GOFC-GOLD REDD+ Sourcebook activities

(progress and next steps)

Brice Mora

Miombo Regional Network meeting , Maputo, July 23-25, 2013

GOFC-GOLD REDD+ Sourcebook
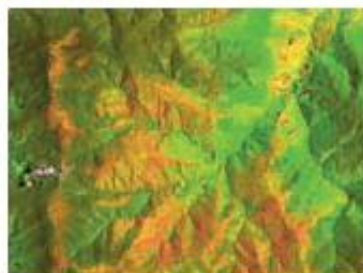
A sourcebook of methods and procedures for monitoring and reporting anthropogenic greenhouse gas emissions and removals associated with deforestation, gains and losses of carbon stocks in forests remaining forests, and forestation

Latest version published for COP-18 in Doha

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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

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Sponsors of the Global Terrestrial Observing System

Sourcebook authors:

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Support for GOFC-GOLD REDD working group:
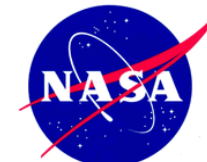
Coarse outline

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 CO_2 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

Definition of forest, deforestation

Forest

- Common to most definitions are threshold parameters including minimum area, minimum height and minimum level of crown cover
- In forest resource assessment of 2010, the FAO uses a minimum cover of 10%, height of 5m and area of 0.5ha stating also that forest use should be the predominant use
- For the purpose of the Kyoto Protocol, Parties should select a single value of crown area, tree height and area to define forests within their national boundaries. From within following ranges:

▫ Minimum forest area: 0.05 to 1 ha

▫ Potential to reach a minimum height at maturity *in situ* of 2-5 m

▫ Minimum tree crown cover (or equivalent stocking level): 10 to 30 %

Deforestation

For most definitions : is a long-term or permanent conversion of land from forest use to other non-forest uses. Under Decision 16/CMP.1, UNFCCC defined deforestation as: "... the direct, human-induced conversion of forested land to non-forested land."

If forest cover decreases below the threshold only temporarily, and the forest is expected to regrow the crown cover to above the threshold, then decrease not considered deforestation
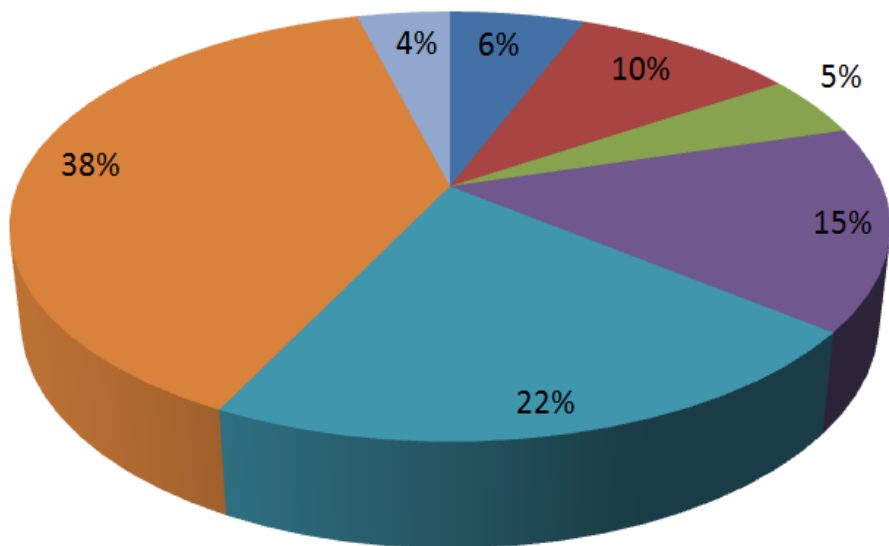
Degradation a resulting decrease in canopy cover/biomass density that does not qualify as deforestation .

