Tree Landscapes of the Future




Tony Simons, Director General, ICRAF

18 June, Japan Pavilion, Rio +20

Tree Landscapes of the Future

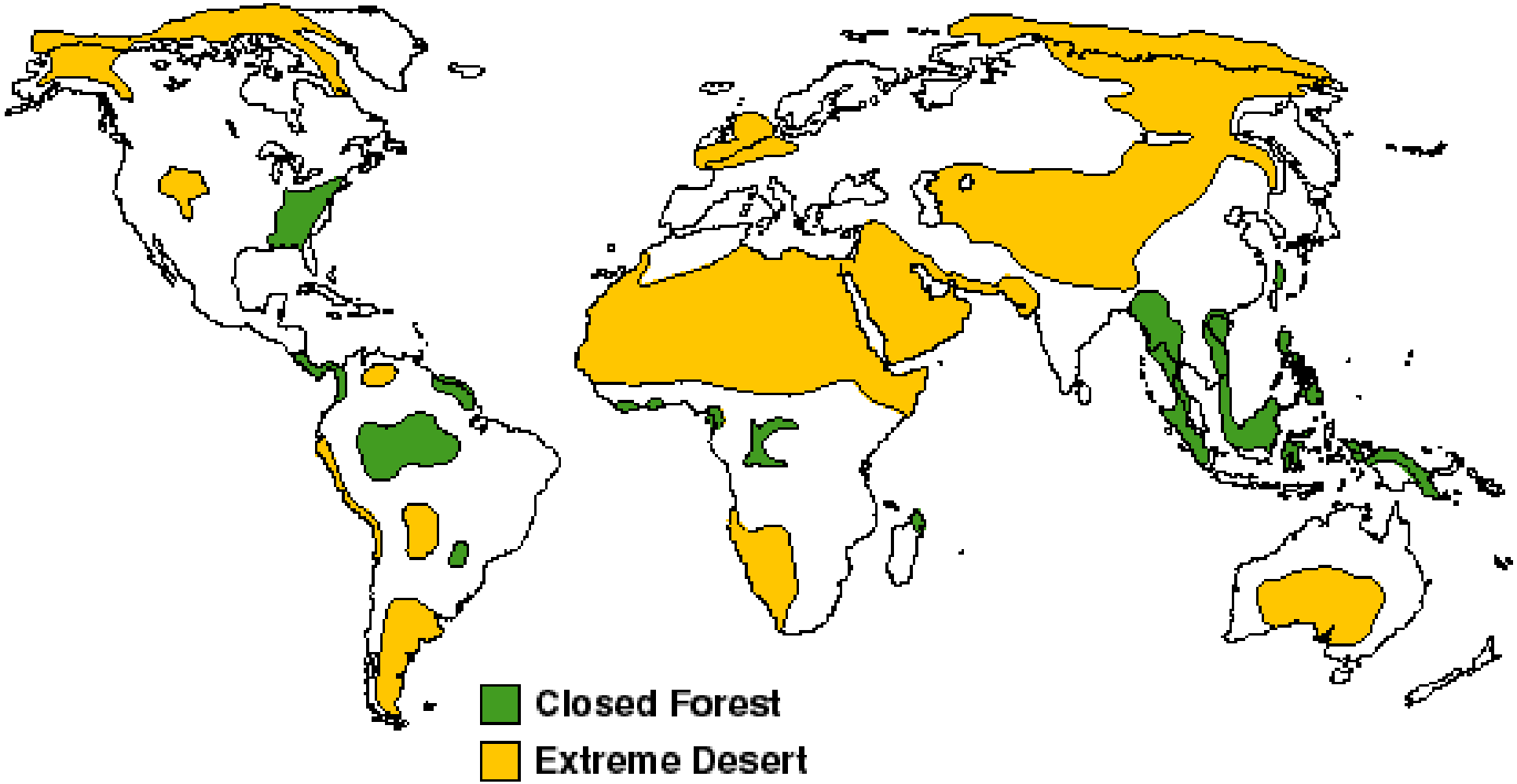
1. Historical Tree Cover

2. Forest/Tree Definitions

3. Sectoral Silos

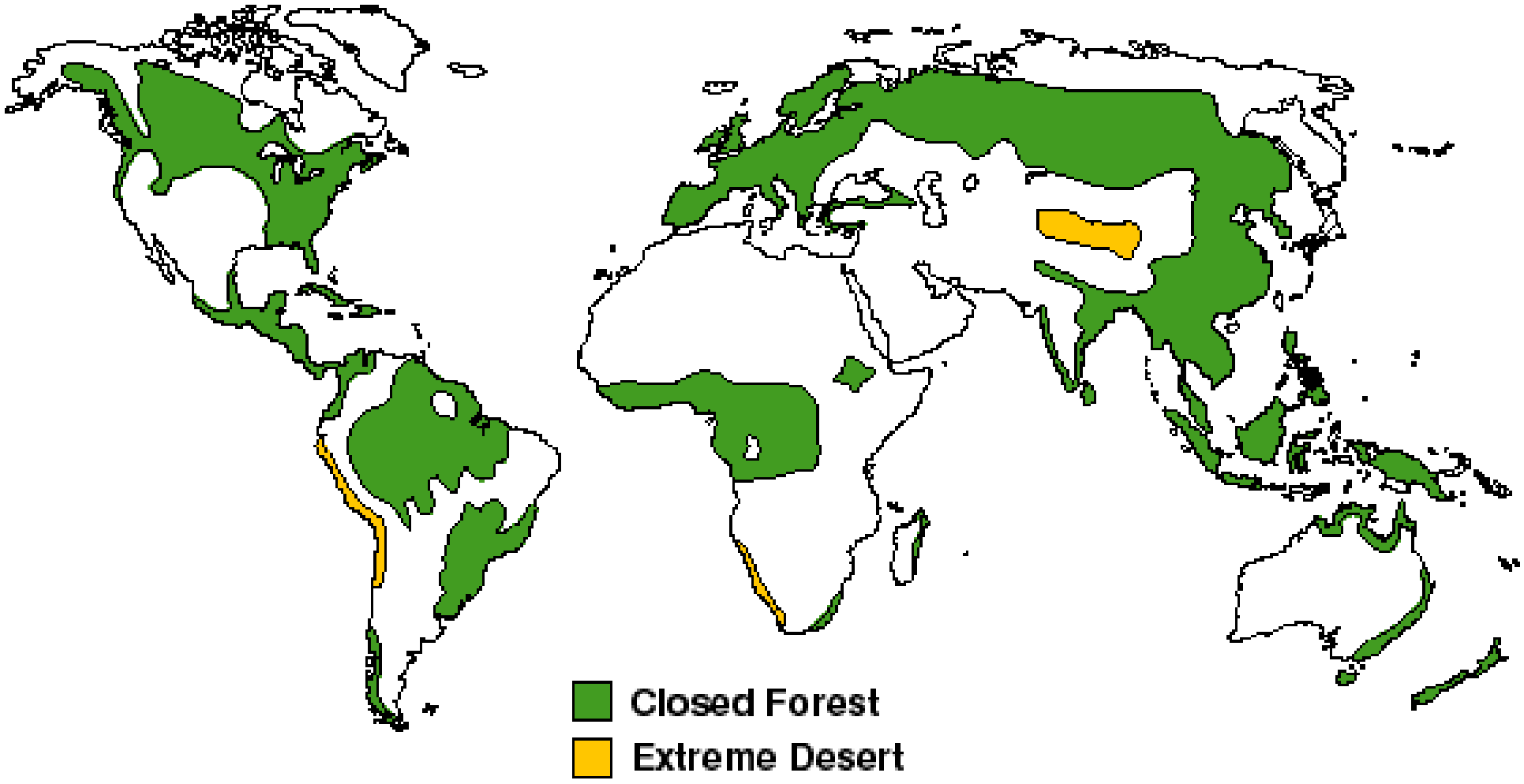
4. The Future

Last Glacial Maximum (18,000 ^{14}C years ago)



Adams J.M. & Faure H. (1997) (ed.s), QEN members. Review and Atlas of Palaeovegetation: Preliminary land ecosystem maps of