



Capacity Building

GFOI CB Work plan - Technical proposal for developing capacity for developing forest Monitoring, Reporting and Verification Systems



1. Background	3
2. Objectives of the Capacity Building Plan	3
3. Process for Developing the Capacity Building Plan	3
i. Evaluation of capacity building in country.....	3
ii. Identification of common capacity building needs in the region	3
iii. Identification of partners working supporting each region.....	4
4. Partners Beneficiaries of GFOI Capacity Building.....	4
• Cambodia	4
• Cameroon.....	4
• Colombia	4
• Democratic Republic of Congo.....	4
• Ecuador	4
• Guyana	4
• Indonesia.....	4
• Laos	4
• Mexico.....	4
• Nepal	5
• Peru.....	5
• Philippines.....	5
• Republic of Congo	5
• Thailand.....	5
• Vietnam.....	5
GFOI Capacity Building Lead - USG SilvaCarbon Program	5
GFOI Capacity Partners	5
Forest Carbon Partnership Facility (FCPF)	5
UN-REDD - FAO	6
GOFC-GOLD.....	6
GFOI Capacity Building Contributors	6
Upcoming Training	7
GFOI Workshops in the Americas 2014/2015.....	7
GFOI Workshops in SE Asia 2014/2015.....	8
GFOI Workshops in Africa 2014/2015.....	9

1. Background

The Cancun Agreements lead to the implementation of REDD+ mechanism, that involved reducing emissions from deforestation and forest degradation, enhancing the role of conservation, increase sustainable management of forest and enhance carbon stocks in non-Annex 1 countries. The Measurement, Reporting and Verification (MRV) systems are a way to measure and verified REDD+ performance in each country in terms of managing forest carbon stocks and reducing CO2 emissions. The fundamental objective of GFOI is to help nations develop a capacity to utilize Earth Observation data in a credible national forest monitoring system that can provide input to national MRV systems for GHG emissions and removals in IPCC-compliant reporting to the UNFCCC, REDD+ and future carbon markets. The GFOI capacity building effort will complement the REDD+ readiness activities of the UN and World Bank and will focus on:

- support for the acquisition, installation and operation of technical hardware/software for processing of satellite, in situ and airborne forest and forest-related data;
- country-specific training in the selection, assessment, use and combination of different types of data for forest and carbon accounting, including model development;
- global and regional workshops/meetings such as those arranged for the National Demonstrators;
- Training courses in selected issues.

Efforts to date have included a series of focused workshops organized and funded by US Silvacarbon (<http://swp.gmu.edu/silvacarbon>) and supported by Australia and Norway. Australia has its own focused programme with Indonesia for the development of national capacity, as does Norway with Tanzania.

2. Objectives of the Capacity Building Plan

This work plan has two objectives:

1. To organize a list of potential activities that emerged from an evaluation the technical capacity existing in each country.
2. To present a general vision of how different programs and initiatives can fit into a general GFOI strategy for investing in creating capacity in support of REDD+ in the three regions.

The activities proposed in this document are based on discussions among SilvaCarbon technical team with country decision makers. The following work plan aims to provide an overall idea of the objectives and goals of capacity building for the construction of the National Monitoring, Reporting and Verification systems of forest carbon stocks and their changes. This work plan is intended to become a guiding tool for future efforts from partners investing in the processing of developing capacity in the GFOI countries to support the creation of their national MRV system.

3. Process for Developing the Capacity Building Plan

i. Evaluation of capacity building in country

The evaluation of the capacities in country starts with a visit to the Institution in country in charge of implementing the MRV systems for REDD+.

ii. Identification of common capacity building needs in the region

Non Annex 1 countries are at different stages in developing their MRV systems, however in a specific region similar characteristics are found among countries. They shared similar challenges on data availability, remote sensing technical capacities, and lack of resources to implement a fully operational monitoring system. Regional capacity building is cost effective in terms of resources directed to bringing experts to provide training to separate countries, language and cultural similarities as well.

iii. Identification of partners working supporting each region

Reaching to different partners providing International cooperation to countries Non Annex 1 is a way to prevent duplicated efforts in a region as well as to increase impact by multiplying financial resources.

