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Definitions

Rasmus Astrup & Stein Tomter



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Why talk about definitions?

- > REDD+ = many stakeholders, different backgrounds, different disciplines
 - Different understanding of terms and definitions
 - Different objectives
 - Leads to confusion and conflicts

- > Definitions → strong implications for REDD+ MRV





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Why talk about definitions?

“Forest-related definitions for terms such as forest degradation which are outcomes of international processes are policy tools and can have major economic, social and environmental implications”

Simula, M. 2009.



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Definitions is a field in itself!

Forests and Climate Change Working Paper 4



Choosing a forest definition
for the Clean Development Mechanism



Forests and Climate Change Working Paper 5



Definitional issues related to reducing
emissions from deforestation in
developing countries



Forest Resources Assessment
Working Paper 154



TOWARDS DEFINING FOREST DEGRADATION:
COMPARATIVE ANALYSIS OF EXISTING DEFINITIONS

ROME, ITALY
8-10 SEPTEMBER 2009

MARKKU SIMULA



October, 2009





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What is a forest?

Many different definitions – Most definitions contains three main threshold that needs to be fulfilled:

(1) Area



(2) Crown cover



(3) Height





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What is a forest?

2006 IPCC Guidelines for National Greenhouse Gas Inventories :

Forest is a minimum area of land of:

- (1) 0.05 – 1.0 hectares
- (2) with tree crown cover of more than 10 – 30%
- (3) with trees with the potential to reach a minimum height of 2 – 5 metres at maturity *in situ*

Areas temporarily unstocked as a result of human intervention such as harvesting or natural causes but which are expected to revert to forest



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What is a forest?

> FRA 2010 Forest Definition:

“Land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent, or trees to reach these thresholds *in situ*. It does not include land that is predominantly under agricultural or urban use”

+ 9 explanatory notes

Is this a forest? (size threshold)



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Is this a forest? (crown cover threshold)



Large forest areas with crown cover close to the forest threshold (degraded forests, mountain forest, wetland forest)



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Definitions change over time!

1. In REDD+ we are interested in change estimates
2. Definitions have often changed over time and will likely further evolve
3. Changing definitions pose a challenge for estimating change
4. When comparing historic forest statistics definitional changes may overwhelm actual changes

