Global Forest Observations Initiative

Global Forest Observations Initiative
Methods and Guidance

Dr Carly Green – MGD Component Manager

Train the Trainer Workshop

September 19-23rd 2016, Addis Ababa, Ethiopia

Global Forest Observations Initiative

Presentation Outline

- Introduction to Global Forests Observation Initiatives
- MGD Edition 2.0
- REDDcompass

GFOI Global Forest Observations Initiative

Global Forest Observations Initiative (GFOI)

- The Global Forest Observations Initiative (GFOI) is an initiative led by Australia, Norway, the USA, the Food and Agriculture Organization of the United Nations (FAO), and the Committee on Earth Observation Satellites (CEOS)

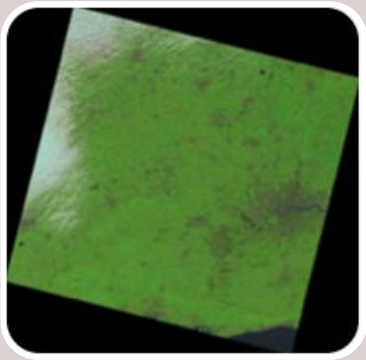
- The GFOI Advisory Committee includes experts from:
  - the United Nations Framework Convention on Climate Change (UNFCCC)
  - the Intergovernmental Panel on Climate Change (IPCC)
  - the World Bank Forest Carbon Partnership Facility (FCPF)
  - Global Observation of Forest and Land Cover Dynamics (GOFC-GOLD)

- The UK supports participation of the Chair of the Advisory Group for the Methods and Guidance Document

FAO FIAT PANIS CEOS Australian Aid NORWEGIAN MINISTRY OF THE ENVIRONMENT A Technical Assistance Program of the United States of America SilvaCarbon

Global Forest Observations Initiative

Global Forest Observation Initiative - Components



Space Data

- GFOI works with space agencies through CEOS to ensures the long-term, world-wide acquisition of core satellite data
- help countries meet their individual data needs

Capacity Building

- GFOI provides capacity building in coordination with others such as UN-REDD. It supports the use of satellite and ground data to monitor forests, and estimate GHGs.

Methods and Guidance

- Guidance on integrating remote-sensing and ground-based observations for estimation of emissions and removals of greenhouse gases in forests.

Research and Development

- Identifying and promoting R&D needed for practical, global implementation of National Forest Monitoring

GFOI Office

- Coordination and Management

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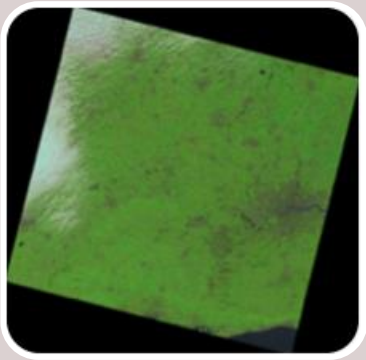
Global Forest Observation Initiative - Components



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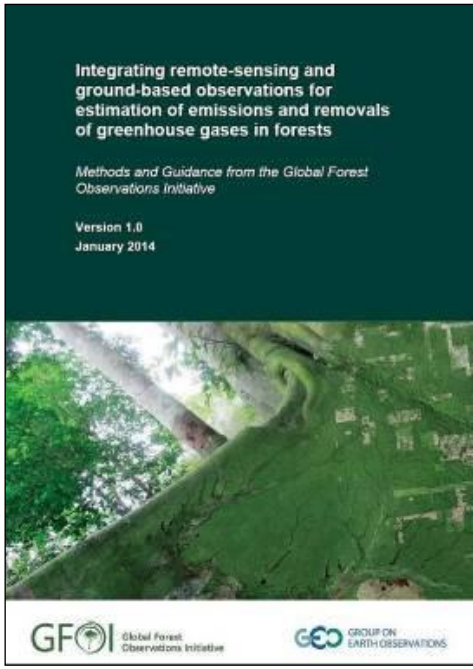
Methods and Guidance Document

Integrating remote-sensing and ground-based observations for estimation of emissions and removals of greenhouse gases in forests