the world since the Last Glacial Maximum. Oak Ridge National Laboratory, TN,

Early Holocene (8,000 ^{14}C years ago)



Adams J.M. & Faure H. (1997) (ed.s), QEN members. Review and Atlas of Palaeovegetation: Preliminary land ecosystem maps of the world since the Last Glacial Maximum. Oak Ridge National Laboratory, TN,

Choosing a forest definition

for the Clean Development Mechanism

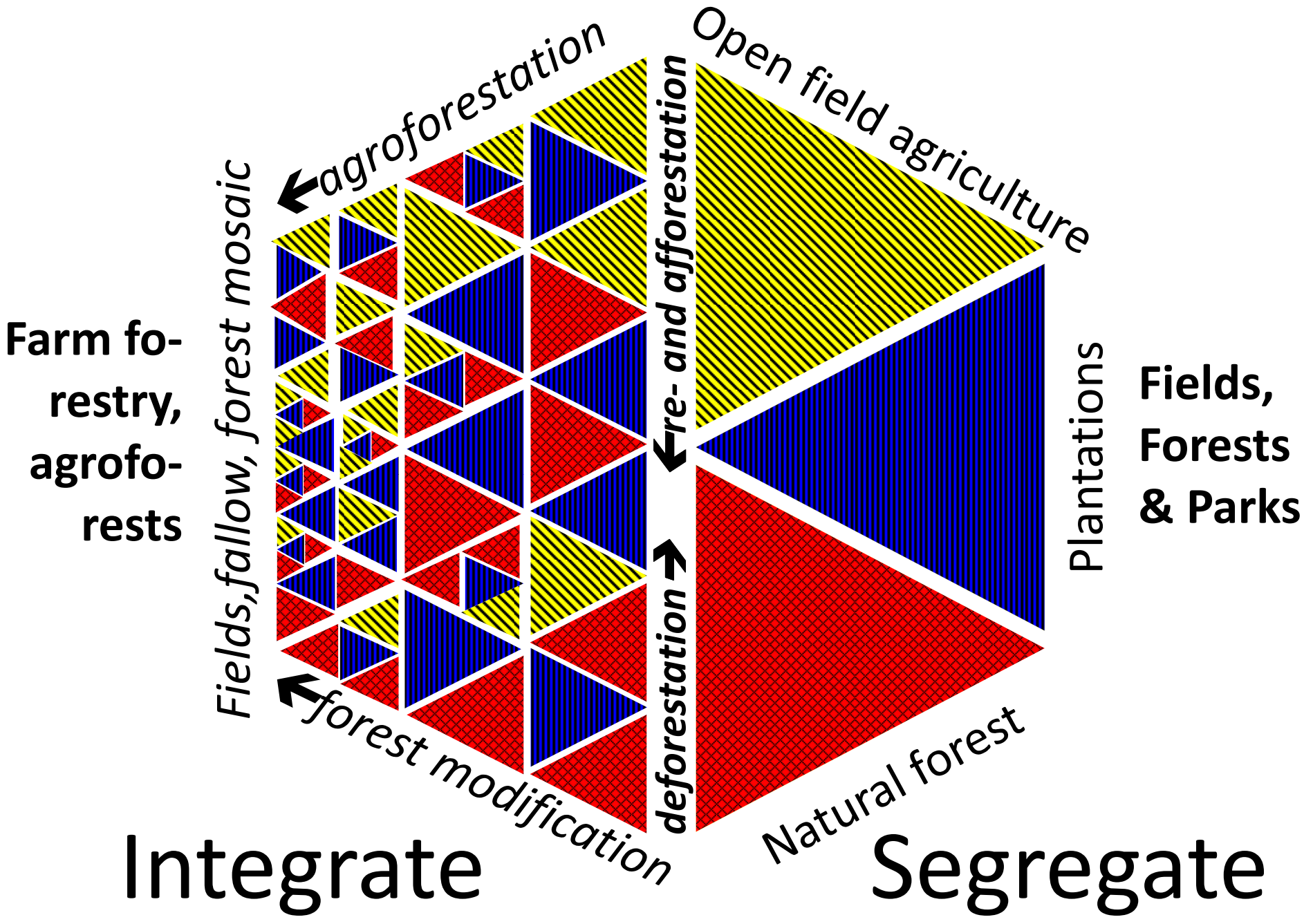
FORESTS AND CLIMATE CHANGE WORKING PAPER 4 – 2006