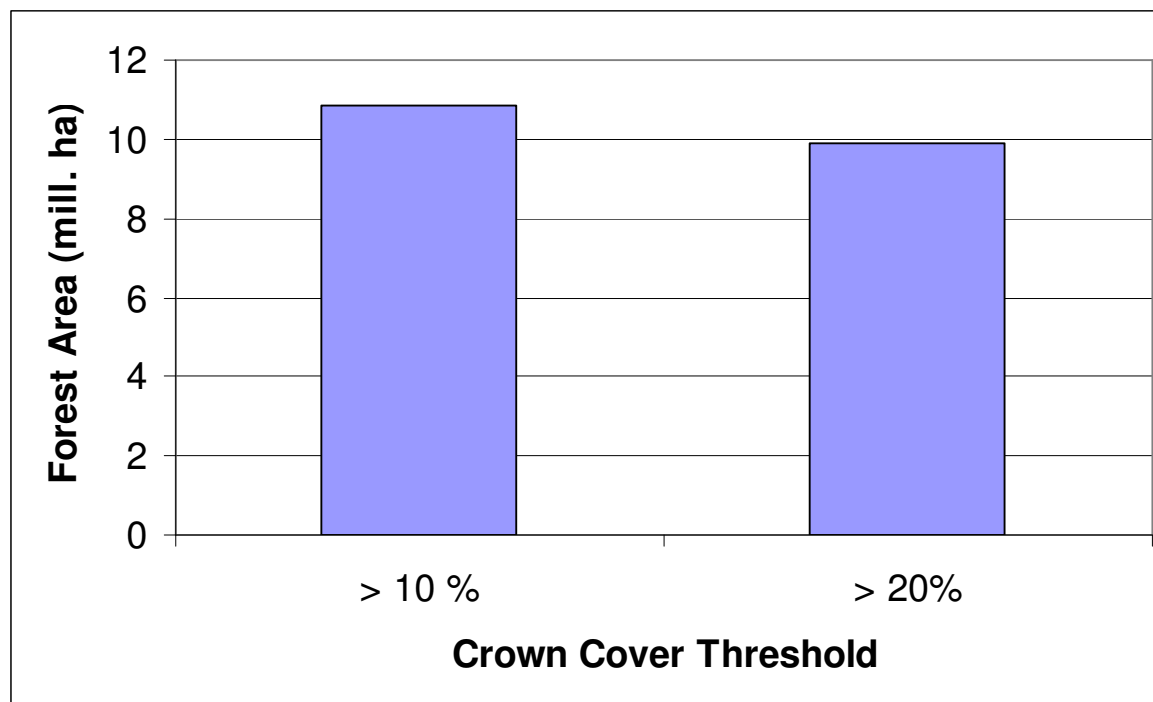


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Example: Crown cover threshold

> FRA changed the crown cover threshold definition between 20% and 10% for temperate forests

Norwegian Forest Area with a 10% and a 20% threshold



Lowering the threshold results in a 10% increase of the forest area

Which area is deforested and which area is a forest?



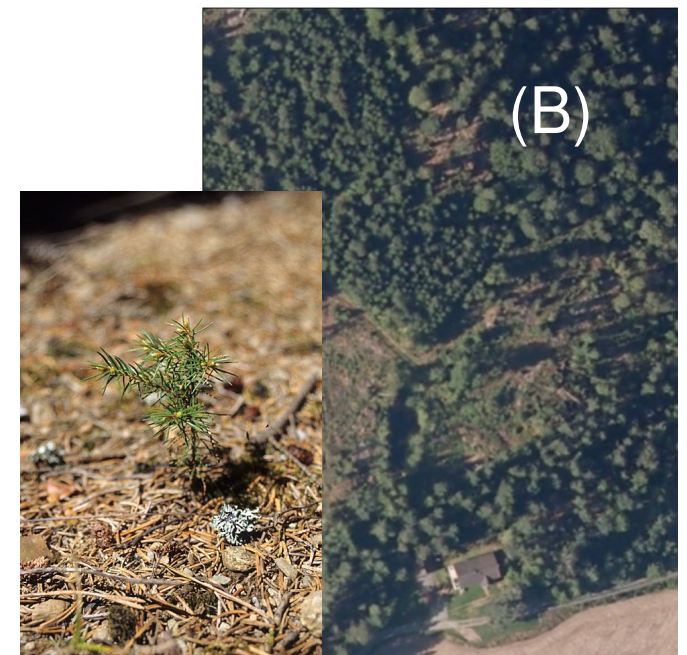
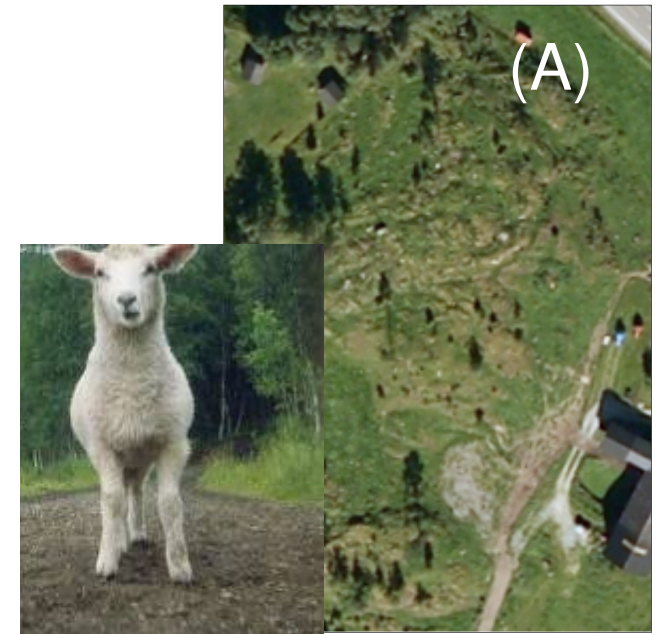
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Land use Change versus Temporary Unstocked

FRA 2010 Deforestation
Definition: The conversion of
forest to other land use or the
long-term reduction of the tree
canopy cover below the minimum
10% threshold

IPPC 2006 Deforestation
definition: The direct human-
induced conversion of forested
land to non-forested land.



