

GOFC-GOLD

Global Observation of Forest and Land Cover Dynamics



Technical Guidance for Reducing Emissions from Deforestation

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UN Climate Change
Conference 2007
Bali - Indonesia

Background on GOFC-GOLD REDD initiative

1. REDD discussions initiated at COP-11:
 - UNFCCC negotiations and country submissions
 - Dedicated case studies
2. GOFC-GOLD REDD ad-hoc working group active since 2005 (2 GTOS submissions):
 - Satellite monitoring is the only objective approach in developing countries
 - Forest changes can be monitored with confidence for assessing and comparing historical and future rates of deforestation
 - Countries can start develop a national monitoring system and establish a historical reference

Ensure contribution through participation





GTOS

land cover

Global Observation of Forest and Land Cover Dynamics

GTOS 46
GOLD 26

Reducing Greenhouse Gas Emissions from
Deforestation in Developing Countries:
Considerations for Monitoring and
Measuring



Side Event at SBSTA 26

hosted by ESA, co-organized by GOFC-GOLD

Friday, 11 May 2007
13:00-15:00 at MoT Metro

Technical guidelines for applying earth observation in the RED-DC context:

A synthesis of recent case studies

Emphasizing the role of earth observation for monitoring deforestation in tropical countries, a GOFC-GOLD workshop held in April 2007 in Santa Cruz (Bolivia) synthesized experiences from recent case studies. Lessons learned, issues of degradation, accuracy assessment, and recommendations for implementation will be addressed during the side-event.

Agenda

Moderator: Marc Doherty (*European Space Agency*)

Intro: Need for earth observation for the RED-DC process
(*UNFCCC Secretariat*)

1. GOFC-GOLD tropical deforestation working group: Main statements from Santa Cruz workshop
(*E. Volden, European Space Agency*)
2. Initiatives at global scale for reducing uncertainties of global estimates
(*F. Achard, Joint Research Center*)
3. Technical implications of policy options for reporting
(*T. Johns, Johanneum Research*)
4. Synthesis of case studies and first recommendations for implementation at national level
(*M. Herold, GOFC-GOLD Land Cover Office*)

Lunch and drinks will be provided

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Ref: DeFries, Achard, Brown, Herold, Murdiyarso,
Schlamadinger, De Souza, 2006. GTOS Report 46, 23 p.
Available at: www.fao.org/gtos/pubs.html

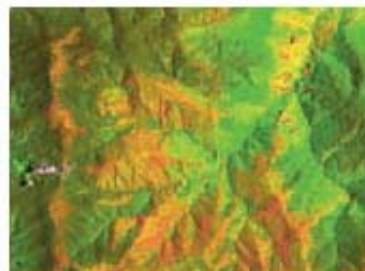


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Sourcebook cover



SOURCEBOOK



Reducing Greenhouse Gas Emissions from Deforestation and
Degradation in Developing Countries: A Sourcebook of Methods
and Procedures for Monitoring, Measuring and Reporting



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Sourcebook rationale

1. Consensus perspective from earth observation & carbon measurement and accounting experts:
 - Presently: 14 authors from 11 organizations
 - GOFC-GOLD platform to formulate scientific and technical consensus
 - User-friendly synthesis of technical procedures
2. Pre-Bali status of negotiations and UNFCCC approved methodologies and definitions

Sourcebook objectives

- The sourcebook is intended to provide transparent methods that are designed to produce estimates of changes in forest area and carbon stocks from deforestation and degradation, with low uncertainty, in a format that is user-friendly.
- It is intended to complement the IPCC GPG-LULUCF (2003) and IPCC Guidelines-AFOLU (2006) by providing additional explanation, clarification and enhanced methodologies for obtaining and analyzing key data.