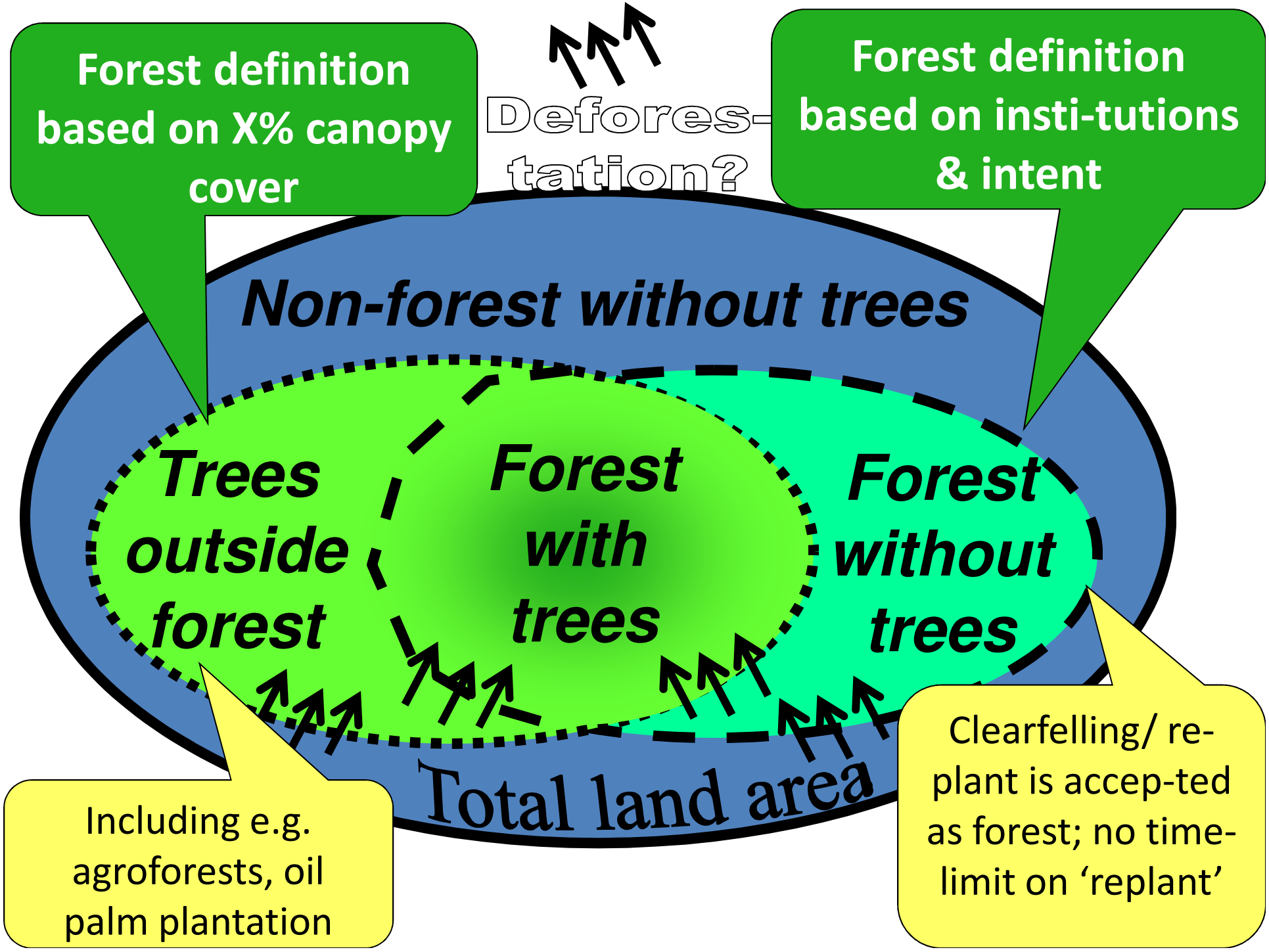
http://www.fao.org/forestry/media/11280/1/0/