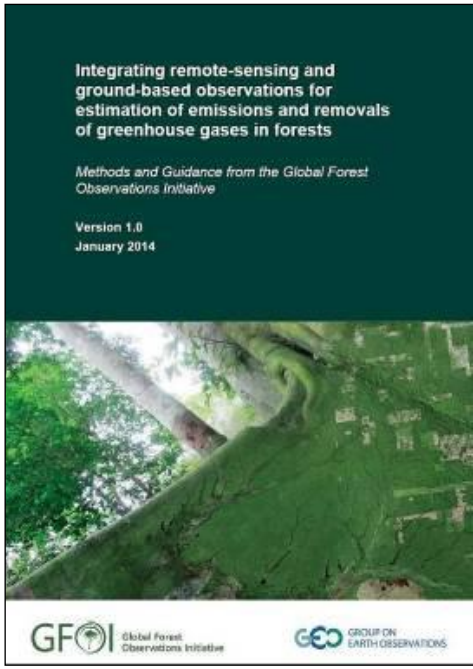
- Development Lead by the Australian Government as their main contribution to GFOI
- More than 50 contributing authors
- 2 years in development
- Published December 2013
- In country use and feedback 2014/2015
- Development of training materials and decision support tools
- Available in English, French, Spanish



Methods and Guidance Document

Audience Aim and Objectives

- MGD presents step-by-step advice on readily implementable approaches for developing REDD-plus estimates for UNFCCC reporting
- Aimed at technical implementers, negotiators and those responsible for REDD-plus nationally
- Provides operational link between IPCC methods and all REDD+ activities identified by UNFCCC
- Aims to assists in the selection of the most appropriate technical solutions consistent with UNFCCC Warsaw Framework on REDD+

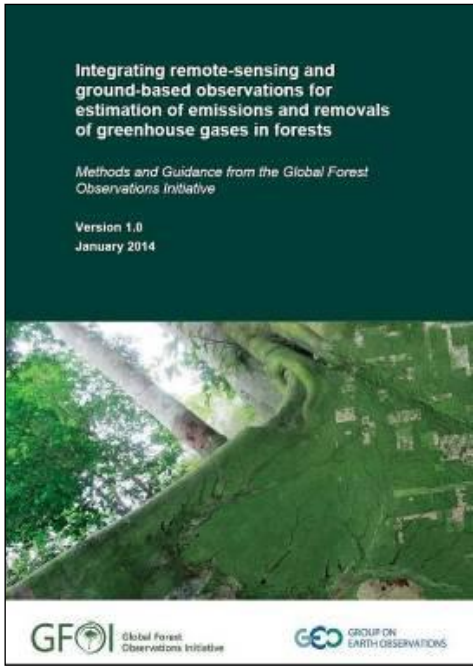


Methods and Guidance Document Edition 2.0

Pre-released through REDDcompass July 2016

Available for download in October 2016

- Updated technical material related to:
  - Institutional arrangements
  - Use of global data sets
  - Integration methods
  - Updates on emerging operational technologies
  - Extension of guidance on biomass estimation
  - Case studies from REDD+ countries



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REDDcompass

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Sign in or Register

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

www.gfoi.org/reddcompass

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Rationale of REDDcompass

- Collates guidance, training resources and tools consistent with the GFOI MGD in one location
- Presents REDD+ MRV in a step-by-step approach through a series of actions
- Provides access to the most appropriate guidance, decision trees and training material/tool aligned with each action
- Enables users to mark actions as complete, identify priority areas and training needs

> *I really like the way the information was integrated. Its nicely done.*

SilvaCarbon
South East Asia Regional Workshop (Indonesia)

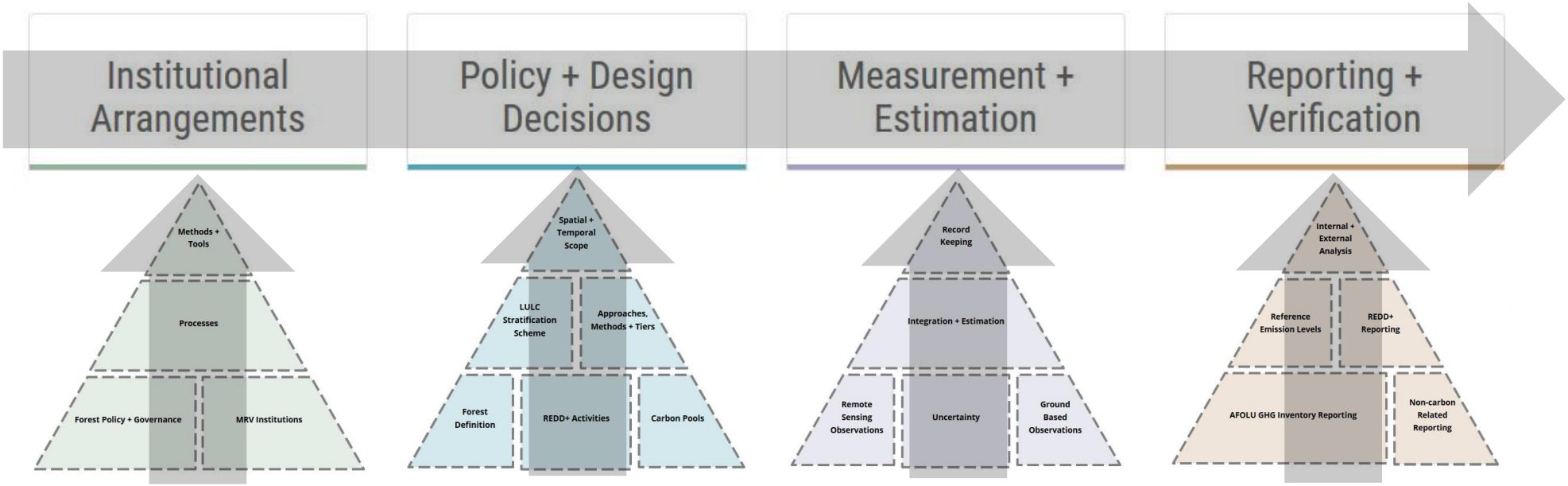
> *It gives me more a structured view on the available data. Kind of refreshing from the texts.*

