

# Buffering local and global climate through trees: what's missing from current science and policy frames?



Meine van Noordwijk

“The global REDD+ agreement is ready to go, it may not be perfect, but it is time to act now”

But have we  
agreed on  
which trees are  
NOT a forest?

Tony La Vina



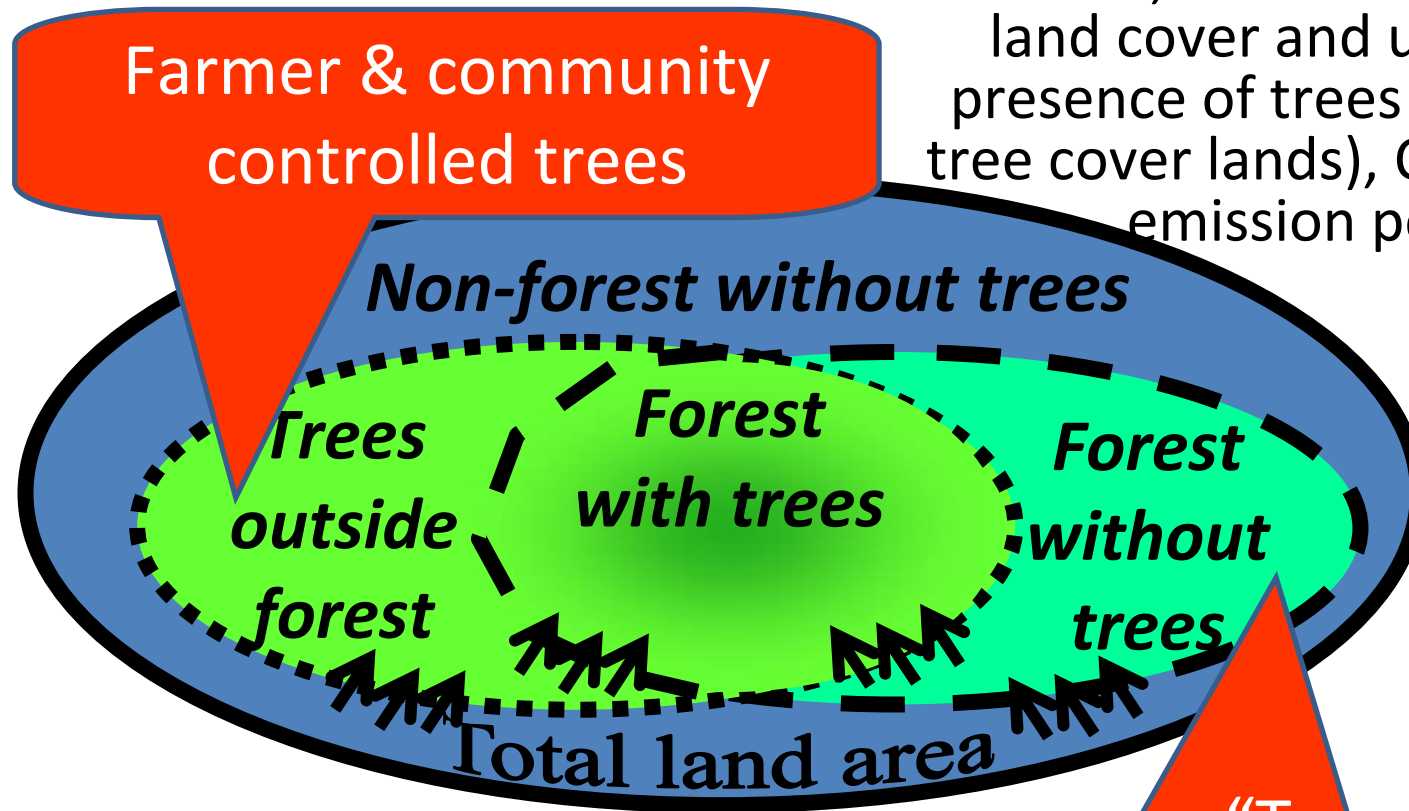
# Outline

- Forests or Trees? Scope of REDD+
- Spare or share?
- Commodify, compensate opportunities foregone and/or co-invest in stewardship?
- Multi-scale REDD+ readiness

# Forests and trees – what's in a name?

Basics: forest ↔ trees

The term '**Forest**', as defined for the UNFCCC, can cover many types of land cover and use, varying in presence of trees (including zero tree cover lands), C-storage and C-emission potential.



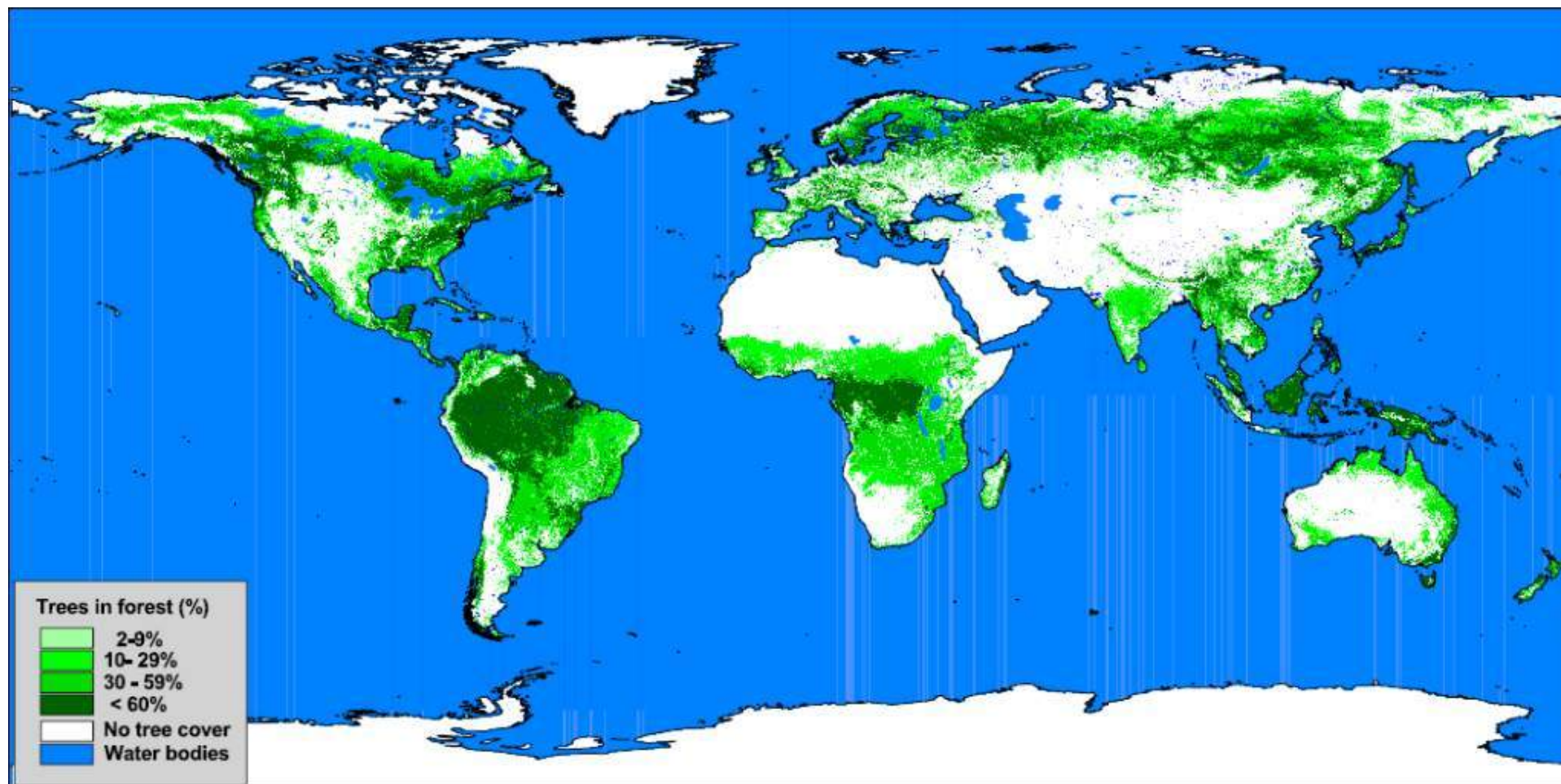
The term 'Non-Forest' can cover many types of land cover and use, potentially with a lot of trees, C-storage and C-emission potential.