GOFC-GOLD registered user (~ 1000 users)
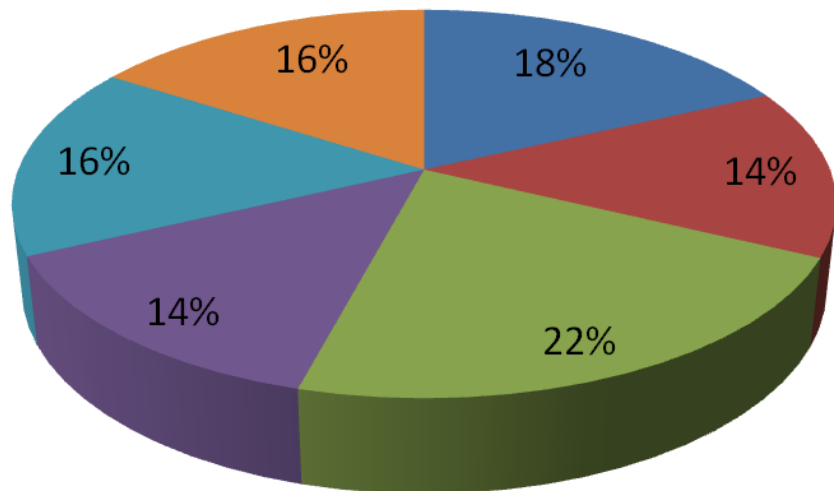
Organization type

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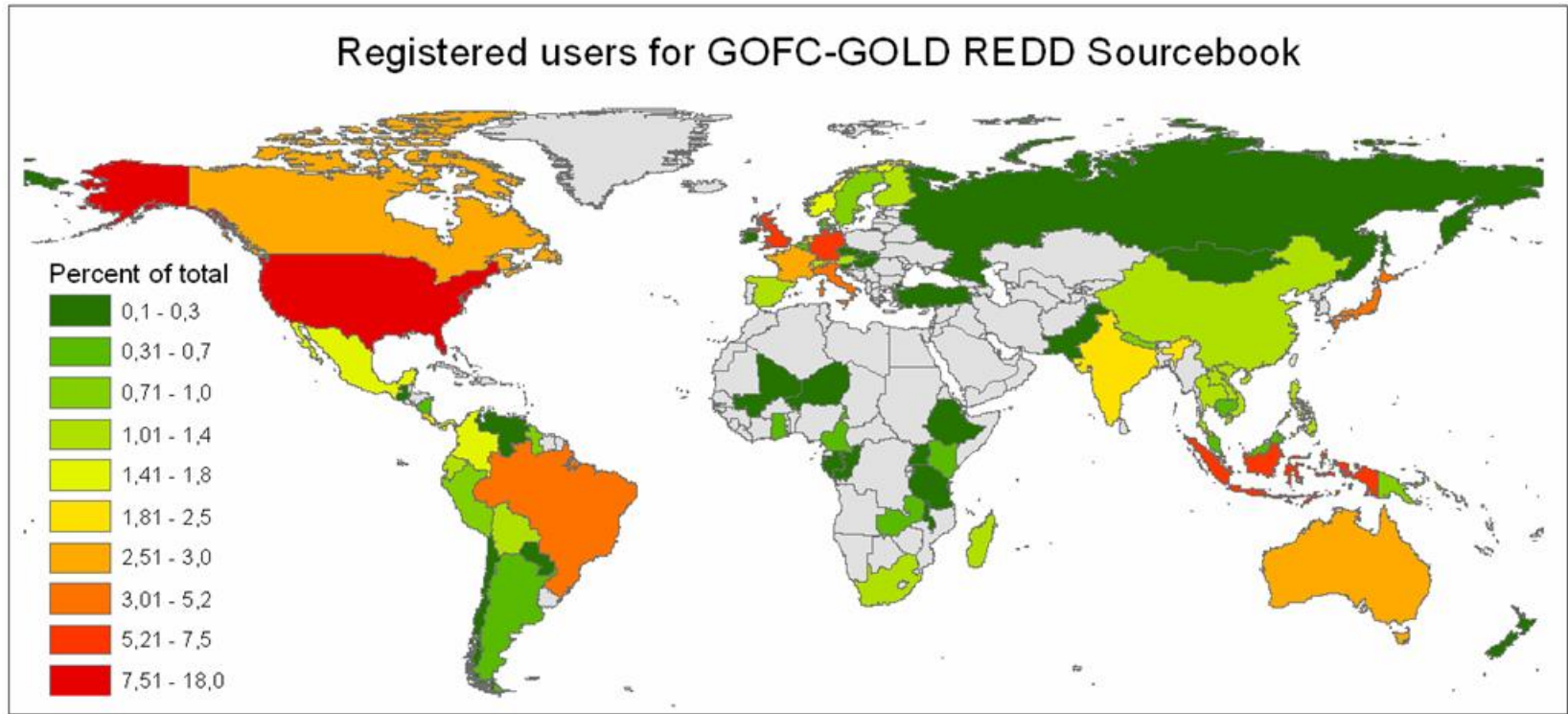- Governmental
- Commercial
- OTHER/UNDEFINED/NA