SilvaCarbon
South East Asia Regional Workshop (Philippines)

> *Its user friendly and gives us access to the MGD even without internet.*

SilvaCarbon
South East Asia Regional Workshop (Philippines)

REDDcompass MRV Guidance Structure



27 Actions

21 Actions

25 Actions

10 Actions

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MGD Application

Search the MGD

Contents Index Search

- Integrating remote-sensing and ground-based observations for estimation of emissions and removals of greenhouse gases in forests
- EXECUTIVE SUMMARY
- LIST OF ACRONYMS
- SHORT GLOSSARY OF TERMS RELATED TO THE UNFCCC
- PURPOSE AND SCOPE
- 1 Design Decisions
  - 1.1 IPCC greenhouse gas inventory methodologies
    - Box 1: The IPCC Tier Concept
  - 1.2 Key category analysis
  - 1.3 Definition of good practice
  - 1.4 Design considerations for national forest monitoring system
    - 1.4.1 Measuring, Reporting and Verifying
    - 1.4.2 Reference Levels
    - 1.4.3 Sub-national approaches
    - 1.4.4 Forest definition
    - Box 2: Exploring different forest definitions and their impact on developing REDD+ reference emission levels: A case study for Indonesia.
    - 1.4.5 Use of existing information
    - Box 3: National Forest Inventories (NFIs)

1.4.1 Measuring, Reporting and Verifying | 1.4.2 Reference Levels (16 / 89) | 1.4.3 Sub-national approaches

1.4.2 Reference Levels

In 2011, decision 12/CP.17 established that FRELs and FRLs are benchmarks for assessing performance in implementing REDD+ activities, and that they should be set transparently, taking into account historical data, may be adjusted for national circumstances, and should maintain consistency with anthropogenic emissions and removals estimates as contained in each country's greenhouse gas inventory. The same decision invited developing countries to submit reference levels on a voluntary basis. In 2013 the Warsaw COP decided that the FRELs and FRLs submitted under the provisions of decision 12/CP.17 shall be subject to technical assessment. An annex to the COP 19 decision provides information on the scope of the assessment; which includes consistency with emissions and removals estimates of REDD+ activities, how historical data have been used (including any modelling), transparency, completeness and accuracy, consistency of the forest definition with that used for other international reporting, inclusion of assumptions about future changes to domestic policies included in reference levels, pools and gases included and justification concerning why omitted pools and gases were deemed not significant, and updating of information which is contemplated by the stepwise approach already established in decision 12/CP.17.

COP19 recognised the importance of addressing drivers of deforestation and forest degradation, their complexity and their linkage to livelihoods, economic costs and domestic resources. Parties, relevant organisations and the private sector are encouraged to work together to address drivers of deforestation and forest degradation, and to share information including via the UNFCCC REDD+ Web Platform. From a technical perspective, gathering evidence to assess the relationships requires quantification of the effect of drivers on emissions and removals, examples of which include direct causes such as pressure from commercial or subsistence agriculture, commercial timber extraction, fuel-wood collection and charcoal production, conservation and sustainability policies and other policy drivers. Taking drivers into account may be useful in stratification and in ensuring consistency between historical data and reference levels.