Land use change: Implication for MRV



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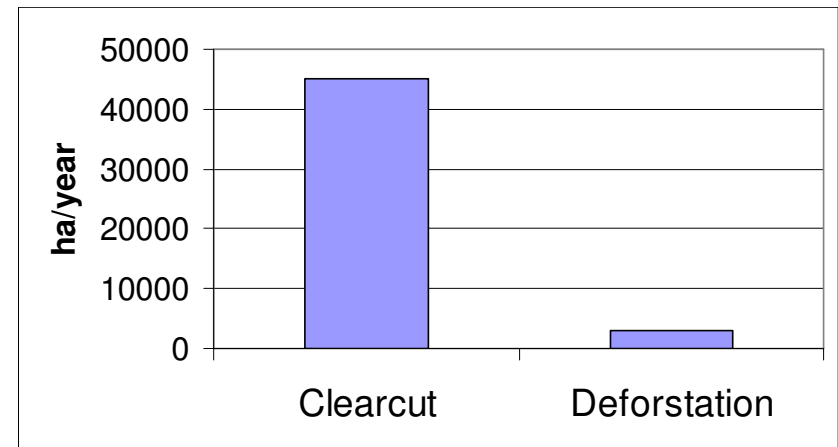
- > Can your method actually distinguish between "temporarily unstocked" and conversion to agricultural land
- > Could you see the difference on an optical image?



Example: Deforestation and Clear-cutting in Norway



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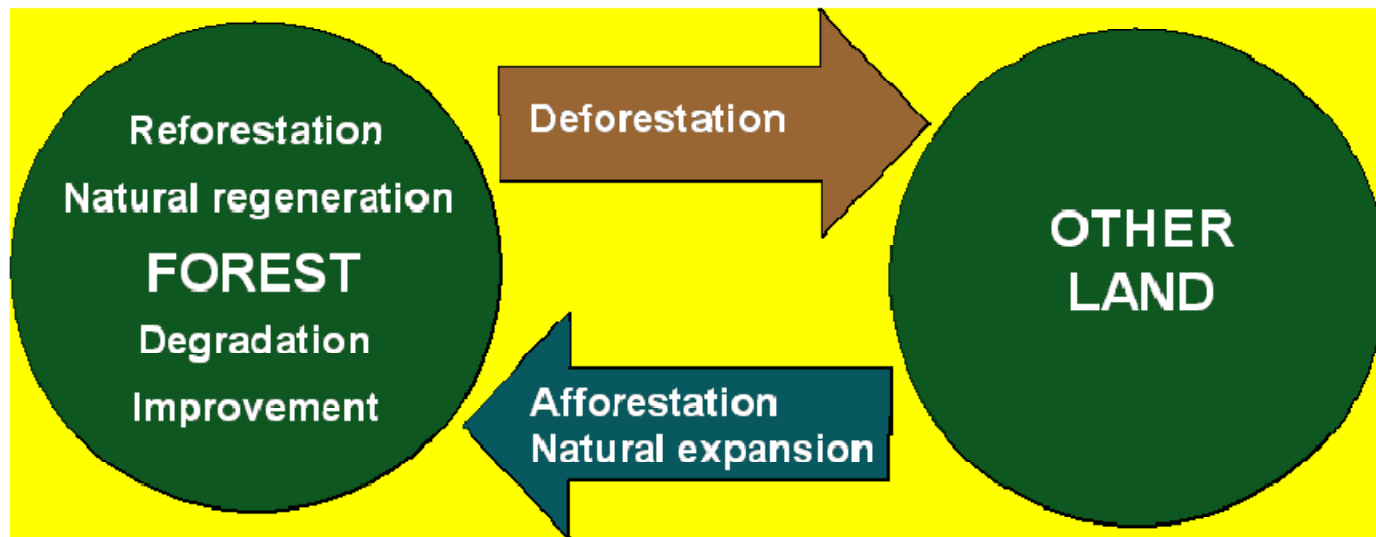
Generally the Clear cut area is much larger than deforested area when Sustainable Forest Management is carried out



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What is forest Degradation?