Source: ASB-policy brief 15

Meine van Noordwijk & Beria Leimona, 2010



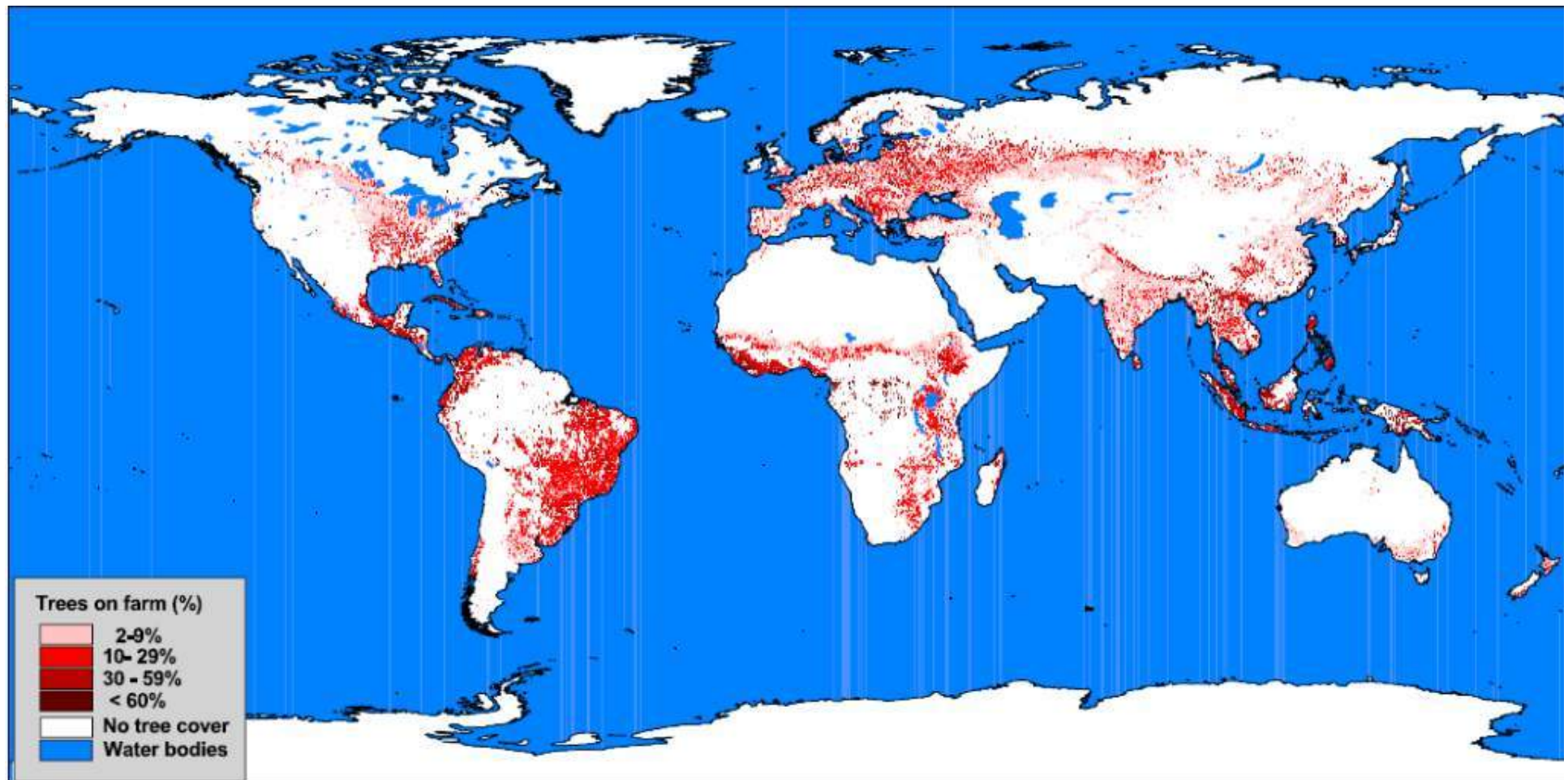
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## The foresters' view of the world

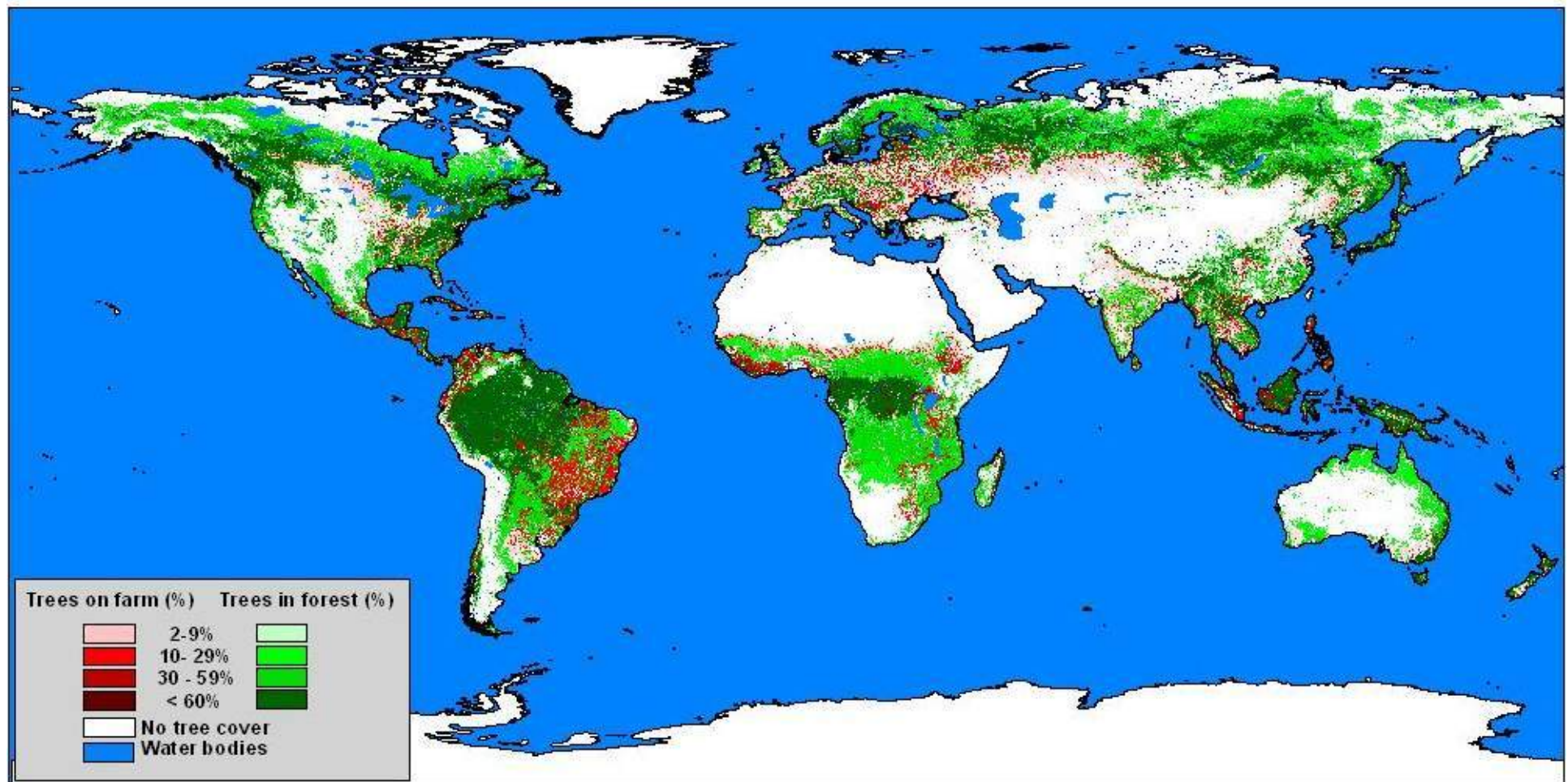
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## The agroforestry view of the world

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# The holistic forest+tree view of the world

Source: 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 Zor al. (2009)

Meine van Noordwijk & Beria Leimona, 2010



Where does agriculture start & forest end?