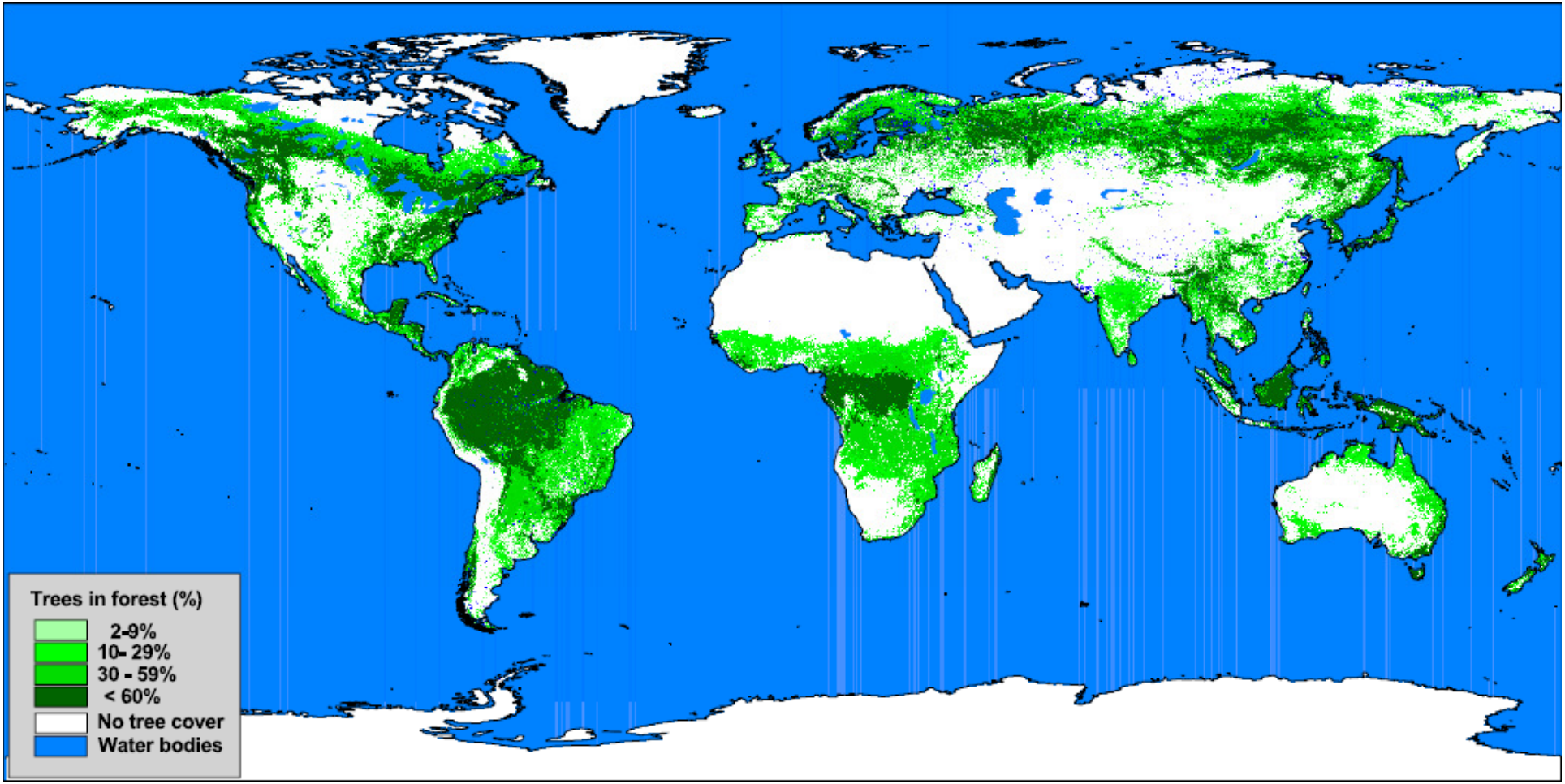
For the CDM, developing countries must choose the parameter values from the ranges: “Forest” is a minimum area of land of 0.05-1.0 hectares with tree crown cover (or equivalent stocking level) of more than 10-30 per cent with trees with the potential to reach a minimum height of 2-5 meters at maturity in situ.

Any signs of deforestation?