- > FRA 2010 Definition: The reduction of the capacity of a forest to provide goods and services

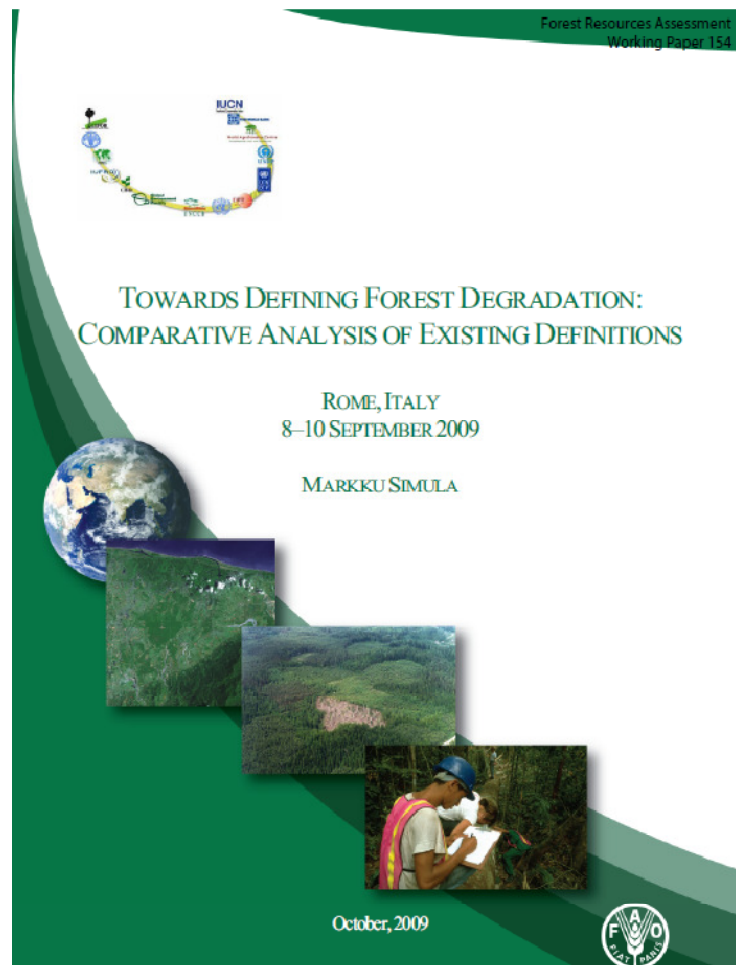


Source: FAO, 2006³



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What is forest Degradation?



- > FRA 2010 definition: The reduction of the capacity of a forest to provide goods and services
- > Not an operational definition
- > Definition is a general framework for defining degradation
- > More than 50 existing definitions of forest degradation

IPPC 2003 Recommendations: Carbon Focus



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INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE



Definitions and Methodological Options to Inventory Emissions from Direct Human-induced Degradation of Forests and Devegetation of Other Vegetation Types

Edited by

Jim Penman, Michael Gytarsky, Iaka Hiraishi, Thelma Krug, Dina Kruger,
Riitta Pipatti, Leandro Buendia, Kyoko Miwa, Todd Ngara,
Kiyoto Tanabe, and Fabian Wagner

“A direct human-induced long-term loss (persisting for X years or more) of at least Y% of forest carbon stocks [and forest values] since time T and not qualifying as deforestation or an elected activity under Article 3.4 of the Kyoto Protocol.”



Degradation also important for biodiversity!



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Convention on Biological Diversity (CBD)

“A degraded forest delivers a reduced supply of goods and services from the given site and maintains only limited biological diversity. Such a forest may have lost its structure, species composition or productivity normally associated with the natural forest type expected at that site”

(UNEP/CBD/COP/6/INF/26)

Degradation versus forest management



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Is Sustainable Forest Management a degradation?

Long-term effect?