# Forest – agriculture gradients in time, space & institutions

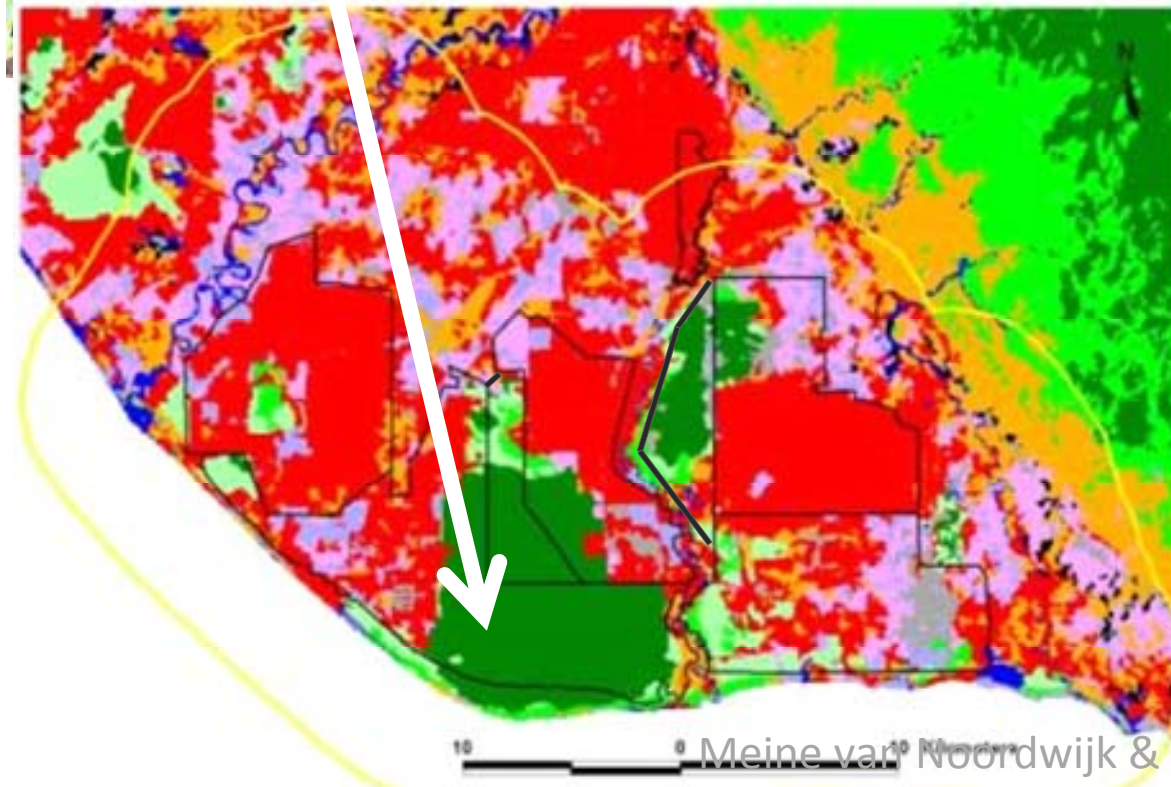
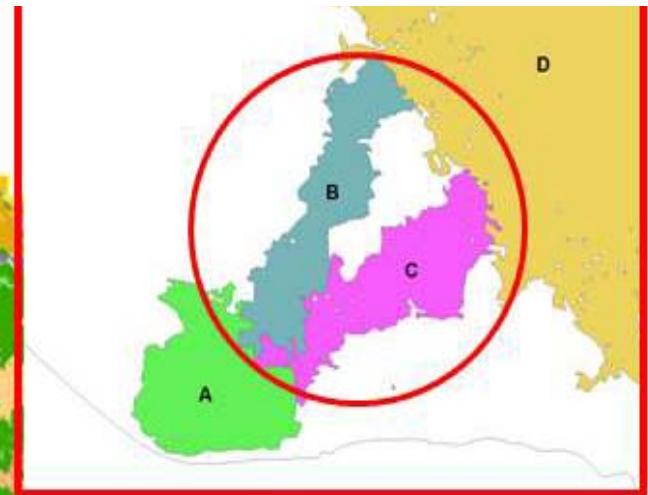
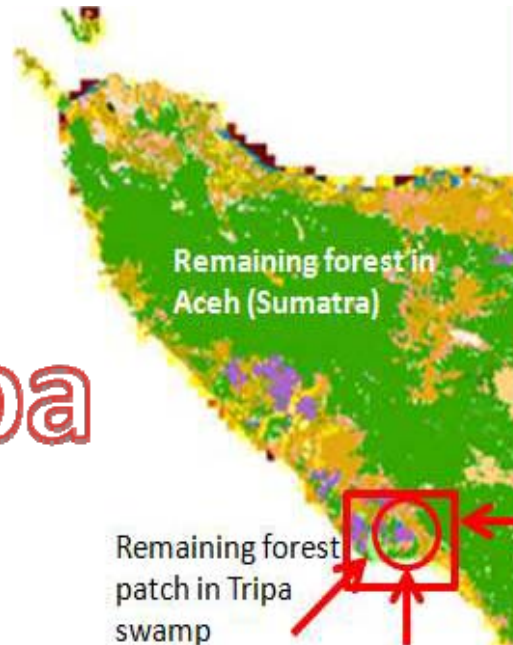


Yet, institutions see a dichotomy &  
contrast





Tripa



### Legend

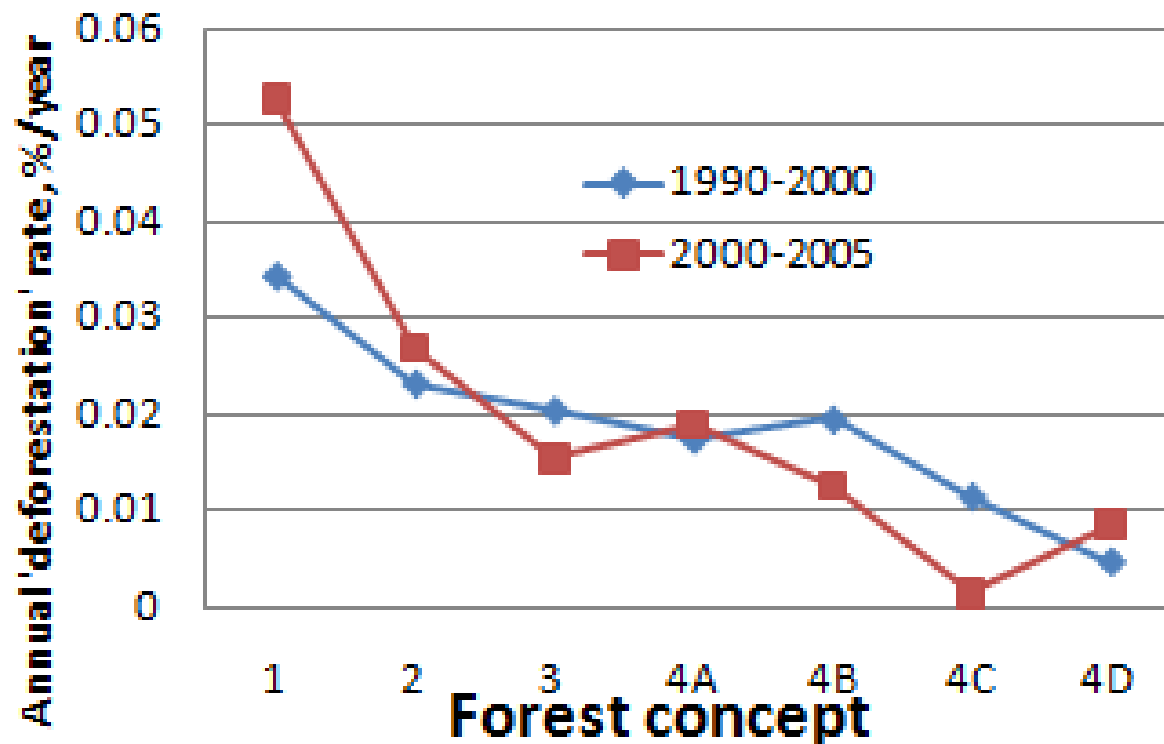
- Agroforest
- Cleared land
- Cloud/shadow
- Crops
- Disturbed forest
- Disturbed swamp forest
- Shrubs and grass**
- Oil palm
- Settlement
- Undisturbed forest
- Undisturbed swamp forest
- Water body
- Tripa study area boundary
- Plantation concession

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## Indonesia's deforestation rate ~ forest definition