Thematic focus/ application

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

GOFC-GOLD REDD+ Sourcebook

Registered users for GOFC-GOLD REDD Sourcebook

Percent of total
- 0,1 - 0,3
- 0,31 - 0,7
- 0,71 - 1,0
- 1,01 - 1,4
- 1,41 - 1,8
- 1,81 - 2,5
- 2,51 - 3,0
- 3,01 - 5,2
- 5,21 - 7,5
- 7,51 - 18,0

Quick facts about the Sourcebook:

- Last version released in 2012 for COP-18
- Accessible from the GOFC-GOLD LC PO website (www.gofcgold.wur.nl/redd)
- Advertised to more than 3,500 persons (beyond registered user list) via GOFC-GOLD LC PO newsletters and social medias
- Downloaded 4,400 times in 2012
- Cited in the literature

GOFC-GOLD REDD+ Sourcebook user survey (Fall 2012)

with Dr Heather Lovell (Edinburg U.)

Results (*n* >110):

1. First access to Sourcebook:
   - 2008 (26%)
   - 2009 (23%)
2. Reasons for using the Sourcebook
   - methodological advice (74%)
   - help in designing a REDD+ policy/programme/project (38%)
   - access up to date science (44%)
3. Most useful Sourcebook sections:
   - Monitoring changes in forest area and degradation (39%)
   - Estimation of carbon stocks (22%)
   - Estimation of uncertainties (11%)
4. Technical content found at the right level (64%), 18% ask for more details
5. Large demand for training materials (50%)
6. Sections to update: see #3

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GOFC-GOLD REDD+ Sourcebook updates

1. Last updates:
   - Introduction section (latest UNFCCC decisions - mid-2012)
   - Guidance and Methods section: forest area change monitoring, change in forest remaining forest, above ground carbon stocks estimation, CO2 emissions
   - Evolving technologies section
   - Update of the reference lists
   - More practical examples, with additional sensors
   - Community forest monitoring
   - Typos, layout consistency

2. Next objectives:
   - Evolving technology section (state-of-the-art application of lidar and RADAR)
   - Forest degradation
   - GHG emissions from biomass burning
   - Increased connection with other material: **training material**, courses, etc
   - Release of the updated version of the Sourcebook for UNFCCC COP-19, Warsaw, Poland (11-22 November 2013

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Some publications for UNFCCC COP 18