Depends on the degradation definition



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Forest Degradation and MRV

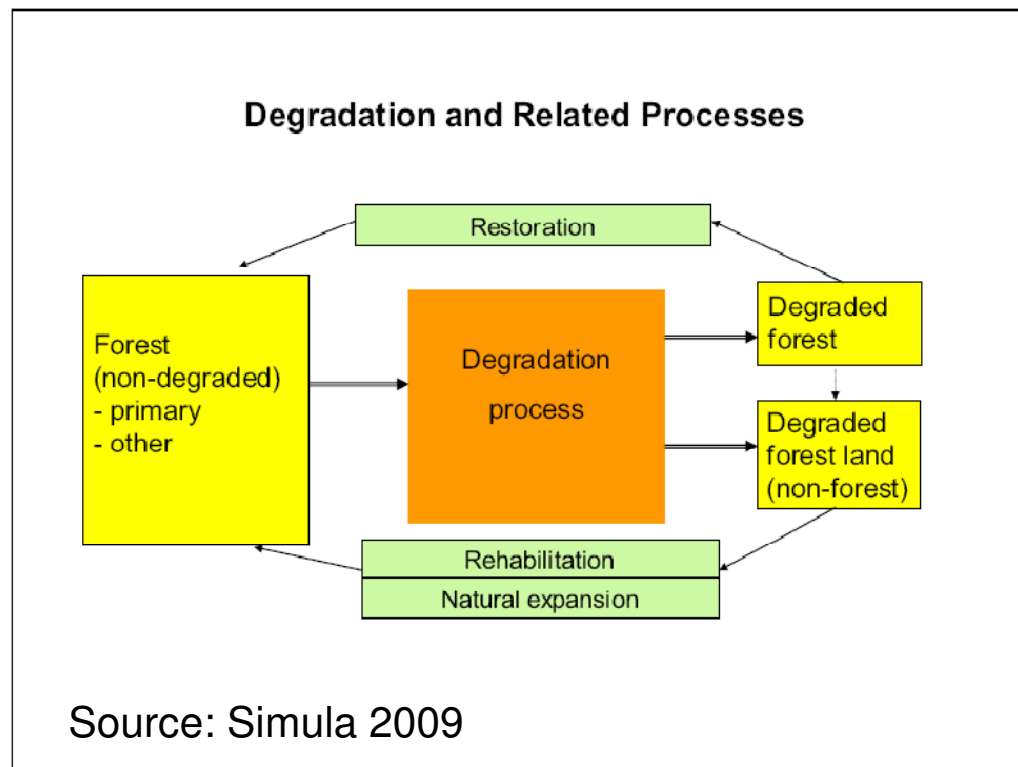
Forest degradation “is technically and scientifically difficult to define and its definition can have policy implications which further complicates reaching common operational approaches which are applicable both at international and country levels” Simula, M. 2009.

“Given the lack of a clear definition for degradation, or even the lack of any definition, it is difficult to design a monitoring system” GOFC-GOLD 2010.



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Forest Carbon Enhancement



Carbon Enhancement does not have an official definition but is often mentioned as the opposite of degradation - restoration/rehabilitation/forest management

Carbon Enhancement or Forest Degradation?



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- Tree species change as part of forest management
- Spruce replace natural birch forest
- Result: more than 5×Carbon pool in live biomass
- Carbon Enhancement or Forest Degradation?





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Summary

- > Definitions are important for REDD+
- > Not all concepts have officially accepted definitions
- > Definitions of central concepts are central to how MRV can be carried out





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References

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- > **IPCC 2003. Definitions and Methodological Options to Inventory Emissions from Direct Human-induced Degradation of Forests and Devegetation of Other Vegetation Types. Jim Penman, Michael Gytarsky, Taka Hiraishi, Thelma Krug, Dina Kruger, Riitta Pipatti, Leandro Buendia, Kyoko Miwa, Todd Ngara, Kiyoto Tanabe, and Fabian Wagner (eds.). Published by the Institute for Global Environmental Strategies (IGES) for the IPCC.**
- > **GOFC-GOLD, 2010, 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. GOFC-GOLD Report version COP16-1, (GOFC-GOLD Project Office, Natural Resources Canada, Alberta, Canada)**
- > **Simula, M. 2009. Towards defining forest degradation: Comparative analysis of existing definitions. Forest Resource Assessment Working Paper 154. FAO Rome, Italy.**