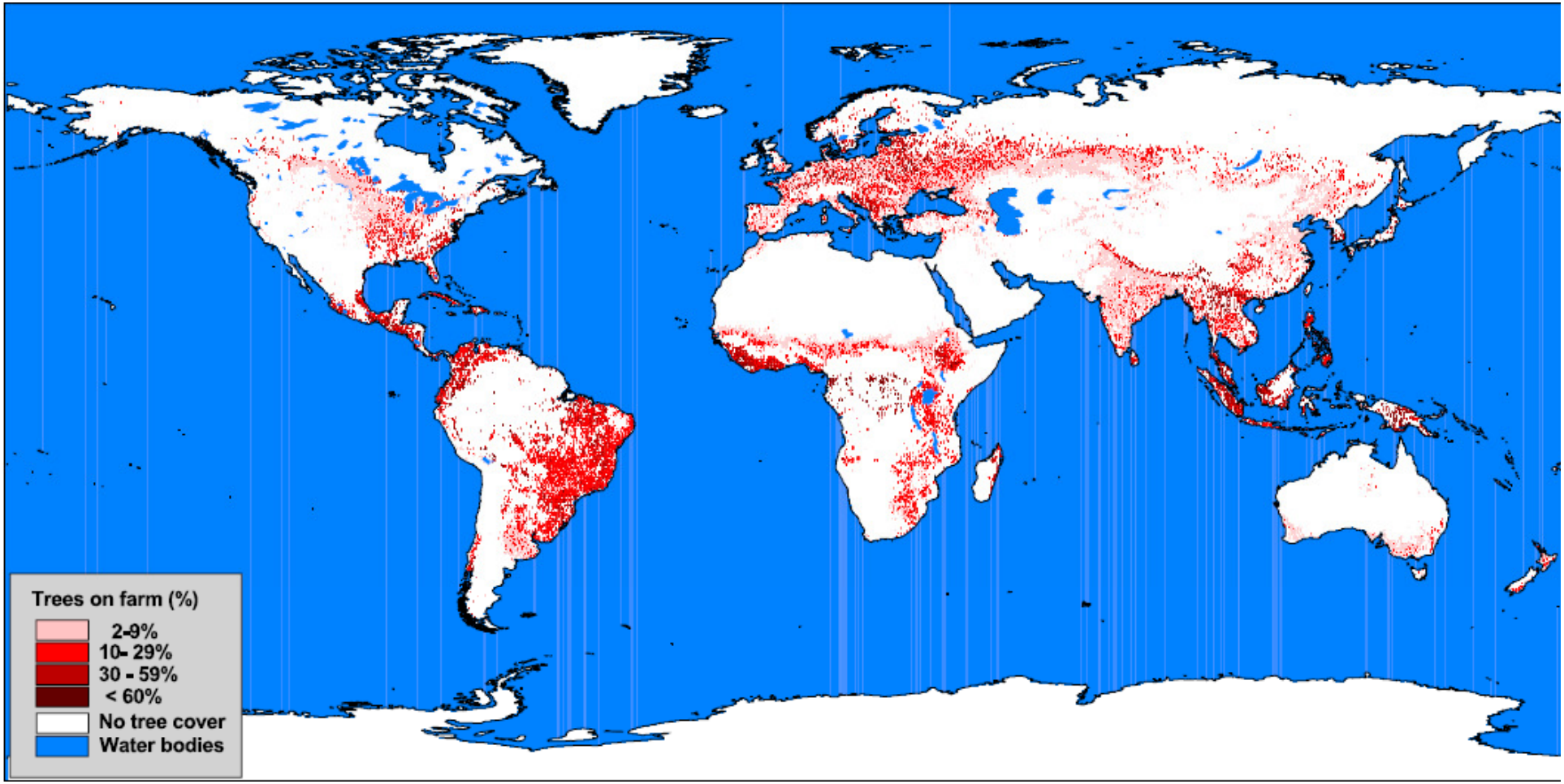
….are included under forest, as are areas normally forming part of the forest area which are ***temporarily*** unstocked as a result of human intervention such as harvesting or natural causes but ***which are expected to revert to forest;***
[FCCC/CP/2001/13/Add.1]


Farm fo-
restry,
agrofo-
rests
Fields,fallow, forest mosaic
agroforestation
Open field agriculture
re- and afforestation
Plantations
Fields,
Forests
& Parks
deforestation
forest modification
Natural forest
Integrate
Segregate