Capacity development in national forest monitoring

Experiences and progress for REDD+

Edited by
Brice Mora, Martin Herold, Veronique De Sy,
Arief Wijaya, Louis Verchot and Jim Penman
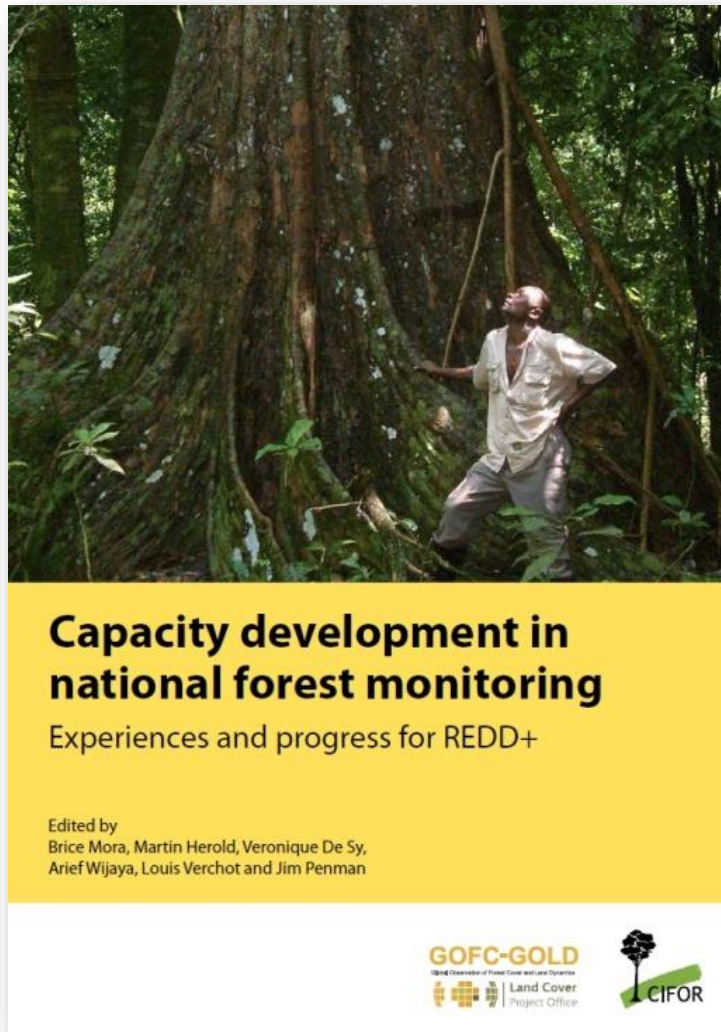
- Country experiences and success factors in building forest monitoring capacities (i.e. India, Vietnam, Guyana …)

- Lessons learned from donors (Worldbank FCPF, Norway IFCI)

- Some critical MRV issues

- Synthesis and recommendations

http://www.cifor.org/online-library/browse/view-publication/publication/3944.html