4. Partners Beneficiaries of GFOI Capacity Building

- **Cambodia**
Department of Forestry and Community
Watershed Management and Forest Cover Assessment Office
- **Cameroon**
Olam/CIB
Forestry and Communities in Cameroon (CEECEC)
Congo Basin Forest Partnership (APV-FLEGVT)
- **Colombia**
Institute of Hydrology, Meteorology and Environmental Studies (IDEAM) – Primary
Ministry of Environment (MinAmbiente)
Ministry of Agriculture
Institute of Geography (IGAC)
Javariana University
Local NGOs
Catholic University
Medellin University
- **Democratic Republic of Congo**
Direction Inventaire et Amenagement Forestiers (DIAF)
University of Kinshasa
- **Ecuador**
Ministry of Environment (MAE)
Ministry of Agriculture
Catolica University
Logal NGOs
- **Guyana**
Forestry Commission
- **Indonesia**
Bakosurtanal
Ministry of Forestry
Ministry of Agriculture
BPN -National Land Agency
LAPAN – Satellite Imagery Agency
DNPI - National Climate Change Council
- **Laos**
Division of Planning and Cooperation
- **Mexico**
National Forestry Commission (CONAFOR)
Mexico Norway Program
Local NGOs
Post Graduate School (COLPOS)

- **Nepal**
Ministry of Forest and Soil Conservation
Department of Forest Research and Survey
- **Peru**
Ministry of the Environment (MINAM)
Ministry of Agriculture (MINAG)
Regional Governments
Agrarian University (UNALM)
Amazonia University (UNAP)
Local NGOs
- **Philippines**
Department of Environment and Natural Resources
Remote Sensing and Resource Data Analysis Department
- **Republic of Congo**
Ministry of Sustainable Development, Forest Economy and Environment (MDDEFE)
 CNIAF (National Center for Surveys and Forest and Fauna Resources Management).
 SNR (National Reforestation Service)
MEPATI (Ministry of Economy, Planning, Land Reform, and Integration
CONA-REDD (National REDD Committee)
- **Thailand**
Geo-Informatics and Space Technology Development Agency (GISTA)
- **Vietnam**
Forest Inventory and Planning Institute (FIPI)
Ministry of Agricultural and Rural Development (MARD)
Ministry of Natural Resources and Environment (MONRE)

GFOI Capacity Building Lead - USG SilvaCarbon Program

SilvaCarbon is a flagship program under United States fast start financing for REDD+ and is a U.S. contribution to the Global Forest Observation Initiative (GFOI) of the intergovernmental Group on Earth Observations (GEO). One of the objectives of the SilvaCarbon program is to build capacity of selected developing countries to use forest and terrestrial carbon monitoring and management methodologies and technologies. Achieving this objective may include developing and delivering good practice guides, manuals, trainings, and tools; facilitating learning exchanges, regional forums, and networks to enhance sharing among countries; providing technical advice and assistance to governments, including GFOI countries; and partnering with other donors and with International Organizations to multiply impact and reach.

GFOI Capacity Building Partners

Forest Carbon Partnership Facility (FCPF)

The Forest Carbon Partnership Facility assists developing countries in their efforts to reduce emissions from deforestation and forest degradation and foster conservation, sustainable management of forest, and enhancement of forest carbon stocks (all activities commonly referred to as “REDD=) by providing value to standing forest.