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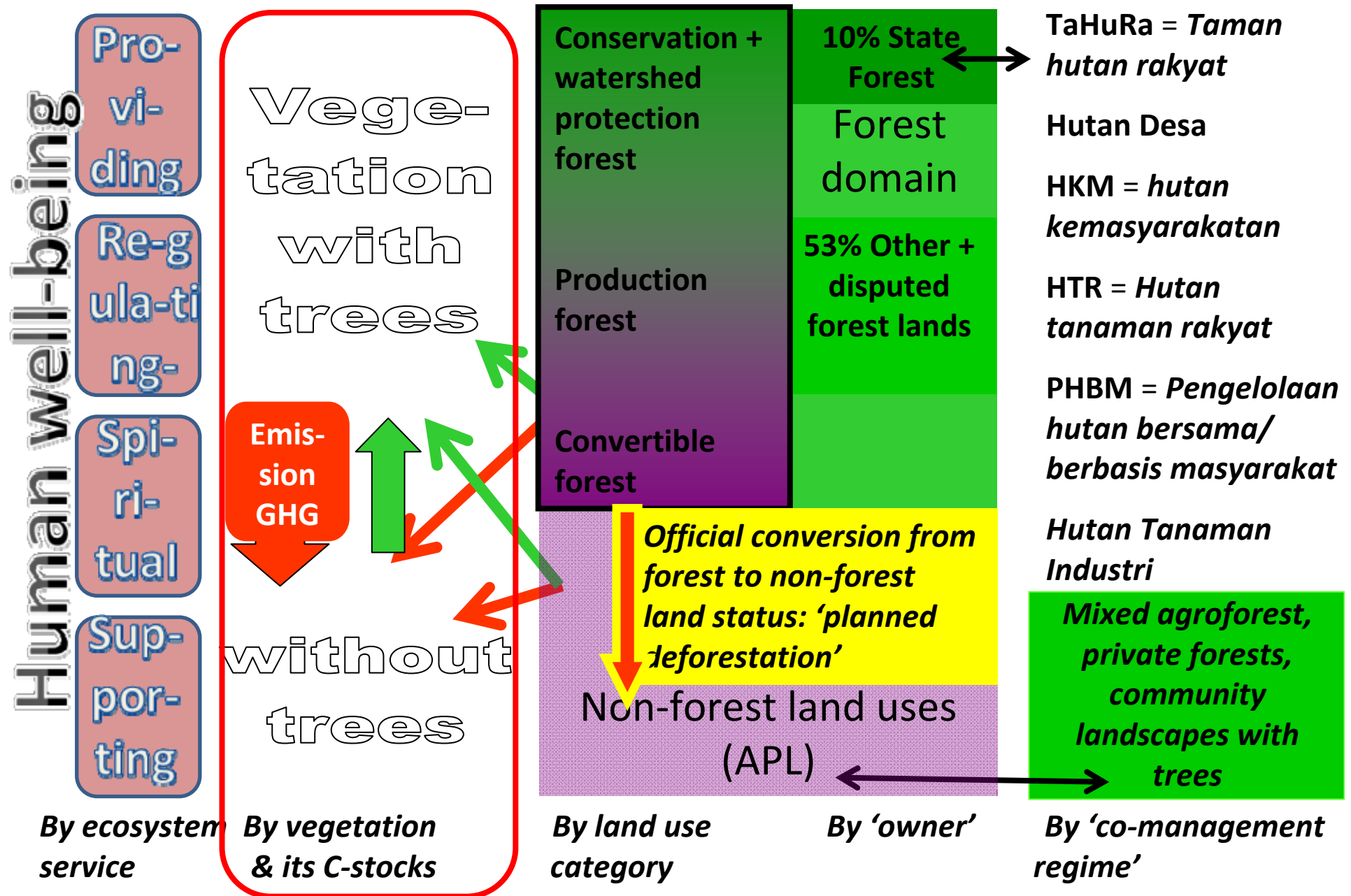
Stakeholder:

- 1. Undisturbed natural forest ← Rainforest foundation
- 2. Undisturbed + sust. logged natural forest ← Conservation agency
- 3. Closed canopy undisturbed + logged forest
- 4A. as 3 + agroforest ← Forest ecologist
- 4B. as 3 + timber plantations ← Ministry of Forestry
- 4C. as 3 + agroforest + timber plant's + estate crops ← UNFCCC
- 4D as 4C + shrub ← Meine van Noordwijk & Beria Leimona



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# 5 different ways of classifying forest:

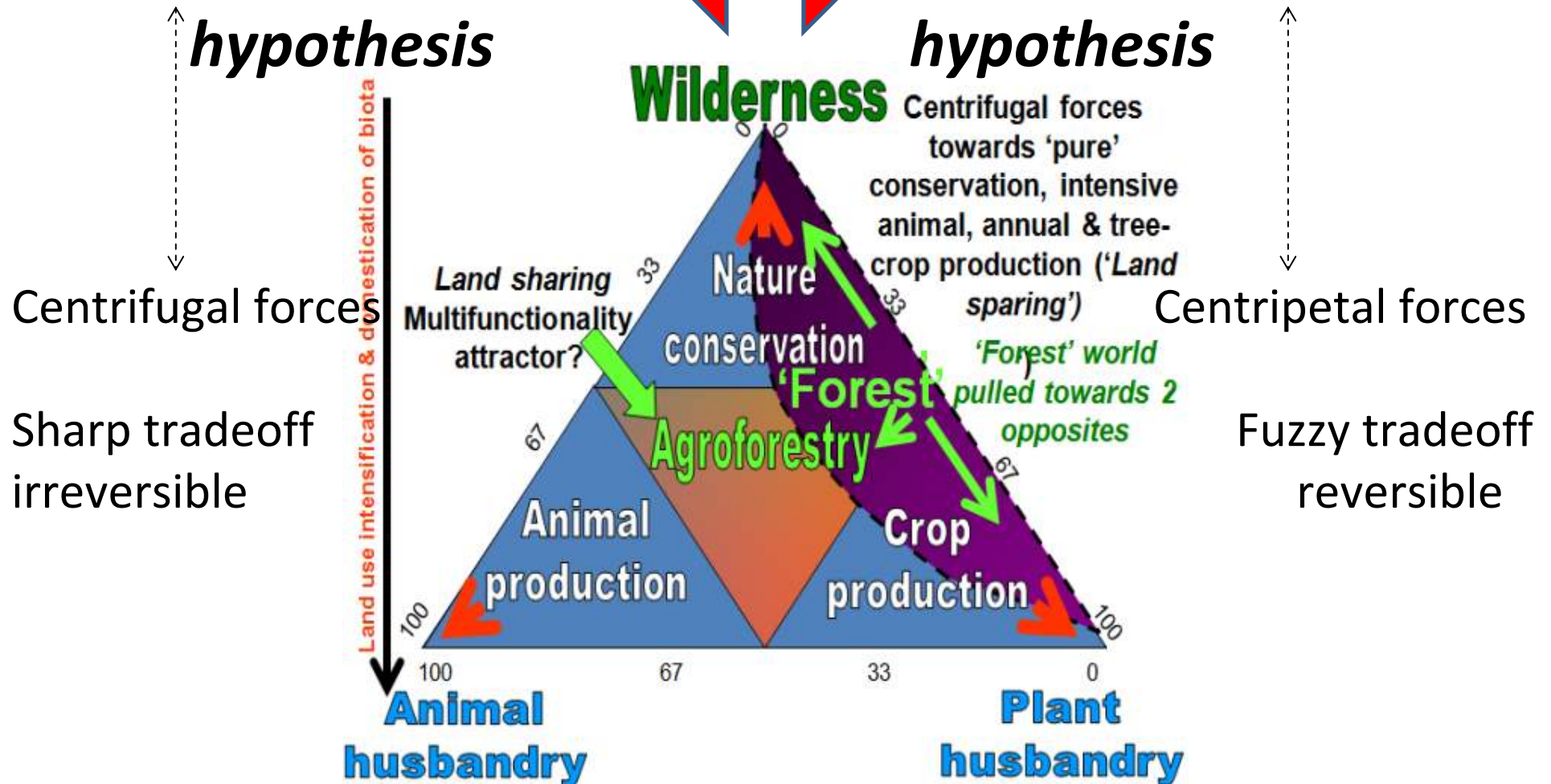




# Sparing vs Sharing

# Segregate vs Integrate

- 
- Sparing/segregate *intensification hypothesis*
- Sharing/integrate *multifunctionality hypothesis*