Some publications for UNFCCC COP 18

b) Area proportion of deforestation drivers

DRIVERS OF DEFORESTATION AND FOREST DEGRADATION

A Synthesis Report for REDD+ Policymakers

BY GABRIELLE KISSINGER, MARTIN HEROLD, VERONIQUE DE SY

CARBON BALANCE
AND MANAGEMENT
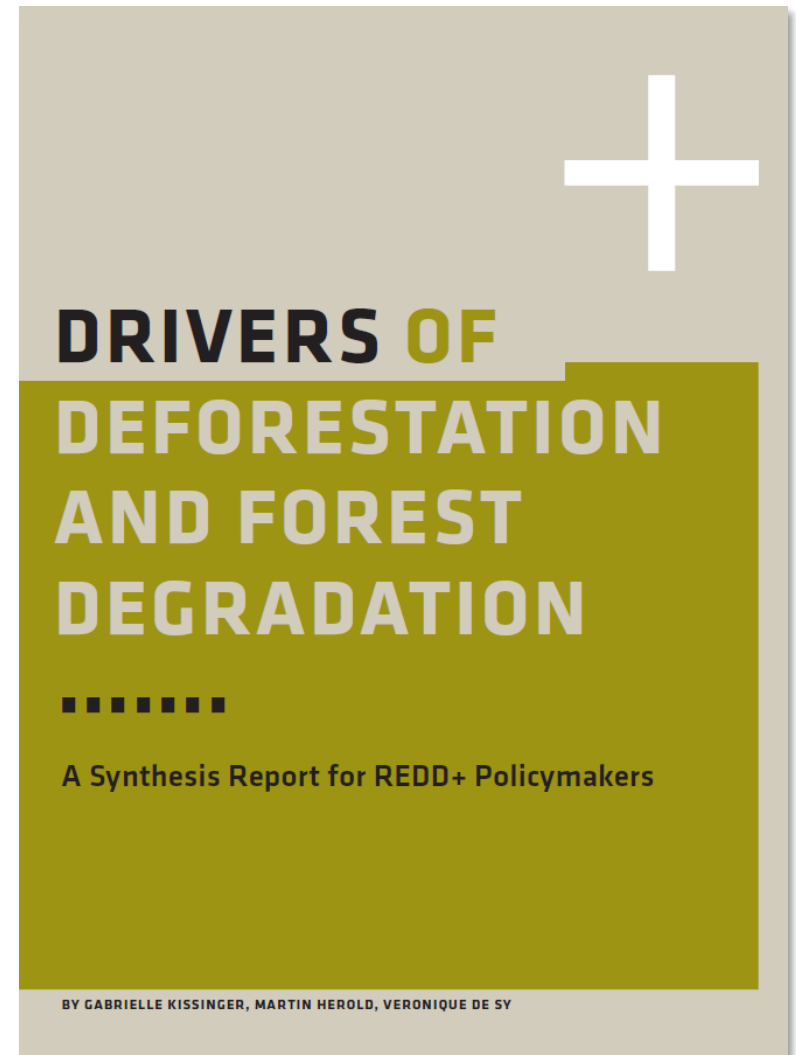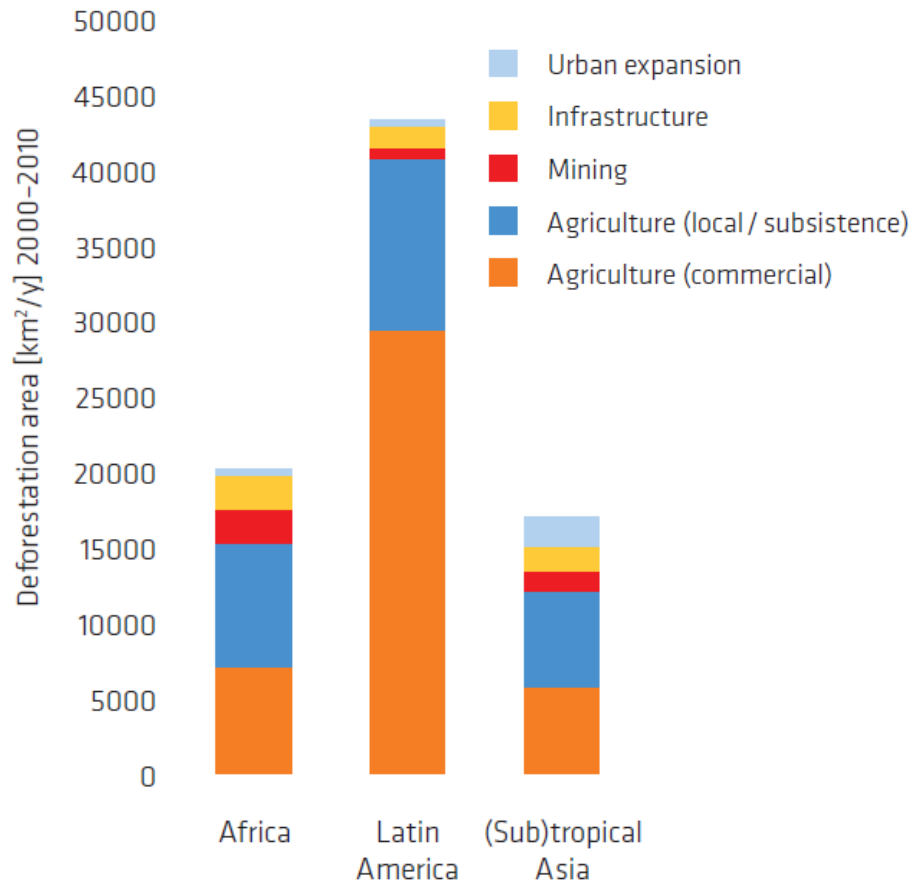
Options for monitoring and estimating historical carbon emissions from forest degradation in the context of REDD+