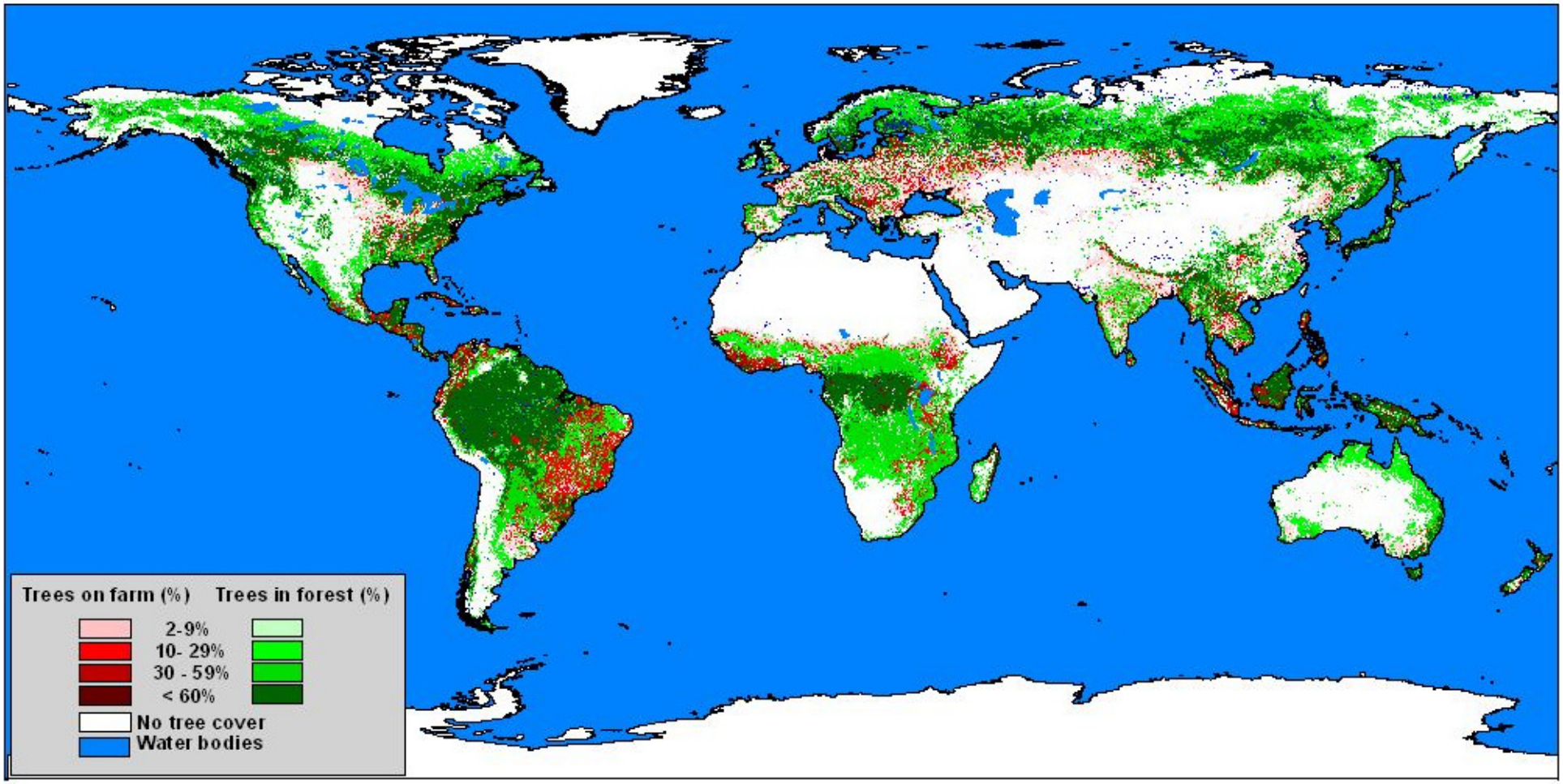

Forest definition based on X% canopy cover
Defores-tation?
Forest definition based on insti-tutions & intent
Non-forest without trees
Trees outside forest
Forest with trees
Forest without trees
Total land area
Including e.g. agroforests, oil palm plantation
Clearfelling/ re-plant is accep-ted as forest; no time-limit on 'replant'