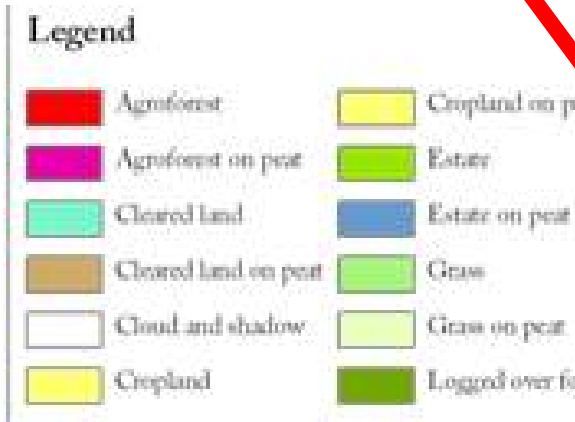


1990

12 Nov 2010,  
Manggala Wanabakti  
1-day meeting on  
MRV for Indonesia  
based on ALLREDDI  
results

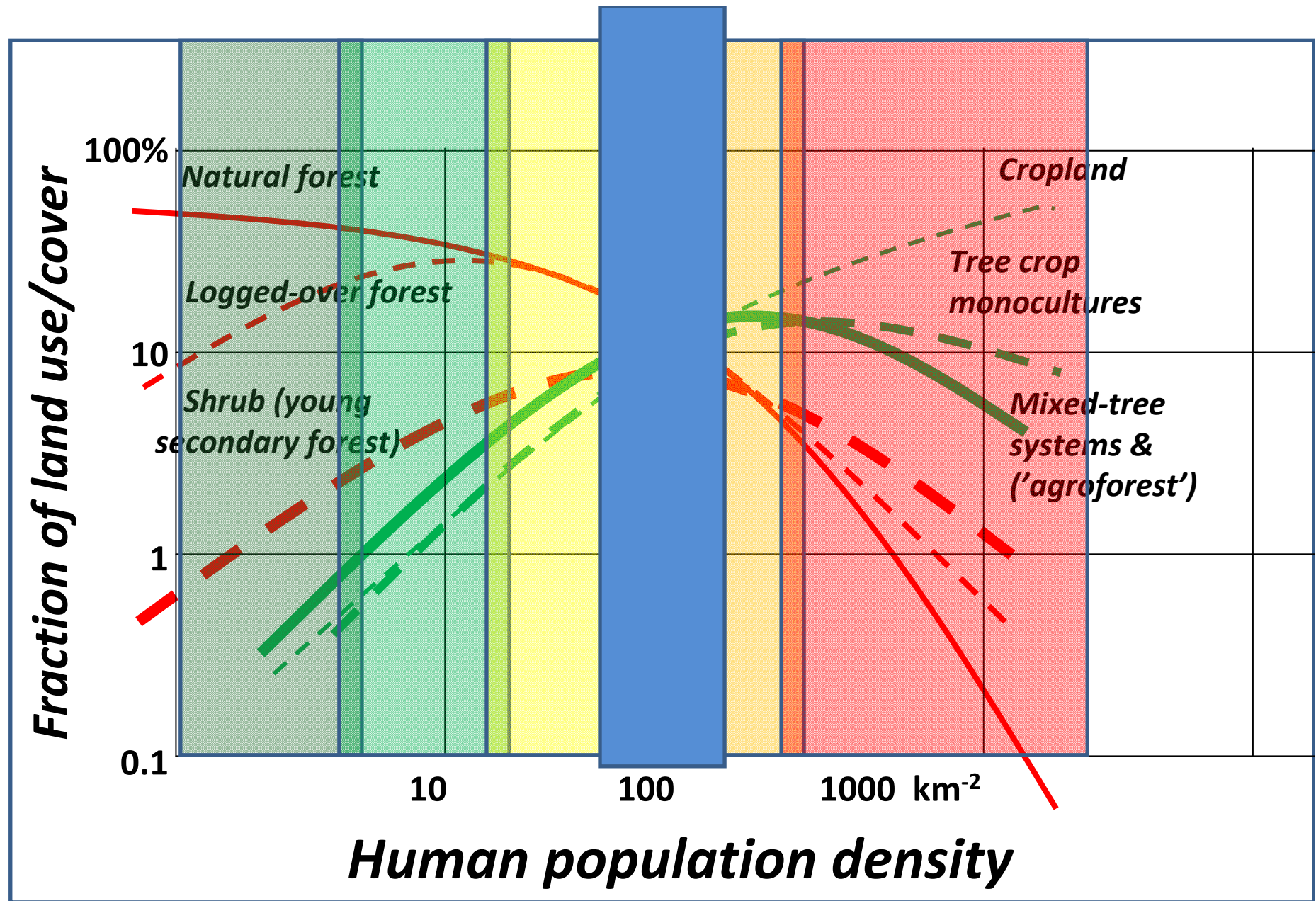
2000

2005



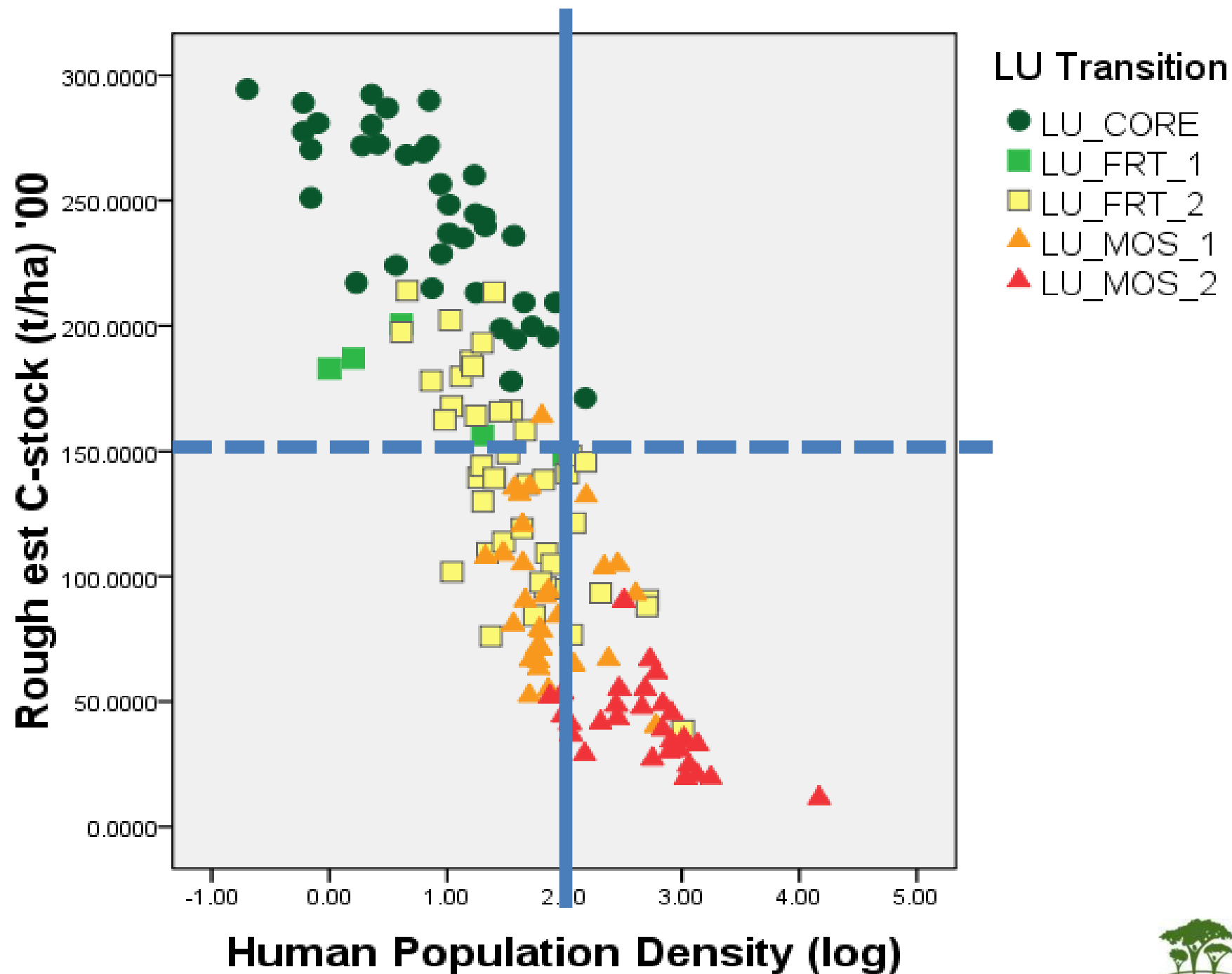
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**SPACE  $\approx$  TIME** Dewi et al. in p  
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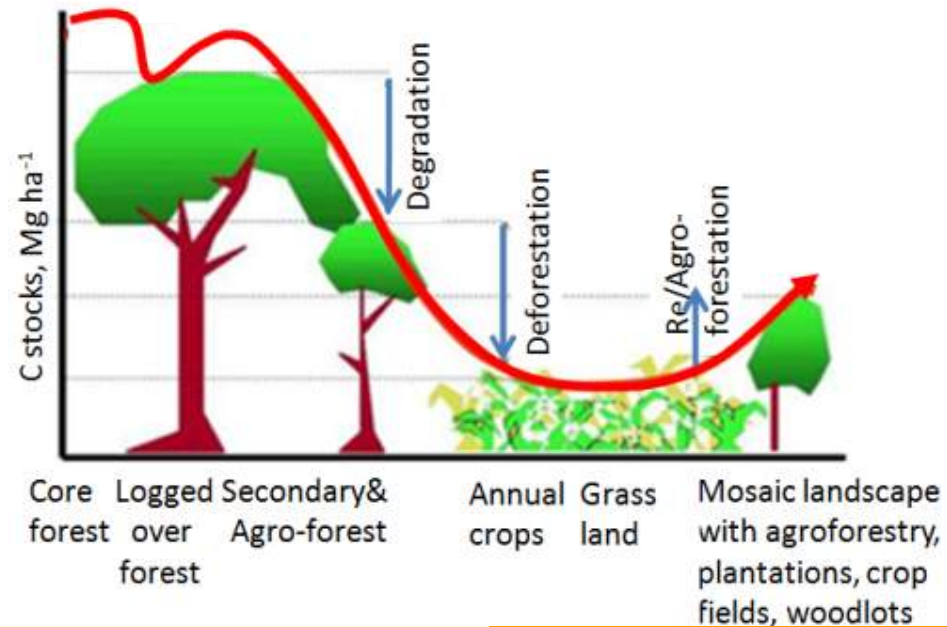