UN-REDD - FAO

The UN- REDD Programme is the United Nations collaborative initiative on Reducing Emissions from Deforestation and forest Degradation (REDD) in developing countries. The Programme was launched in 2008 and builds on the convening role and technical expertise of the Food and Agriculture Organization of the United Nations (FAO), The United Nations Development Programme (UNDP) and United Nations Environment Programme (UNEP). The UN-REDD Programme supports nationally- led REDD+ processes and promotes the informed and meaningful involvement of all stakeholders, including Indigenous Peoples and other forest-dependent communities, in national and international REDD+ implementation.

GOFC-GOLD

GOFC –GOLD is a panel of GTOS and its overall objective is to improve the quality and availability of observations of forest and land cover at regional and global scales and to produce useful, timely and validated information products from these data for a wide variety of users.

GFOI Capacity Building Contributors

Arbonaut – Finland

Australian Department of Climate Change and Energy Efficiency (DCCEE) - Australia

Boston University (BU) – United States

Canadian Forest Service (NRCAN) - Canada

Commonwealth Scientific and Industrial Research Organization (CSIRO) - Australia

Forest Carbon Markets and Communities (FCMC) – United States

Food and Agriculture Organization (FAO) - Rome

Forest Carbon Partnership Facility (FCPF) – United States

Freiburg University – Germany

International Institute for Applied Systems Analysis (IIASA) - Austria

Institute of Research for Development (IRD) – French

NASA – United States

National Institute for Space Research (INPE) – Brazil

Northern Research Institute (Norut) – Norway

Norwegian Space Center (NSC) - Norway

Peace Corps – United States

Michigan State University – United States

Moore Foundation (United States)

Stanford University – United States

Technical Research Center of Finland (VTT) - Finland

The Nature Conservancy – United States

University of Freiburg – Germany

University of Maryland (UMD) – United States

University of Oxford - England

U.S Forest Service (USFS) – United States

U.S. Geological Survey (USGS) – United States

U.S Agency for International Development (USAID) – United States

U.S State Department – United States

Woods Hole Research Center (WHRC) – United States

Wageningen University – The Netherlands

Moore Foundation – United States

World Wildlife Fund (WWF) – United States
Word Research Institute (WRI) – United States

Upcoming Training **GFOI Workshops in the Americas 2014/2015**

9th Technical Americas GEO GFOI- Regional Forest Monitoring Workshop

Topic: Comparison of methodologies for Biomass Maps

Location: Bogota and Leticia, Colombia

Host Institution: IDEAM, Universidad de Medellin

Participants 20-25: Colombia, Ecuador, Mexico and Peru.

Technical Advisors: Woods Hole Research Center, NASA, Freiburg University, Boston University, University of Hamburg.

Funding source: UE ReCover Program and SilvaCarbon

Proposed Dates: **December 2 – 7, 2013**

10th Technical Americas GEO GFOI- Regional Forest Monitoring Workshop

Topic: Thematic Accuracy Maps Assessment – Hands on workshop

This workshop is a follow up of the work for map validation and accuracy assessment that Boston University has been doing with Colombia, Peru, and Ecuador.

Possible Venue: Boston University

Host Institution: Boston University

Participants: Mexico, Colombia, Guyana, Ecuador, and Peru.

Technical Advisors: Boston University and EROS Data Center

Possible Funding source: SilvaCarbon

Proposed Dates: **March, 2014 tbc**

11th Technical Americas GEO GFOI- Regional Forest Monitoring Workshop

Topic: Early Warning Systems

Possible Location: Brazil

Host Institution: IMAZON

Participants: Colombia, Ecuador, Mexico, Guyana and Peru.

Technical Advisors (proposed): CAF, IMAZON, CIAT, University of Maryland, and NASA

Funding source: SilvaCarbon

Proposed Dates: **June, 2014**

12th Technical Americas GEO GFOI- Regional Forest Monitoring Workshop

Topic: Socioeconomic Issues of REDD+: Drivers of deforestation

Possible Location: Lima or Iquitos, Peru

Host Institution: Minam

Participants: Colombia, Ecuador, Mexico and Peru.

