENT: PERSPECTIVES FROM THE DEVELOPING WORLD

Geospatial technologies could play a significant role in the development and strengthening of national policy and decision-making. Yet, their application in environmental policy support has been rather limited, especially in developing countries, where Earth observations is a relatively young domain and the uptake and usage of geospatial science and technology is constrained by capacity and institutional handicaps. This paper presents a brief summary of insights on the environmental policy support role of Earth observations based on six case studies coordinated by the Global Change System for Analysis, Research and Training (START).

Senay Habtezion

PROGRAM SPECIALIST, INTERNATIONAL START SECRETARIAT

Environmental policy and decision making requires knowledge of the state of environment and the complex interactions between humans and the natural world. Enhanced knowledge of the state, trends and outlooks of the environment is a key characteristic of effective policy devices that protect and promote ecological systems. Geospatial technologies (which include GPS, Remote Sensing and

ize worrying levels of ozone depletion, thereby catalyzing the political will needed for decisive national (US) and global action on ODSs. Similarly, EOs are very useful in monitoring recovery and/or deterioration of ecosystem goods and services. Further, EOs also could play a positive role in promoting 'environmental' democracy. For example, geospatial technologies make environmental harms easier to trace (e.g. oil spills, forest fires etc) and allow empirically grounded and analytically rigorous decision making, which could in turn lead to more accountability and transparency to the policy making and decision making process (see Esty

edge, led an effort to explore priority knowledge and capacity needs related to the utilization of EOs in environmental policy and governance support by coordinating six case studies from 5 countries in Africa on current use and future potential of EOs in advancing environmental policy in the region and beyond. Focusing on varied themes such as natural resources management (Nigeria, Kenya), forest fire monitoring (Swaziland), water policy (Ghana) and urban growth (Uganda), the six case studies highlight data, knowledge and capacity gaps associated with EOs and assess the current and potential role of geospatial technologies

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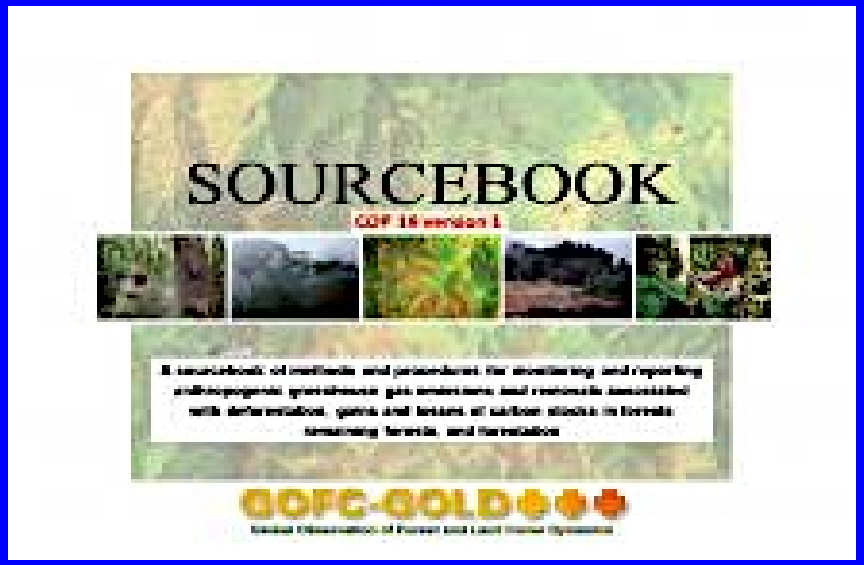
Another significant outcome

Extensive use of REDD Sourcebook (GOFC-GOLD, 2010: A sourcebook of methods and procedures for monitoring and reporting anthropogenic greenhouse gas emissions and removals caused by deforestation, gains and losses of carbon stocks in forests remaining forests, and forestation)



Ask Brice Mora for stats on usage of this

Looking Ahead – thoughts for enhanced and impactful CB within GOFC GOLD

Evolving global realities

Driving six related trends in international science

New imperative: building capacity of regional systems

Community of practice comprising science, practitioner, decision-policy cohorts

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Evolving global realities

- Inseparability of social, economic, political, cultural and environmental problems
- Centrality of people; behaviour and social practice
- Urgency of transformation; profound social change

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Driving six related trends in international science

- Shifting research agendas and conceptions of scientific relevance
- Shifting approaches to the production and use of knowledge
- Shifting programming principles and dynamics
- Shifting institutional partnerships and new players
- Shifting funding arrangements
- Shifting (geo-)politics of science?

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Evolving Capacity building imperative

- From capacity building as a disconnected special function
- To capacity building as an embedded, cross-cutting priority
- From a focus on supporting catch-up: capacity building (primarily through individual level training)
- To more comprehensive science systems support, and a focus on securing access and voice, mobilizing excellence and leadership that is solutions oriented and fosters resilience .