Meine van Noordwijk & Beria Leimona, in p



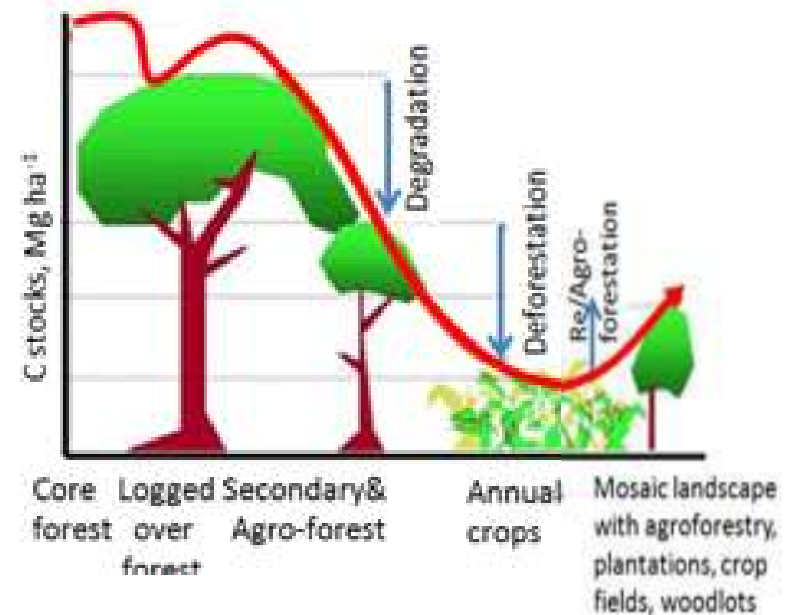
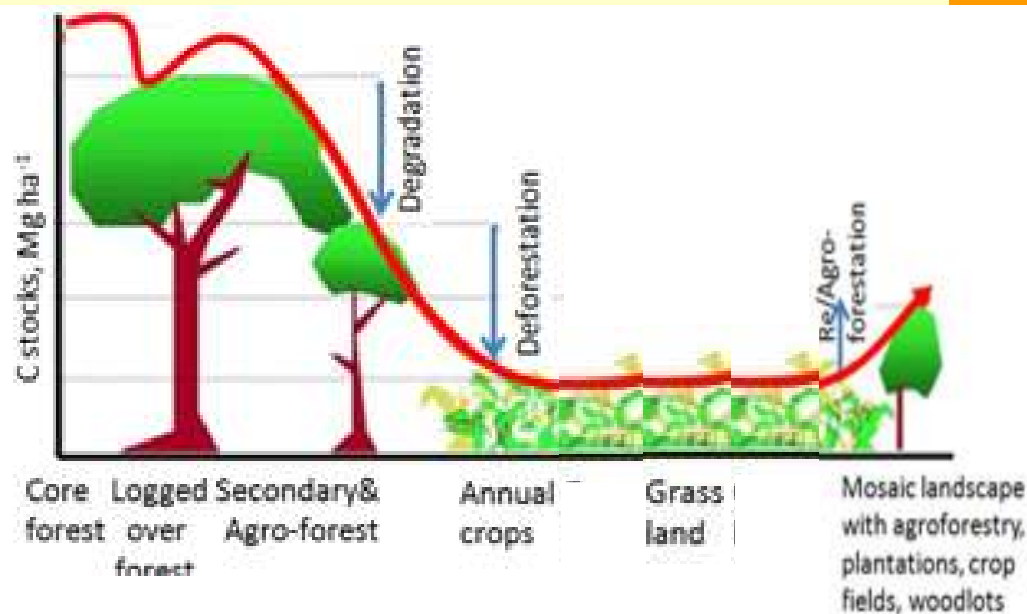
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## Tree cover transition

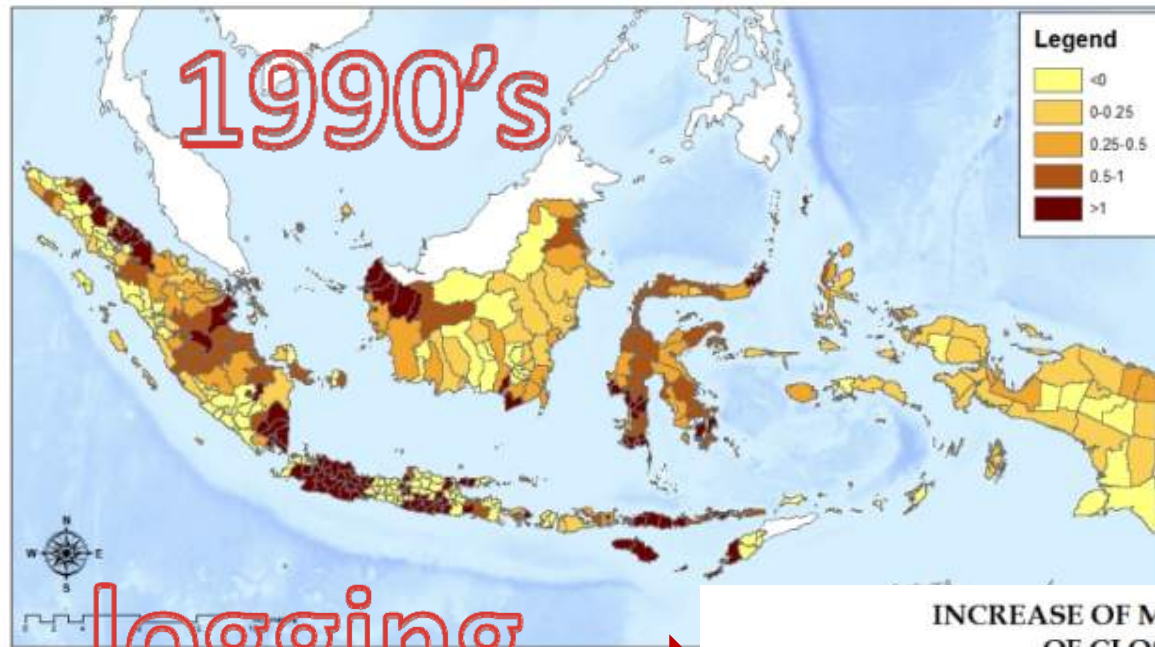


Widening: area planted < area cleared

Contracting: area planted > cleared



INCREASE OF MONOCULTURE TREE COVER VS LOSS  
OF CLOSED CANOPY-FOREST 1990-2000



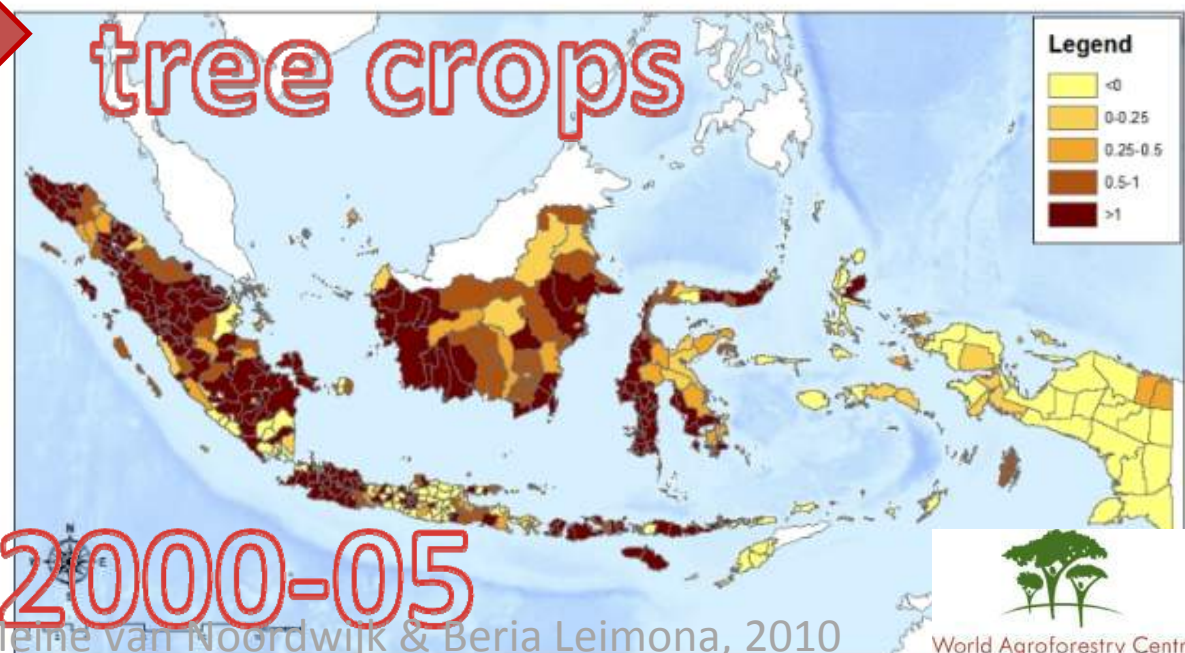
1990's

logging

After 2000 planting of tree (crop)s equals 90% of concurrent loss of natural forest; the amount of low C-stock/low economic value land decreases

In the 1990's loss of natural cover increased the amount of 'low C-stock'/low economic value land; tree (crop) planting was 28% of the loss of natural forest area

