

GOFC-GOLD

Global Observation of Forest Cover and Land Dynamics



Land Cover
Project Office



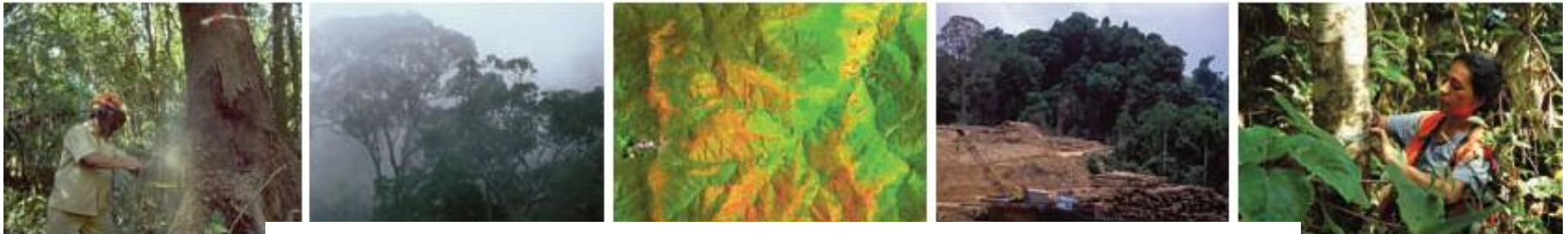
GOFC-GOLD REDD+ Sourcebook activities (progress and next steps)

Brice Mora

Workshop on step-wise approaches for national forest monitoring and REDD+ MRV capacity development

GOFC-GOLD REDD+ Sourcebook

SOURCEBOOK



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

Latest version published for COP-17 in Durban



WAGENINGEN UR

for quality of life

Sourcebook objectives

1. To provide transparent methods that are designed to produce estimates of changes in forest area and carbon stocks in a format that is user-friendly
2. To complement the IPCC GPG-LULUCF (2003) and IPCC Guidelines-AFOLU (2006) by providing additional explanations and enhanced methods
3. To foster technical understanding and build confidence for political discussions on specifying REDD MRV options and requirements
4. Support REDD early actions at national level



Sponsors of the Global Terrestrial Observing System:



Sourcebook authors:

Frederic Achard, Sandra Brown, Ruth De Fries, Giacomo Grassi, Martin Herold, Danilo Mollicone, Devendra Pandey, Carlos Souza Jr., Olivier Arino, Gregory P. Asner, Luigi Boschetti, Barbara Braatz, Michael Brady, Emilio Chiuvioco, Ivan Csiszar, Michael Falkowski, Sandro Federici, Scott Goetz, Nancy Harris, Yasumasa Hirata, Hans Joosten, Chris Justice, Josef Kellndorfer, Stephen Kull, Werner Kurz, Eric Lambin, Suvi Monni, Erik Næsset, Ross Nelson, Marc Paganini, Tim Pearson, David Shoch, Florian Siegert, Margaret Skutsch, Allan Spessa, Patrick Van Laake, Michael Wulder

Support for GOF-C-GOLD REDD working group :



Coarse outline

1 INTRODUCTION

- Purpose and scope of the sourcebook
- IPCC context and requirements
- Clarifying REDD+ elements causing forest carbon stock change
- Emerging issues for REDD+ implementation

2 METHODOLOGICAL SECTION

- Monitoring of changes in forest area and degradation
- Estimation of above ground carbon stocks
- Estimation of soil carbon stocks
- Methods for estimating CO₂ emissions from deforestation and forest degradation
- Methods for estimating GHG emissions from biomass burning
- Estimation of uncertainties
- Methods to address emerging issues for REDD+ implementation
- Guidance on reporting
- Status of evolving technologies

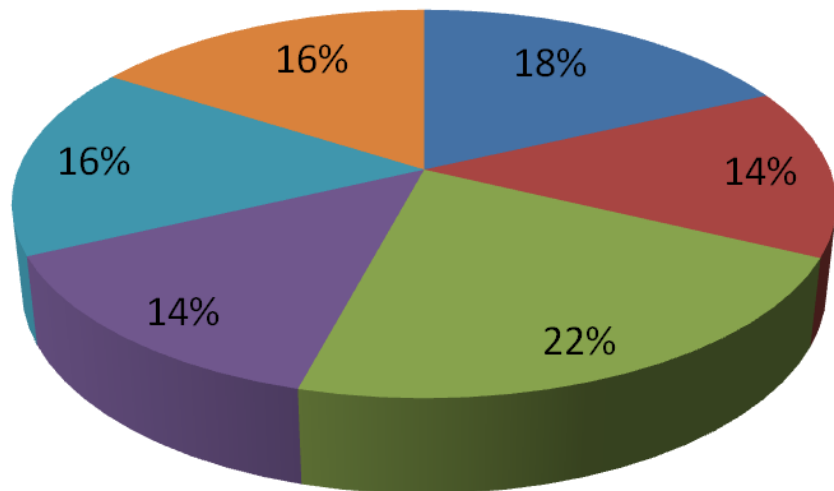
3 PRACTICAL EXAMPLES FOR DATA COLLECTION