A strategic Framework for START's capacity building for regional systems

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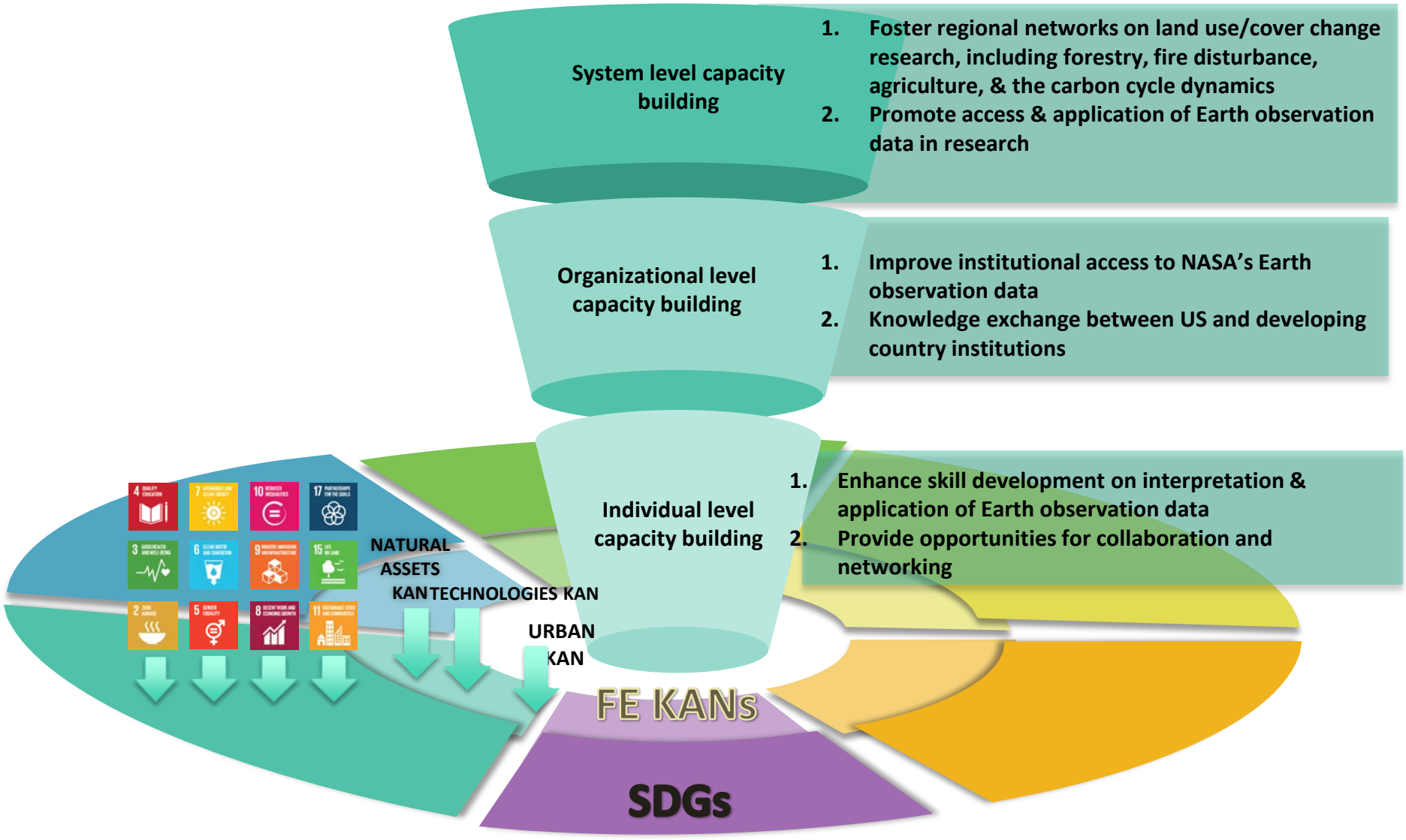
A strategic Framework for START's capacity building for regional systems



Example: Relevance of START's capacity building for GOFC-GOLD in relation to contributions to Future Earth and SDGs

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Building communities of practice within GOFC GOLD

- Need for anchoring CB work within GOFC-GOLD within the milieu of development and sustainability challenges (e.g., context of SDGs, Climate Agreement, WSDRR, IPBES, etc.)

- Need for creation of more opportunities for cross-network knowledge exchange (learning forums), and research (e.g. monitoring INDC's)

- Need to assess and enhance the efficacy of existing RNs – possibly by fostering them as Knowledge Action Networks with the objective of supporting a broader community of researchers and stakeholders (related to urban, FEW nexus, SERVIR+, etc.)