INCREASE OF MONOCULTURE TREE COVER VS LOSS  
OF CLOSED CANOPY-FOREST 2000-2005



tree crops

2000-05

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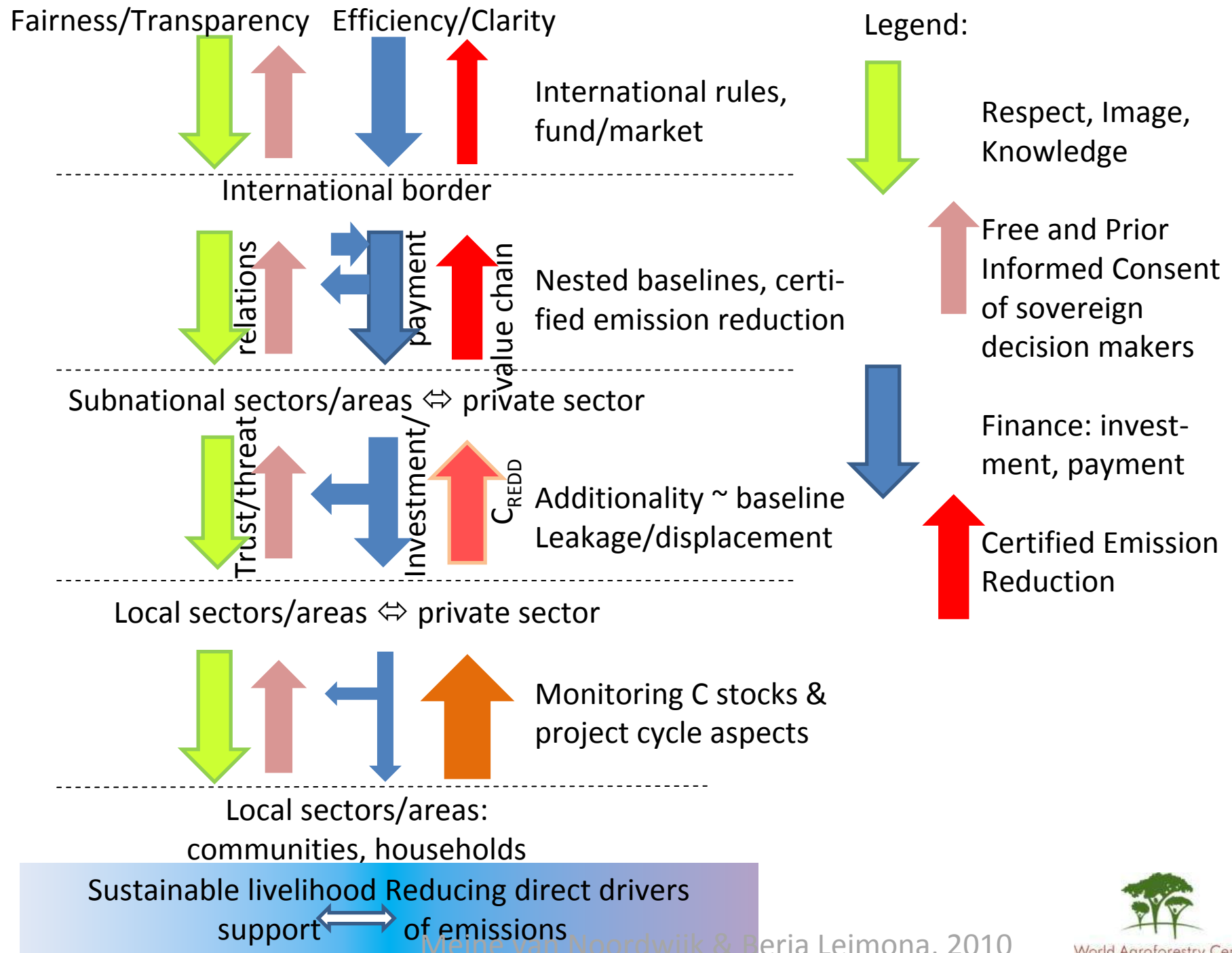


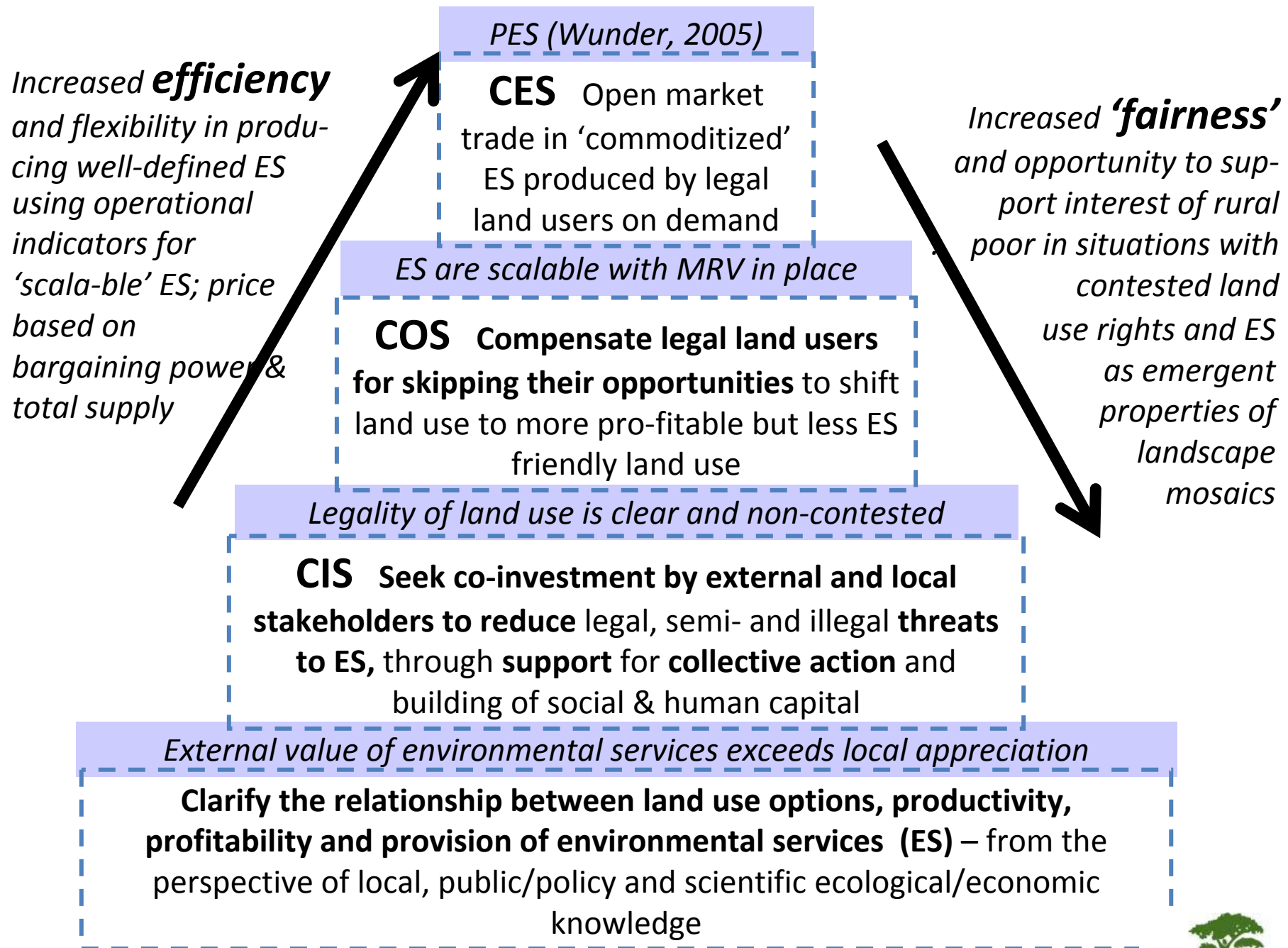
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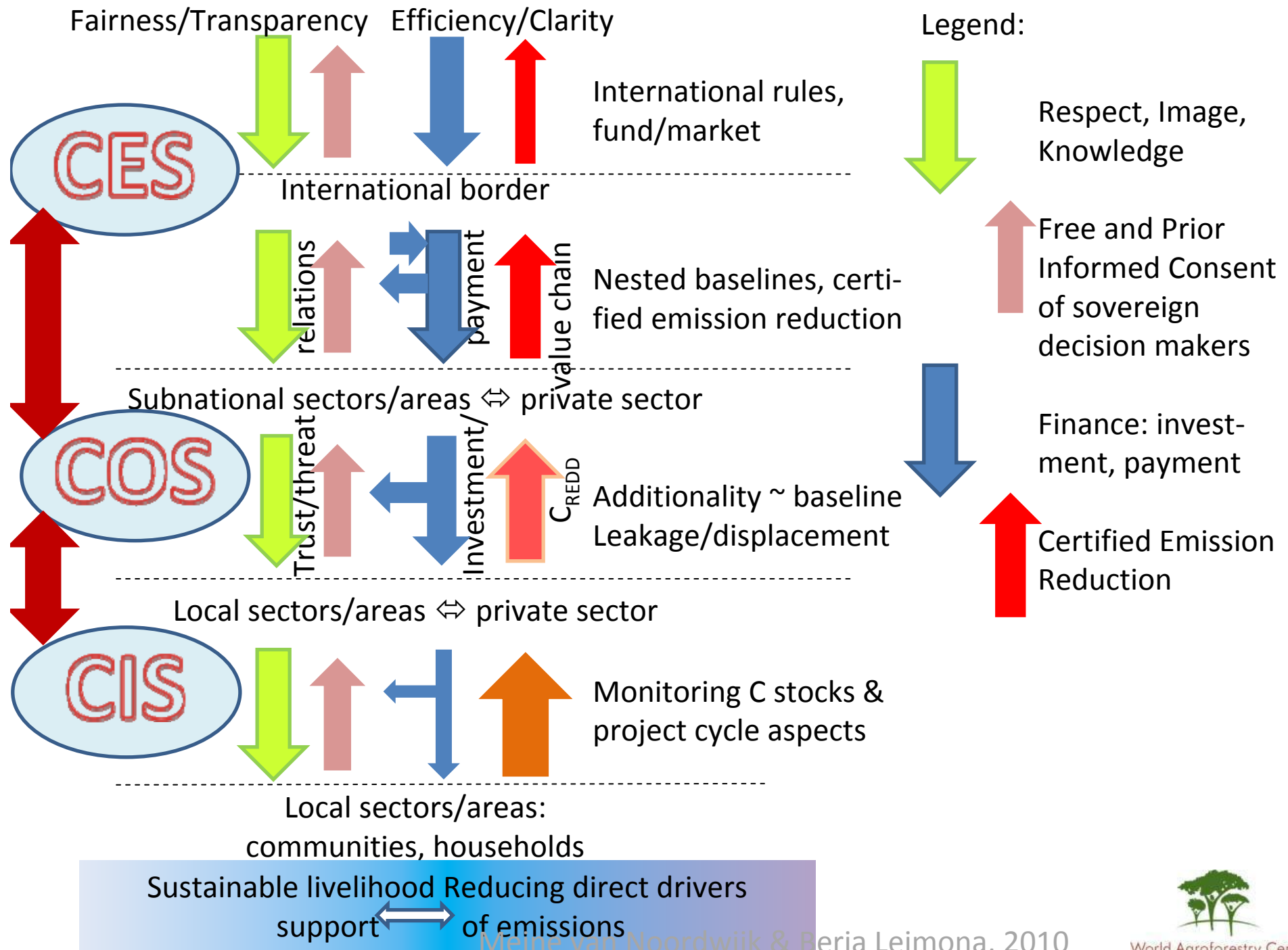