- Methods used by annex-1 countries for national LULUCF inventories
- Overview of the existing forest area changes monitoring systems
- From national forest inventory to national forest GHG inventories
- Community forest monitoring

4 COUNTRY CAPACITY BUILDING

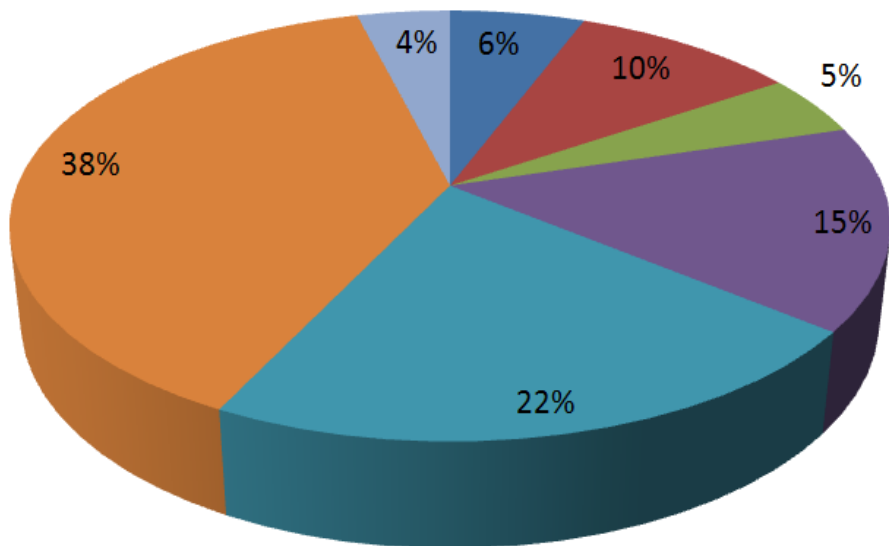
- Building national carbon monitoring systems for REDD: elements and capacities
- Capacity gaps and cost implications
- Linking monitoring and policy development

GOFC-GOLD registered user (~ 1000 users)



- University
- Research Facility
- NGO/non-Profit
- Governmental
- Commercial
- OTHER/UNDEFINED/NA