Networking rk coordinator!!!

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SCERIN RN - Brasov

RedLatiFF RN – San Paolo

SEARRIN RN - Bogor

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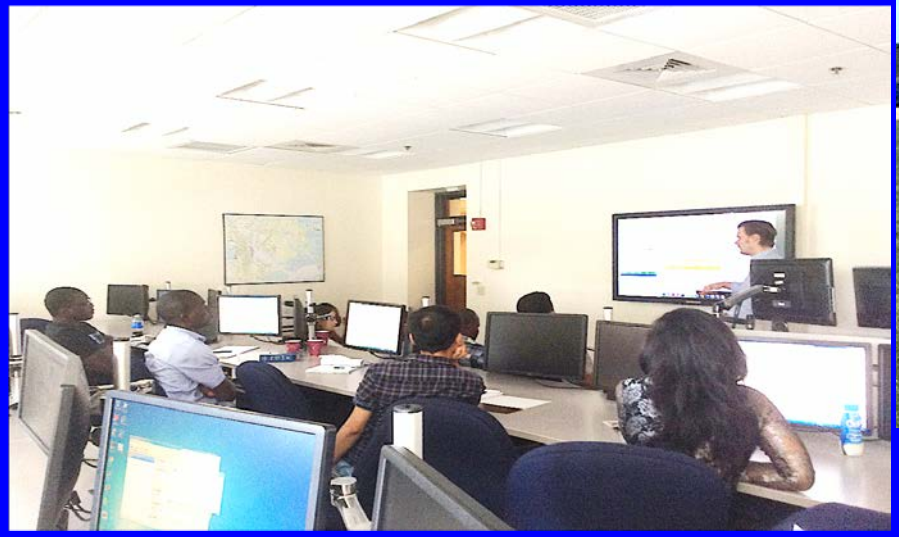
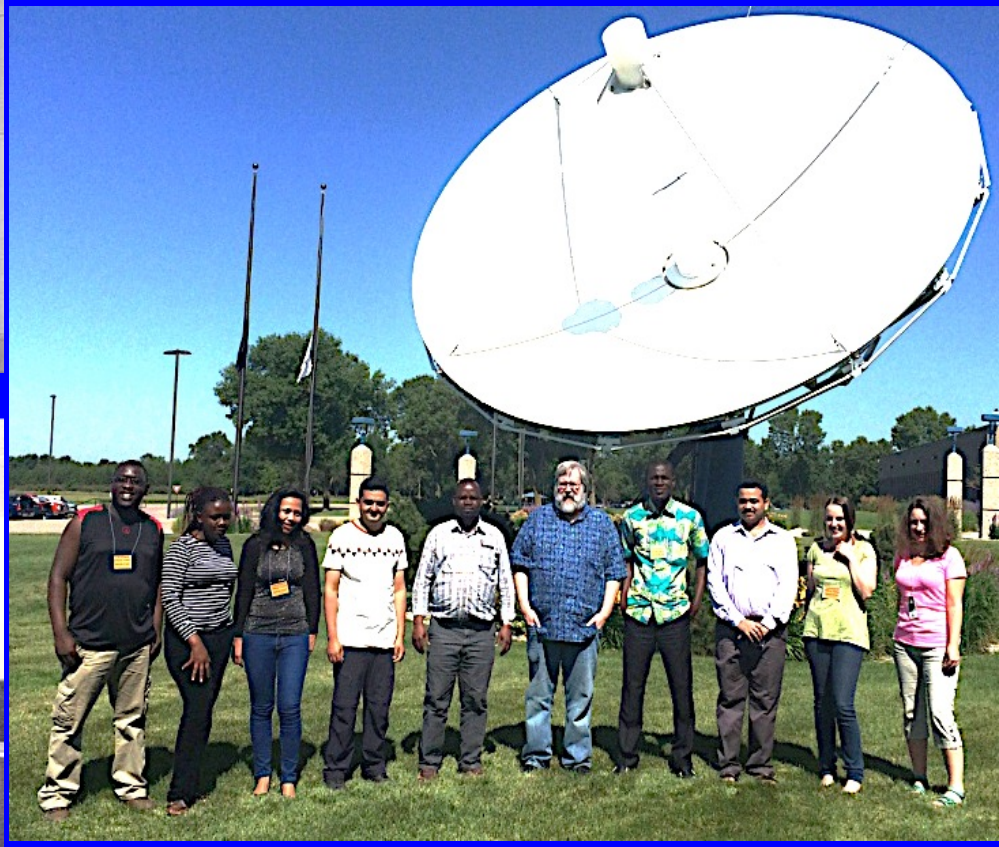
GOFC-GOLD Fellows at BU



GOFC-GOLD Fellows at EROS Center



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