REDD finance should be used for investment in alternative development pathways that support maintenance of C stocks – rather than in protection of forests per se

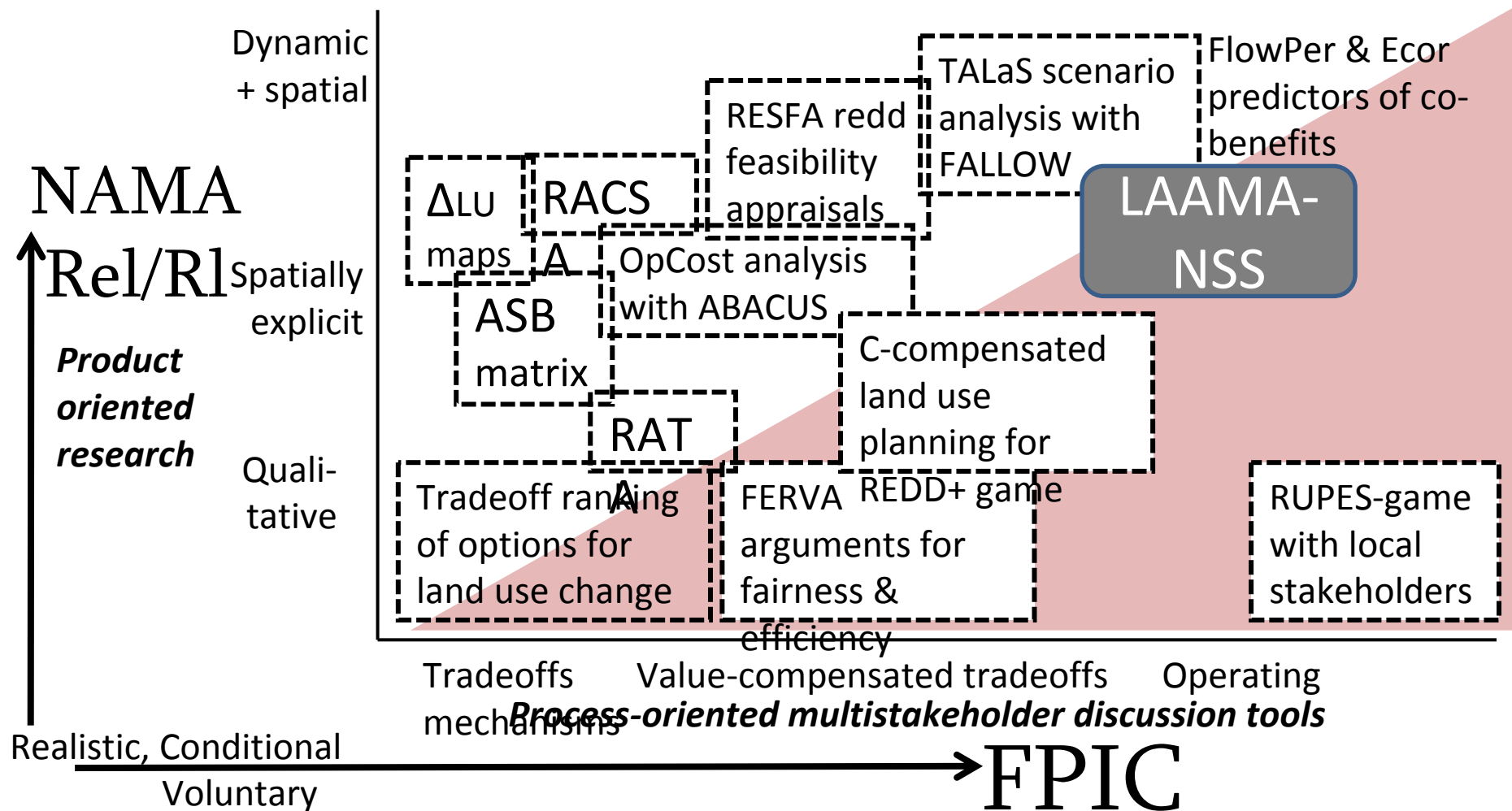








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ABACUS = abatement cost curve calculator; ASB matrix = land use systems & their key attributes;  $\Delta$ LU = land use change; Ecor = Ecological corridors; FALLOW = Forest, Agriculture, Low-value Lands or Waster model; FERVA = Fair & Efficient REDD Valuechain Analysis; FlowPer = Flow Persisytnce model; FPIC = Free and Prior Informed Consent; LAAMA = Locally Appropriate Adaptation and Mitigation Actions; NAMA = Nationally Appropriate Mitigation Actions; OpCost = Opportunity Cost analysis scheme; NSS = Negotiation Support System; RACSA = Rapid C stock appraisal; RATA = Rapid Tenure Claim Appraisal; REDD = Reducing Emissions from Deforestation and Degradation; REL/RL = reference (emission) level; Rewarding Upland Poor for the Environmental services they provide; TALaS = Tradeoff Analysis



# Summary

- Forests or Trees? Scope of REDD+
- Spare or share?
- Commodify, compensate opportunities foregone and/or co-invest in stewardship?
- Multi-scale REDD+ readiness



A photograph of a forest scene with a yellow text overlay. The background shows several tree trunks and branches, some with green foliage. The text is centered in a yellow rectangular box.

what's missing from current  
science and policy frames?  
***Many of the trees that  
matter most to people***

## Reducing emissions from deforestation, inside and outside the 'forest'

New data from Indonesia suggests that one-third of greenhouse gas emissions from deforestation originate from areas not officially defined as 'forest'.

Accounting for carbon in the whole landscape and Reducing Emissions from All Land Uses (REALU) can be more effective in reducing emissions.



**1.** One third of Indonesia's forest emissions (total of 0.6 Gt carbon per year) occur outside institutionally defined forests, and are not accounted for under the current national policy for Reducing Emissions from Deforestation and forest Degradation (REDD+).

<http://www.asb.cgiar.org/>



### Main findings

**1.** One third of Indonesia's forest emissions (total of 0.6 Gt carbon per year) occur outside institutionally defined forests, and are not accounted for under the current national policy for Reducing Emissions from Deforestation and forest Degradation (REDD+).

### Implications

- Current REDD+ approaches in Indonesia may not reduce net CO<sub>2</sub> emissions

• An approach for Reducing Emissions from All Land Uses

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