THE GLOBAL FOREST OBSERVATIONS INITIATIVE
– Update on Early Warning

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GFOI coordinates international assistance to countries on forest monitoring and GHG accounting:

- Support the utilisation of Earth observation for countries developing National Forest Monitoring Systems for REDD+ reporting
- Build technical capacity and provide operational guidance
- Facilitate access to key remote sensing data
- Stimulate scientific advancements for forest monitoring and MRV for REDD+
Partners

• Founded under **Group on Earth Observations (GEO)** in 2011

• Lead partners:
  – Govt of Norway and Australia
  – USA via SilvaCarbon
  – FAO
  – Committee on Earth Observation Satellites (CEOS)
  – Govt of U.K. (new 2017)
  – European Space Agency (new 2017)

• Advisory experts from UNFCCC, IPCC, World Bank FCPF, REDD+ countries, universities, etc
**GFOI Components**

**Methods and Guidance**
User friendly guidance on MRV for REDD+. IPCC & UNFCCC compliant

**Data Coordination**
Facilitates the acquisition, accessibility & capacity to use Earth Observation datasets & tools

**Capacity Building**
Direct support to countries: training, tech transfer and implementation assistance

**R&D Coordination**
Methodology development on Priority Research Topics to overcome barriers to progress. R&D Programme

**GFOI Office**
Provides secretariat services to the Initiative

[Links: GFOI.ORG, FACEBOOK.COM/GFOI, @GFOI_FOREST]
• GFOI Methods and Guidance Document (MGD) provides logical and systematic guidance to REDD+ countries on the utilisation of EO data for national C emissions reporting;

• Consistent with UNFCCC Paris Agreement and Warsaw Framework on REDD+

• Provides operational link between IPCC methods and all REDD+ activities identified by UNFCCC

• Consistent with the annual review of scientific developments by GOFC-GOLD Sourcebook

• Available in English, French and Spanish

• Accompanied by an interactive web application REDDcompass www.gfoi.org/REDDcompass
Methods & Guidance (MGD)

- Interactive web application **REDDcompass**

[Image of the REDDcompass website]

**Guiding you through REDD+**

Welcome to REDDcompass.

Progressively work through the key themes, concepts and actions of REDD+ National Forest Monitoring Systems (NFMS) for Measurement, Reporting and Verification (MRV) gaining access to a suite of GFOI methods and guidance, space data resources, training materials and tools along the way.

[LEARN MORE]

- Institutional Arrangements
- Policy + Design Decisions
- Measurement + Estimation
- Reporting + Verification

[REDDcompass Resources]

Search MGD Edition 2.0

Download MGD

www.gfoi.org/REDDcompass
REDDcompass guides users through core Themes, Concepts and Actions involved in the development of National Forest Monitoring Systems (NFMS) for Measurement, Reporting and Verification (MRV). It provides contextual links to GFOI methods and guidance, space data resources, references and tools, training materials and advances in research and development as users work through the pyramid framework.

Quick Start

The overarching colour coded Themes displayed in the pyramid opposite are consistent with the headings of the GFOI Methods and Guidance Document (MGD) and suggest a bottom to top hierarchical progression through MRV Themes.

Selecting a Theme reveals a second layer pyramid which represents a MRV Concept (or second level heading) to be considered, again with a suggested progression being from the bottom to the top.

REDDcompass presents suggested reading from the GFOI MGD related it each Concept. Additionally each Concept has a range of possible Actions for consideration listed below the pyramid. Within this Action worksheet are a range of relevant links to various guidance, references, training material and tools which can be explored further at this level.

To get started take the following steps:
1: Click on the Theme of interest and explore the related Concept pyramid.
2: Click on the Concept of interest to reveal relevant Actions and supporting guidance, references, training and tools.
3: Click to add detail to an Action and register and create an MRV profile.
4: Add and store relevant information on progress and training requirements against Action items.
5: Run reports to track progress of your MRV development against the Action items.

www.gfoi.org/REDDcompass
Space Data Coordination (SDCG)

Implementation of Global Baseline Data Acquisition Strategy

- Work with space agencies to assure the availability and continuity of consistent time-series of optical and radar (SAR) satellite data over global forest cover.
- At least one annual national cloud-free optical coverage over each country.
- Based on publicly open satellite data – “core data” (Landsat, Sentinels, CBERS)

Space Data Services

- Supporting REDD+ countries’ specific technical requirements, heritage, or experience.
- Demonstrating data exploitation solutions e.g. Data Cube, Analysis Ready Data.