Gross carbon emissions (concept)

Gross carbon
emissions

Gross deforestation

Gross degradation

$$C_{gr_em} = \left(\sum_{i=1}^m A_{loss(i)} \cdot C_{loss(i)} \right) + \left(\sum_{j=1}^n A_{dgr(j)} \cdot C_{dgr(j)} \right)$$

A_{loss} = Area of deforestation (ha)

C_{loss} = Carbon emission from deforestation (t/ha)

} for forest types $i \dots m$

A_{dgr} = Area affected by degradation (ha)

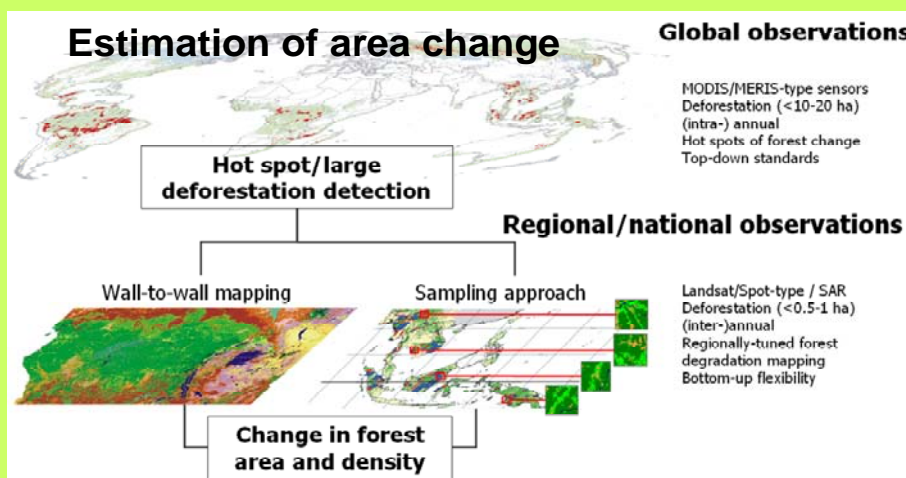
C_{dgr} = Carbon emission from degradation (t/ha)

} for degrad. types $j \dots n$

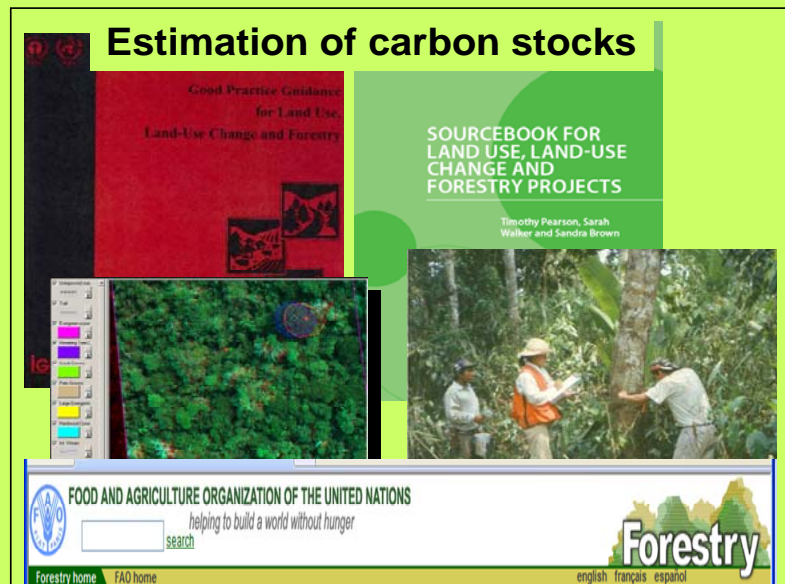
Area change is most dynamic: needs to be observed
from satellite !

Sourcebook format

Chapter 1 and 2: Introduction and definitions



Chapter 3



Chapter 4

Chapter 5 Estimation of CO₂ emissions

Chapter 6 Guidance on reporting of CO₂ emissions

Sourcebook assumptions

1. Global applicability; national conditions require use of different sensors, methods, and capacity building
2. Historical reference can be done consistently from 1990s onwards with confidence
3. Account for gross carbon emission only in existing forest areas on a national basis:
 - Satellite data analysis to estimate forest area change
 - Data on carbon stocks (in-situ/airborne)
 - Clarified approach based on IPCC GPG to report changes in forest carbon stocks
4. Measurement and monitoring system should be simple and provide conservative estimates