1.4.1 Measuring, Reporting and Verifying | 1.4.2 Reference Levels (16 / 89) | 1.4.3 Sub-national approaches

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Access to Guidance, Training and Tools

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English

MGD Application

MGD Material

Supporting Guidance Documents

FCPF Methodological Guidelines

GOFC-GOLD REDD Sourcebook

FCMC REDD+ Measurement, Reporting and Verification Manual

MGD Modules

Module 1: How the GOFC-GOLD Sourcebook and the GFOI Methods and Guidance Document Relate

Module 2: Use of global tree cover and change datasets in REDD+ Measuring, Reporting and Verifying

Module 3: Forest reference emission levels and forest reference levels: Extended methodological advice

Training Materials

FCPF REDD+ Training Material for Forest Monitoring

Tools

FCPF REDD+ Decision Support Tool

Openforis

CEOS Cove Tool

BEEODA

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Themes, Concepts, Actions

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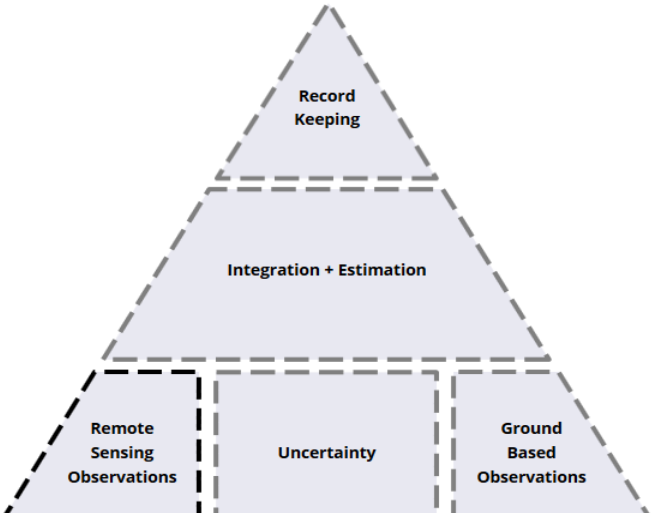
MGD Application

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

Related Concepts (Marked as)

Remote Sensing Observations



MGD Sections

- Design considerations for national forest monitoring systems
- Activity data requirements
- Area, uncertainties and statistical inference for activity data
- Guiding principles for remote sensing data sources and methods
- Methods for mapping activity data
- Map products estimated from remote sensing
- Pre-processing of satellite data
- Remote sensing data sources
- Remote sensing data anticipated to be available through GFOI arrangement with the CEOS Space Data coordination group

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Action Detail

Actions

Consult remote sensing experts (domestic and international) to identify the most efficient approach for developing activty data.

Show | Done

Identify the most appropriate remote sensing data sources to support documented design decisions (i.e. spatial and temporal resolution both historically and into the future; selected forest definitions and REDD+ activities; MRV system development and operational cost).

Show | Done

Generate consistent, multi-date, forest area change activity data with associated uncertainty estimates.

Tags:
Further Action Required

Competency:
Training Required

Response:
Landsat will be used as the basis of time series change detection. All available images from the Landsat archive have been acquired.

Related Links

Related Concepts
- Processes
- REDD+ Activities
- Spatial + Temporal Scope
- Approaches, Methods + Tiers

Related Resources/Tools
- Open Foris
- BEEODA

Hide | None Specified

Document process to ensure transparency and identify any areas for future development or research.

Show | Enter Action State

Implement quality assurance and quality control procedures related to activity data.

Show | Enter Action State

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Reporting on Progress

MRV System: National

Date Report Created 17 Apr 2016 by user@enviroaccounts.com

Summary Theme Completion Details

Summary

24	3	0
Actions Done	Training Identified	Themes Complete

Theme Completion

Institutional Arrangements	
Forest Policy + Governance	0/5
Methods + Tools	0/5
MRV Institutions	0/8
Processes	0/7

Policy + Design Decisions	
Approaches, Methods + Tiers	0/7
Carbon Pools	0/4
Forest Definition	2/3
LULC Stratification Scheme	0/3
REDD+ Activities	0/2
Spatial + Temporal Scope	0/2

Measurement + Estimation	
Record Keeping	0/4
Ground Based Observations	✓
Integration + Estimation	✓
Remote Sensing Observations	✓
Uncertainty	✓

Reporting + Verification	
AFOLU GHG Inventory Reporting	0/1
Internal + External Analysis	0/6
Non-carbon Related Reporting	0/3
REDD+ Reporting	0/1
Reference Emission Levels	0/2

Action Details

User Statistics

Month	Users in the Month		Countries	Average time spent (mins)	Average number of page views (pages)
	Total	New/Return			
April	62	21/41	19	6.3	6
May	163	106/57	46	8	6
June	196	142/54	32	7.26	6
July	254	92/162	35	20.26	12
August	312	120/192	46	20.25	12

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Demonstration of REDDcompass

- This Thursday 22nd September
  - 9.30 – 12.00
  - Work through the main elements of the tool
  - Create an account and work through a series of tutorial questions

Acknowledgements

- GFOI Leads Australia, Norway, the USA, the Food and Agriculture Organization of the United Nations (FAO), and the Committee on Earth Observation Satellites (CEOS)
- MGD Advisory Group and Authors and Reviewers
- Governments, agencies and other organisations supporting participation