Data Supply in Support of GFOI R&D Activities

- Includes support for science studies and Priority R&D Topics assisting the development and evolution of the MGD for GFOI.
Capacity Building

- **Interface** of GFOI with REDD+ countries;
- Jointly implemented through **US SilvaCarbon**, and **FAO (UN-REDD)**;
- **Tailored** to meet country needs and requests;
- Aims to build up **networks of experts** in countries (recent train-the-trainer workshops);
- Intended to use **MGD** as core syllabus;
- Workshops, one-on-one training, in-country experts, webinars and open sources tools;
R&D Coordination

• Coordinate global R&D activities on forest monitoring to help meet country needs

• Aimed to progress development of “Priority Research Topics” towards operational status, such as e.g.
  – Forest degradation
  – Biomass estimation
  – Sensor interoperability
  – Use of global data sets
  – Accuracy assessment and uncertainty;

• Conducting Expert Workshops on dedicated R&D Priority topics

• Ultimate goal to include mature methods as new MGD modules

GFOI.org/RD
GFOI Phase 2

- GFOI Phase 2 started in 2017, following external review of first 5 years of GFOI (2012-2016)

- GFOI Phase 2 focus on country engagement, where coordinated capacity building on forest monitoring is the primary goal for the benefit of developing countries.

- MGD and the interactive REDDcompass are the backbone of capacity building in the countries providing up-to-date information.

- Data Component emphasis turns from systematic acquisition of satellite data to data uptake in the countries and their applications.

- R&D Coordination invites research groups to contribute to the GFOI R&D agenda and join the effort to make MRV systems more robust.

- Early Warning added as a new focus activity
Early Warning constitutes a key tool for countries to operate proactively to reduce illegal deforestation and resulting GHG emissions.

Although not directly related to C emissions reporting for REDD+ (main focus of GFOI Phase 1), EW is an integral part of a National Forest Monitoring System (NFMS). Countries likely to develop EW as part of their NFMS (with or without GFOI).

Opportunity for GFOI to provide guidance with standardised methods, and to connect with on-going EW activities (e.g. JJ-FAST, GLAD Alert, IBAMA/INPE DETER, etc.)

GFOI EW activity initiated in Q3/2017 by CEOS and supported by Norway (NICFI) and the World Resources Institute (WRI).
First scoping meeting Sept 2017 (ESA/ESRIN, Italy). Participants included WRI, GFOI (SDCG), CEOS space agencies, GOFC-GOLD, JJ-FAST (JAXA) and input from SilvaCarbon and INPE (Non-comprehensive. Broad partnership anticipated.)

Starting point: **EW User Needs Assessment**

- UNA effort led by WRI, as part of ongoing “Lessons Learned” study
- Assessment of user country needs and priorities for EW.
- Identification of end user groups (e.g. REDD country governments, CSOs/NGOs/NPOs, science, donors, media etc.)
- Stratify assessment based on country capacities, which vary between countries and EW categories (law enforcement, fire monitoring, with different technical requirements)
- Building on existing efforts on-going EW activities, such as e.g. JJ-FAST, GLAD Alerts, INPE DETER, etc.
- Multi-stakeholder Forum to be organised by Norway govt in mid-2018.
- CEOS space agencies dedicated to support GFOI EW development.
- Missions cover full range of sensor types (optical, L-, C-, X, S-band SAR) and spatial characteristics (VHR, HR, LR)
- Several categories of EW systems. Each with different technical requirements on the EO space segments (sensor types, temporal & spatial resolution) and ground segments (processing levels, provision latency, etc).
- GFOI R&D Programme to add focus on EW.
- CEOS also to undertake dedicated technical studies and demonstrations (e.g. Vietnam/Colombia Data Cubes)
Early Warning

Foreseen outcomes:

- EW User Requirement document
- Guidelines and recommendations (stratified). Possibly similar tool such as the REDDcompass (decision tree structure)
- Pilot studies
- R&D topics

GFOI EW implementation:

- User Needs Assessment due mid 2018
- Possible GFOI EW launch Dec 2018 at UNFCCC COP-24 (Poland)
- SDCG and GFOI R&D studies foreseen to start 2018/Q1~Q2
More Information

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