The foresters' view of the world



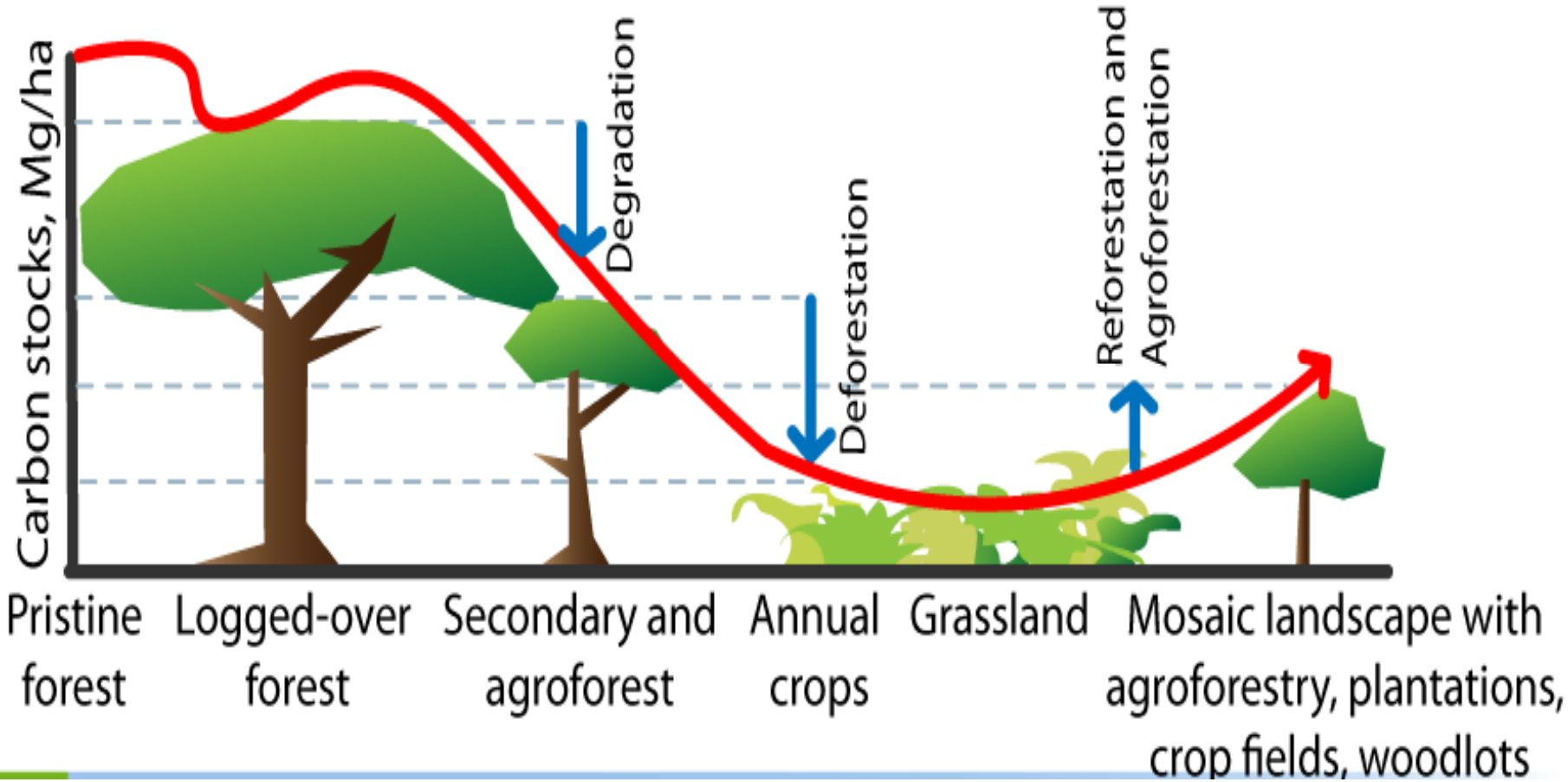
The agroforestry view of the world

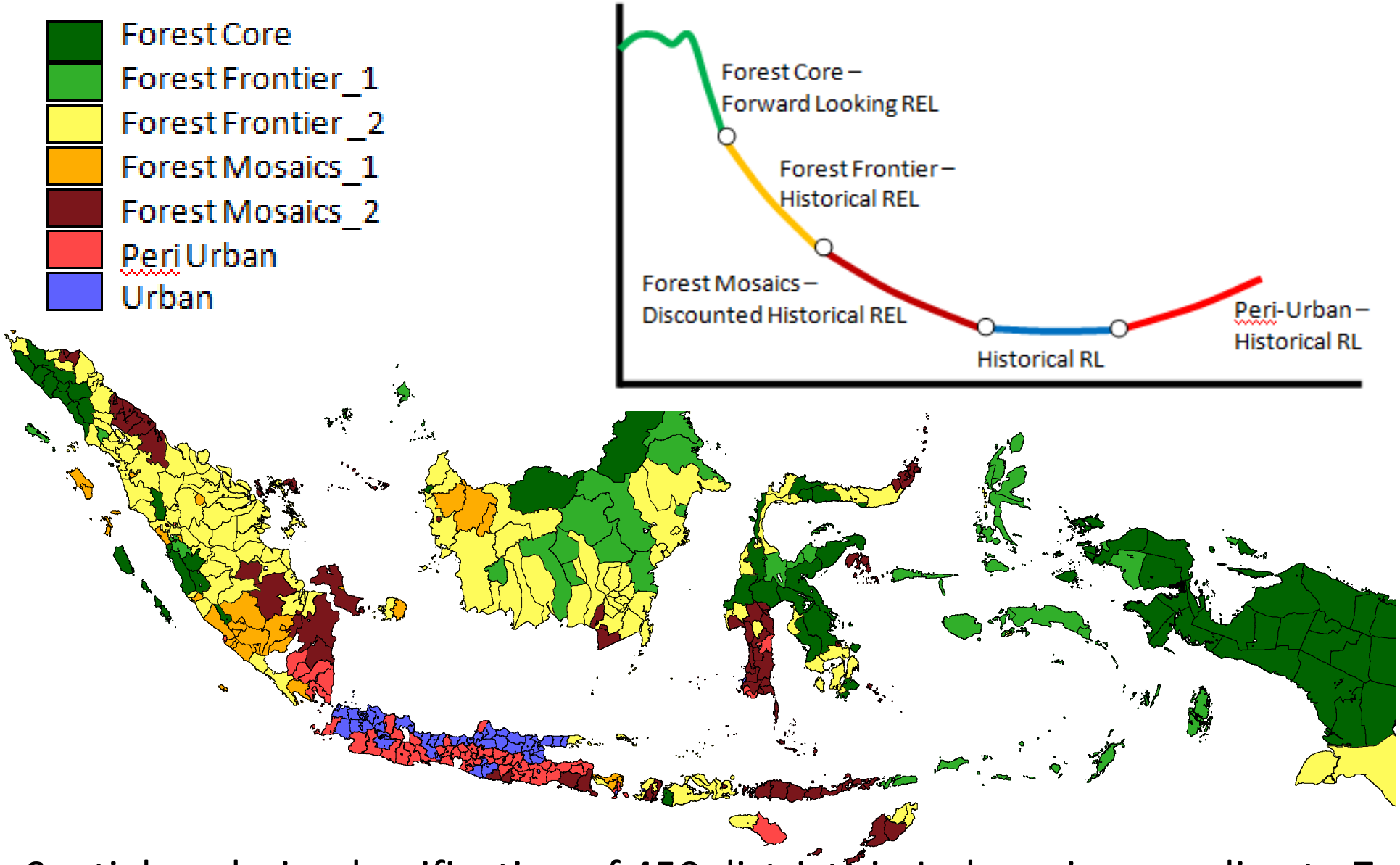


The integrated view of the world

Global tree cover inside and outside forest, according to the Global Land Cover 2000 dataset, the FAO spatial data on farms versus forest, and the analysis by Zomer et al. (2009)