Side event to present REDD sourcebook draft

CIFOR Forest Day Side Event

Saturday, 8 December 2007

12:00-13:30

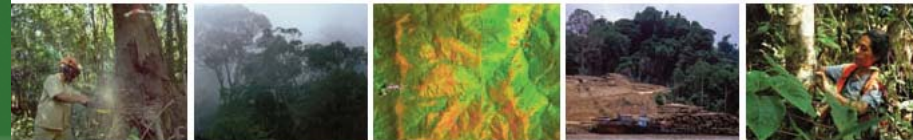
at Ayodya Hotel, Moyo Room

UNFCCC Side Event

Saturday, 8 December 2007

18:00-19:30

at Grand Hyatt, room V GH (C1)



Reducing Greenhouse Gas Emissions from Deforestation and
Degradation in Developing Countries: A Sourcebook of Methods
and Procedures for Monitoring, Measuring and Reporting

GOFC-GOLD +++

Authors: Sandra Brown, Frederic Achard, Barbara Braatz, Sandro Federici, Ruth De Fries, Giacomo Grassi, Nancy Harris, Martin Herold, Danilo Mollicone, Devendra Pandey, Tim Pearson, David Shoch, Carlos Souza

www.gofc-gold.uni-jena.de/redd/



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Side event itinerary

1. Background and Scope
(M. Herold, GOFC-GOLD)
- 2) Monitoring deforestation
(R. DeFries, U. of Maryland)
- 3) Monitoring forest degradation
(D. Mollicone, MPI-BGC)
- 4) Changes in carbon stocks
(S. Brown, WINROCK)
- 5) Guidance on reporting
(G. Grassi, JRC)
- 6) Discussions
(F. Achard, JRC)



Sourcebook status

1. Current draft available online:
 - www.gofc-gold.uni-jena.de/redd
(Registration required)
2. Starting point for discussing and defining an appropriate monitoring framework
3. Experts are invited to provide comments and feedback (by end of Febr. 2008)
4. Further methods and technical details may be specified and added with evolving negotiations and decisions

Acknowledgement

Authors

Sandra Brown, Frederic Achard, Barbara Braatz, Ivan Csiszar, Sandro Federici, Ruth De Fries, Giacomo Grassi, Nancy Harris, Martin Herold, Danilo Mollicone, Devendra Pandey, Tim Pearson, David Shoch, Carlos Souza Jr.

Support for GOFC-GOLD REDD working group and Sourcebook preparation:



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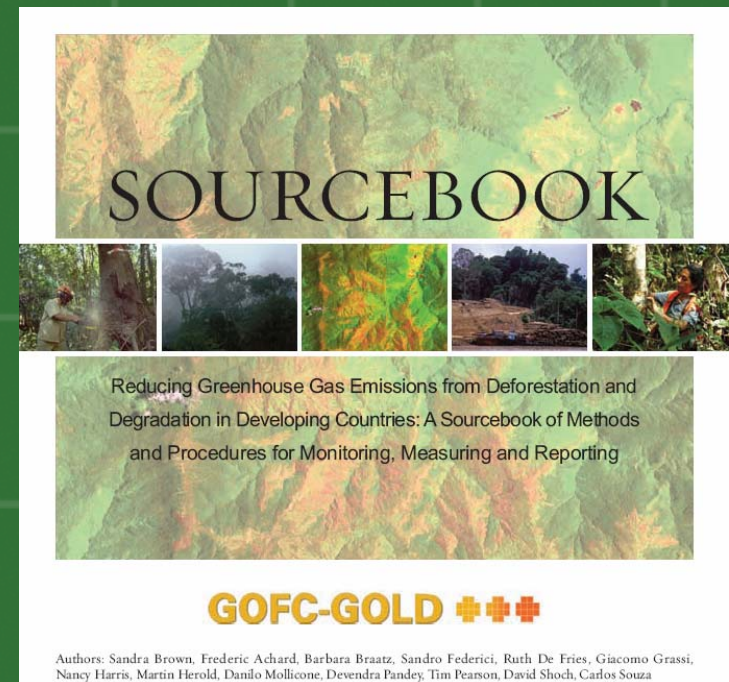
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- Developed by ad-hoc GOFC-GOLD REDD working group active since 2005
- Consensus from the global community of earth observation and carbon experts
- Based on the current status of negotiations and UNFCCC approved methodologies
- Provides additional explanation, clarification, and methodologies to support national REDD implementation activities REDD Sourcebook



www.gofc-gold.uni-jena.de/redd/

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