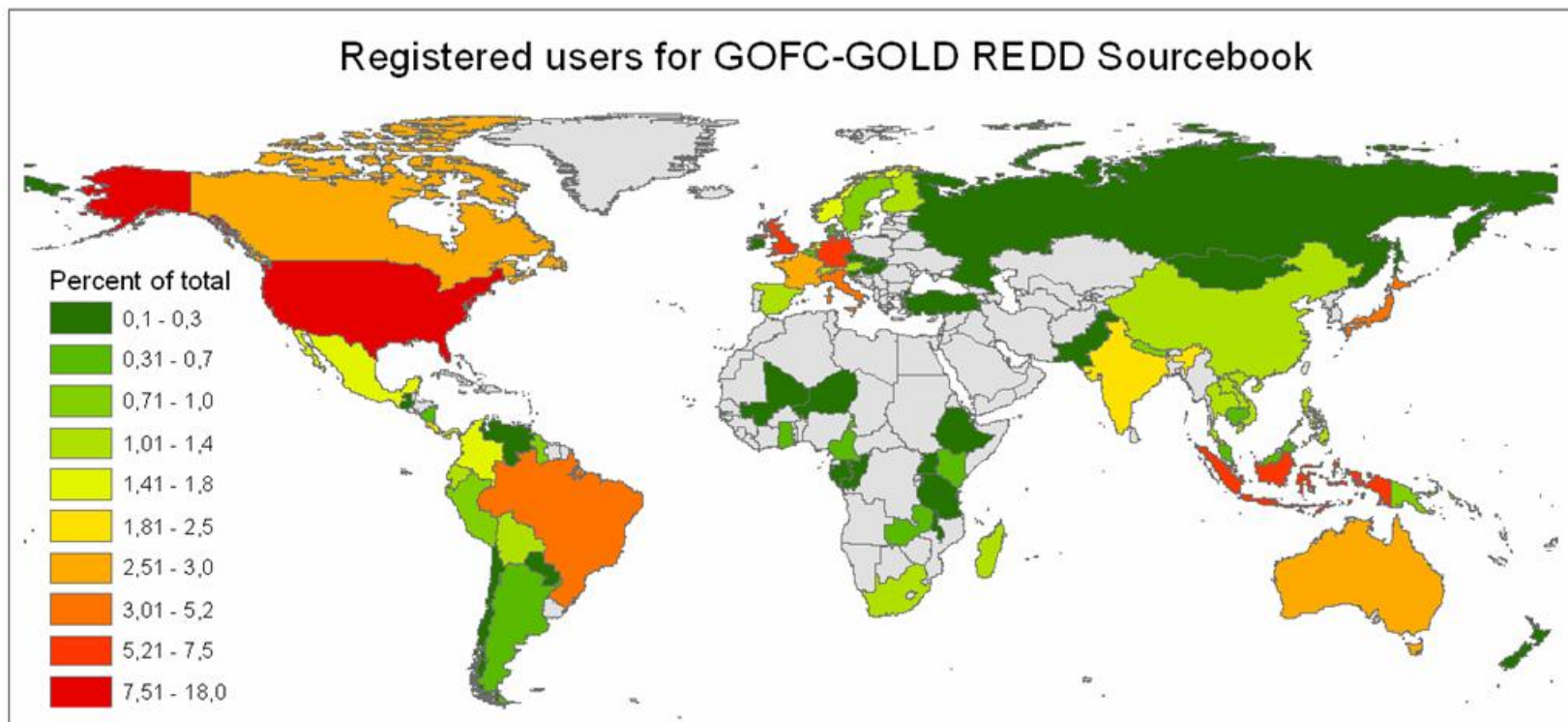
Organization type



- Other or NA
- General interest
- Political/UNFCCC
- LULUCF or CDM project work
- National-regional tropical forest monitoring
- Remote sensing analysis
- In situ/carbon measurements

Thematic focus/ application

GOFC-GOLD REDD+ Sourcebook



Quick facts about the Sourcebook:

- Last version released in 2011 for COP-17
- Accessible from the GOFC-GOLD LC PO website (www.gofcgold.wur.nl/redd)
- Advertised to more than 1500 persons (beyond registered user list) via GOFC-GOLD LC PO newsletters
- Now cited in the literature

GOFC-GOLD REDD+ Sourcebook user survey

with Dr Heather Lovell (Edinburg U.)

Some early results (55 replies so far):

1. First access to Sourcebook:
 - 2008 (28%)
 - 2009 (25%)
2. Reasons for using the Sourcebook
 - methodological advice (69%)
 - help in designing a REDD+ policy/programme/project (49%)
 - access up to date science (47%)
3. Most useful Sourcebook sections:
 - Monitoring changes in forest area and degradation (37%)
 - Estimation of carbon stocks (24%)
 - Estimation of uncertainties (12%)
 - Status of evolving technologies (8%)
4. Technical content found at the right level (63%), 22% ask for more details
5. Large demand for training materials (54%)
6. Sections to update: see #3

GOFC-GOLD REDD+ Sourcebook user survey

Survey accessible online until September 30

<https://www.surveymonkey.com/s/T5CDJFK>

Spread the information around you, thank you!



GOFC-GOLD REDD+ Sourcebook updates

1. Anticipated sourcebook updates:
 - i. UNFCCC/REDD+ progress
 - Negotiation / policy topics
 - New country experiences
 - ii. Revise sections (based on user survey):
 - Focus on evolving technologies (optical and lidar sensors, time series, ..)
 - Earth observation sensor lists and capabilities
 - iii. Usefulness and presentation
 - Training materials (lectures etc.)
 - Develop interactivity (web-page, wiki, links)

2. Objective: COP-18, Doha
 - release of an updated version of the Sourcebook
 - present updates in side event(s) and through ESA booth
 - relative place of the Sourcebook to other guideline documents (GFOI MGD)



Global Forest Observations Initiative (GFOI)

Methods and Guidance Reference

for the Use of Remote Sensing and *in situ* Data in Forest Monitoring and the Estimation and Reporting of Greenhouse Gas Emissions

Chapter 1. Introduction

Chapter 2. Generic guidance for the application of remote-sensing and *in situ* measurements for improved GHG estimation in forests

2.1a Introduction/chapter

2.1b Description of REDD+ activities and their effects on GHG emissions and removals

2.2a Generic description and guidance for each IPCC Tier

2.2b Generic methods for estimating activity data, including

2.2b1 Data products

2.2b2 Remote sensing and *in situ* data sources and processing including maps and underlying spatial data sets

2.2b3 Inference methods & uncertainty estimates

2.2c Generic methods for estimating emissions and removals

Chapter 3. Using remote sensing and *in situ* data to construct or improve estimates of greenhouse gas emissions and removals from forests

3.1 Introduction

3.2 Activity data

3.3 Estimation of emissions and removals of GHGs

3.4 Non-CO₂ emissions (fire and soil)

3.4 Guidance on uncertainties

3.5 Examples of integration of activity data and emissions estimation

3.6 Advice on reporting

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3. GOFC-GOLD 2013 Symposium (April 15-19 2013 at Wageningen)
 - GOFC-GOLD REDD Working group session
 - Follow-up session on REDD+ MRV stepwise approach



Web resources

- GOFC-GOLD:
 - <http://www.fao.org/gtos/gofc-gold/>
- GOFC-GOLD land cover project office:
 - <http://www.gofcgold.wur.nl/>
- GOFC-GOLD REDD sourcebook:
 - <http://www.gofcgold.wur.nl/redd>
- IPCC background paper on use of remote sensing in LULUCF sector (GOFC-GOLD 33):
 - <http://www.fao.org/gtos/gofc-gold/series.html>
- UNFCCC/SBSTA technical paper on costs of monitoring for REDD
 - <http://unfccc.int/resource/docs/2009/tp/01.pdf>

THANK YOU

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