Guiding Paradigms



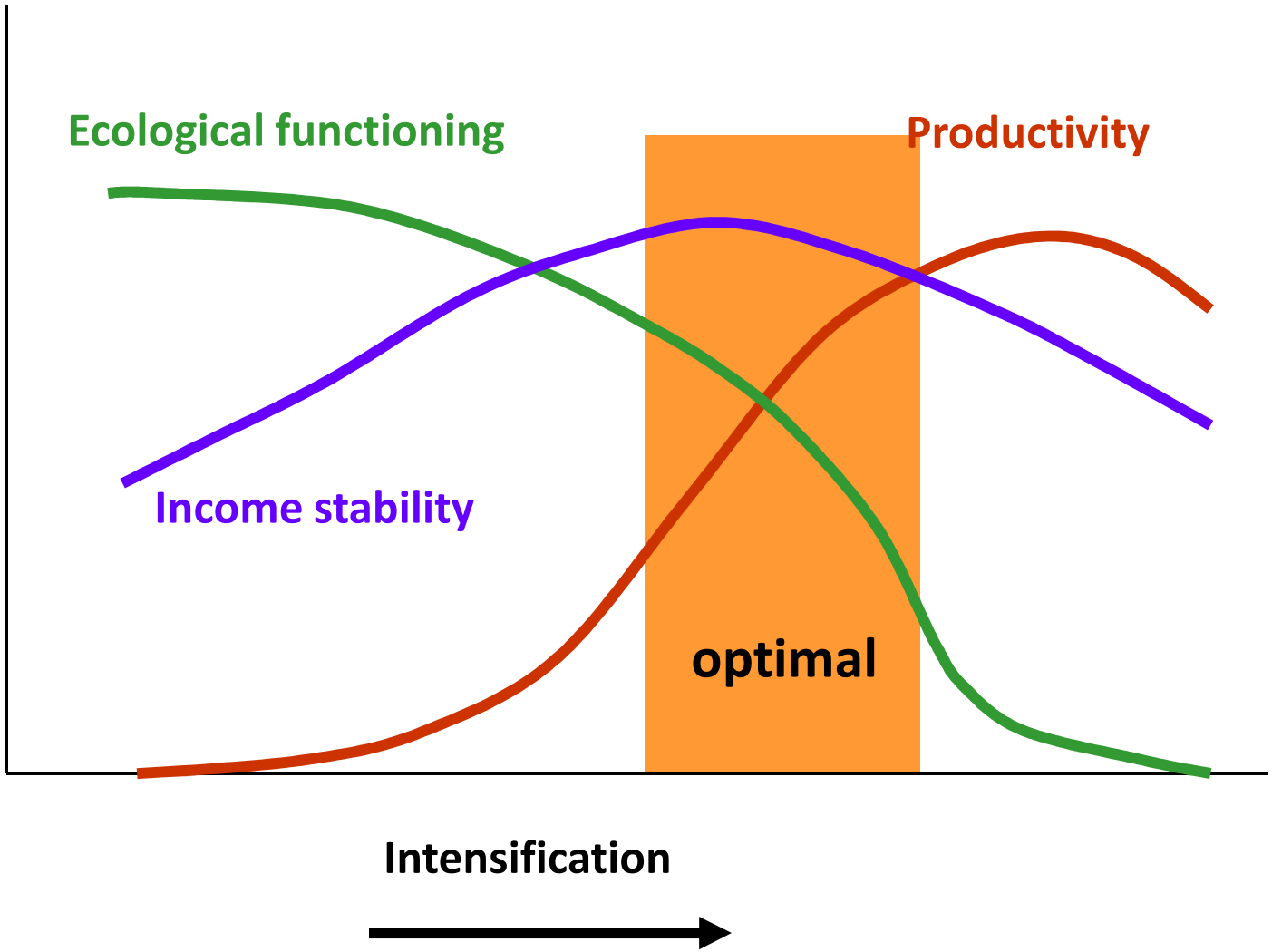


Spatial analysis: classification of 450 districts in Indonesia according to 7 tree cover transition stages (Dewi et al., in prep.)

Indonesia's forest loss by land-use category

Forest Use Class	% area	Loss during 2000-2005		
		t C ha-1 yr-1	% yr-1	% total emissions
Protected Forest	26.7%	2.01	0.90%	20%
Production Forest	31.8%	3.28	1.80%	39%
Convertible	9.6%	3.07	1.87%	11%
"Non-forest"	31.9%	2.57	3.33%	30%
TOTAL		2.69	1.70	

(Source http://www.worldagroforestrycentre.org/sea/ALLREDDI)


Ecological functioning
Productivity
Income stability
optimal
Intensification

Adjudicated Land

Lake Basin, Kenya. Mixed agriculture with fruit trees and smallholder tea

Source: Ecosystems Ltd

Adjudicated under the Land Adjudication Act CAP 284 1968, intensive smallholder cultivation with clear freehold title

Unadjudicated Land

Unadjudicated land,
no firm legal title

ure 3.1. The dot-grid used for the analysis, over a scene from Arua. The surface area covered by the frame is a function of the f
ght, which is monitored during flight. For the Arua interpretation, the calibration between the aircraft radar altimeter and pl
ension gives a mean airphoto area of 4.18 ha, with a central interpretation area within the 320-dot grid of 2.57 ha.

Economic, Environmental and Social Impacts	Unadjud	Freehold	Tenure Effect
Net returns to land ($ ha^{-1} y^{-1})	$126	$288	2.28
Woody crops, woodlots etc (ha km^{-2})	5.4	25.6	4.7
Hedgerows (km km^{-2})	5.2	23.6	4.5
Social cost from embedding	-$40	$30	$70
Social "tax"	-32%	+10%	

Energy is the missing MDG

Landscapes for People, Food and Nature

Components:

1. Global Review
2. International Forum (March 12-16, 2012)
3. Action and Advocacy

Bioversity International

World Agroforestry Centre
TRANSFORMING LIVES AND LANDSCAPES

UNEP

Food and Agriculture Organization of the United Nations
for a world without hunger

ecoagriculturepartners

CONSERVATION INTERNATIONAL