Martin Herold[1*], Rosa María Román-Cuesta[2], Danilo Mollicone[2], Yasumasa Hirata[3], Patrick Van Laake[4], Gregory P Asner[5], Carlos Souza[6], Margaret Skutsch[7], Valerio Avitabile[1] and Ken MacDicken[8]

Available online at www.sciencedirect.com

SciVerse ScienceDirect

ELSEVIER

Current Opinion in
Environmental
Sustainability

Synergies of multiple remote sensing data sources for REDD+ monitoring

Veronique De Sy[1], Martin Herold[1], Frédéric Achard[2], Gregory P Asner[3], Alex Held[4], Josef Kellndorfer[5] and Jan Verbesselt[1]

Global Forest Monitoring from Earth Observation

Edited by
Frederic Achard • Matthew C. Hansen
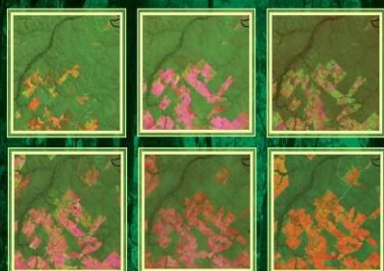
CRC Press
Taylor & Francis Group

Published Nov. 2012
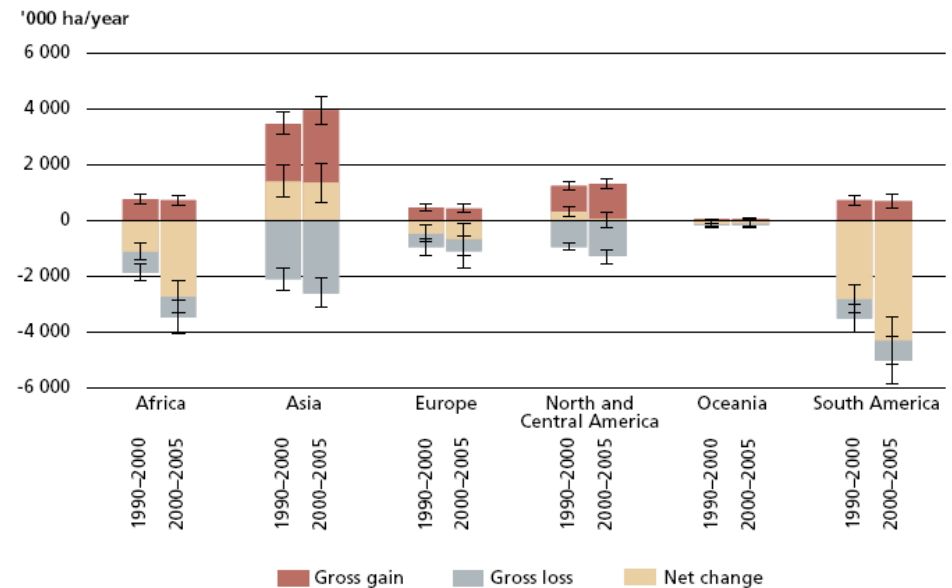
www.routledge.com/books/details/9781466552012

Update on global forest LU change (1990-2005)

FIGURE 11
Gross gains and losses and net changes in forest area, by FRA region, 1990–2000 and 2000–2005

Report released Dec. 2012

FAO Forestry Paper No. 169. FAO & JRC. Rome.

http://www.fao.org/forestry/fra/remotesensingsurvey/en/

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

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THANK YOU

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