Technical Advisors: U. Wisconsin, Germany, Brazil

Funding source: SilvaCarbon

Proposed Dates: **November, 2014**

13th Technical Americas GEO GFOI- Regional Forest Monitoring Workshop

Topic: Change detection based on analysis of time series satellites observations

Participants: Colombia, Ecuador, Mexico, and Peru.
Technical Advisors: Imazon, Boston University, CSIRO, University of Maryland
Funding source: SilvaCarbon
Proposed Dates: **January 2015**

Community Based Monitoring Study Tour to Guyana

Topic: *This study tour will be to exchange experiences among the Latin American countries in their community based monitoring activities. Guyana has a project in cooperation with Norway and WWF, and we will visit 4 of their communities.*

Possible Location: Guyana
Host Institution: WWF
Participants: Colombia, Ecuador, Mexico and Peru.
Technical Advisors: tbc
Funding source: SilvaCarbon, and WWF
Proposed Dates: **tbc**

Alternatives Topics based on available funding:

- Modeling different scenarios for reference levels
- Data Interoperability
- Land Cover classification systems

GFOI Workshops in SE Asia 2014/2015

1st Technical SE Asia GFOI- Regional Forest Monitoring Workshop

Topic 1: Remote Sensing for Forest Cover Mapping in South East Asia

Location: Thailand
Host Institution: DNP
Participants: 40: Cambodia, Laos, Indonesia, Thailand, Vietnam, Philippines and Nepal
Technical Advisors: Woods Hole Research Center, Arbonaut, Norut, USGS, USFS, Boston University.
Funding source: SilvaCarbon
Dates: January 20- 24, 2014

2nd Technical SE Asia GFOI- Regional Forest Monitoring Workshop

Topic: Comparison of methodologies for Biomass Maps

Location: Cambodia
Host Institution: tbd
Participants 40: Cambodia, Laos, Indonesia, Thailand, Vietnam, Philippines and Nepal.
Technical Advisors: Wageningen University, Freiburg University, Boston University, University of Hamburg, NASA
Funding source: SilvaCarbon
Proposed Dates: **November, 2014**

3rd Technical SE Asia GFOI- Regional Forest Monitoring Workshop

Topic: Topic: Community Based Monitoring

Location: Nepal
Host Institution: tbd

Participants: 40: Cambodia, Laos, Indonesia, Thailand, Vietnam, Philippines and Nepal.
Technical Advisors: WWF, Wageningen University, Norut, and the Universidad Autónoma de Mexico
Funding source: SilvaCarbon
Proposed Dates: **March, 2015**

GFOI Workshops in Africa 2014/2015

1st Technical Africa GFOI- Regional Forest Monitoring Workshop

Topic 1: Remote Sensing for Forest Cover Mapping in Africa

Location: tbd

Host Institution: DNP

Participants: 40: Cameroon, Gabon, Democratic Republic of Congo, Republic of Congo and Central African Republic

Technical Advisors: Arbonaut, Norut, USGS, USFS, Boston University, University of Maryland

Funding source: SilvaCarbon

Dates: May, 2014

2nd Technical Africa GFOI- Regional Forest Monitoring Workshop

Topic: Comparison of methodologies for Biomass Maps

Location: tbd

Host Institution: tbd

Participants 40: Cameroon, Gabon, Democratic Republic of Congo, Republic of Congo and Central African Republic

Technical Advisors: Wageningen University, Freiburg University, Norut, University of Hamburg, NASA, USGS.

Funding source: SilvaCarbon

Proposed Dates: August, 2014

3rd Technical Africa GFOI- Regional Forest Monitoring Workshop

Topic: Community Based Monitoring

Location: DRC

Host Institution: tbd

Participants: 40: Cameroon, Gabon, Democratic Republic of Congo, Republic of Congo and Central African Republic

Technical Advisors: WWF, Wageningen University, Norut, FCPF.

Funding source: SilvaCarbon

Proposed Dates: November, 2014 – or Early 2015