



FACT<sup>O</sup>R

SUCCESS IN CARBON BUSINESS

Marketing of ecosystem services  
from tropical forests -  
The demand side's perspective

Shaping the Global Agenda for Forests & Climate Change

Forest Day: UNFCCC COP13, Bali, 8 December 2007

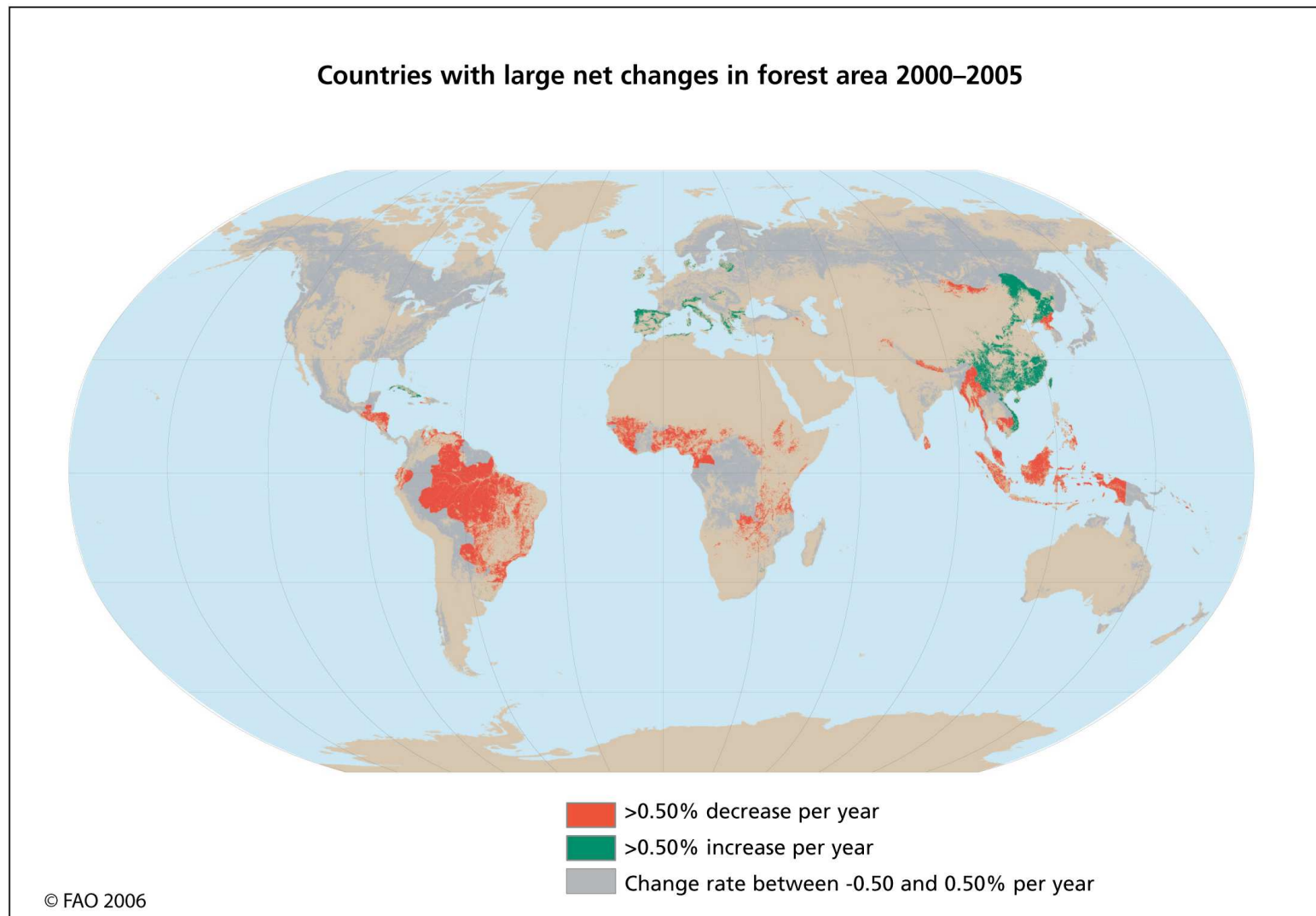
Joachim Sell, Ana Moeri and Luzia Bieri  
Factor Consulting + Management  
[www.factorglobal.com](http://www.factorglobal.com)

## Examples of forest ecosystem services

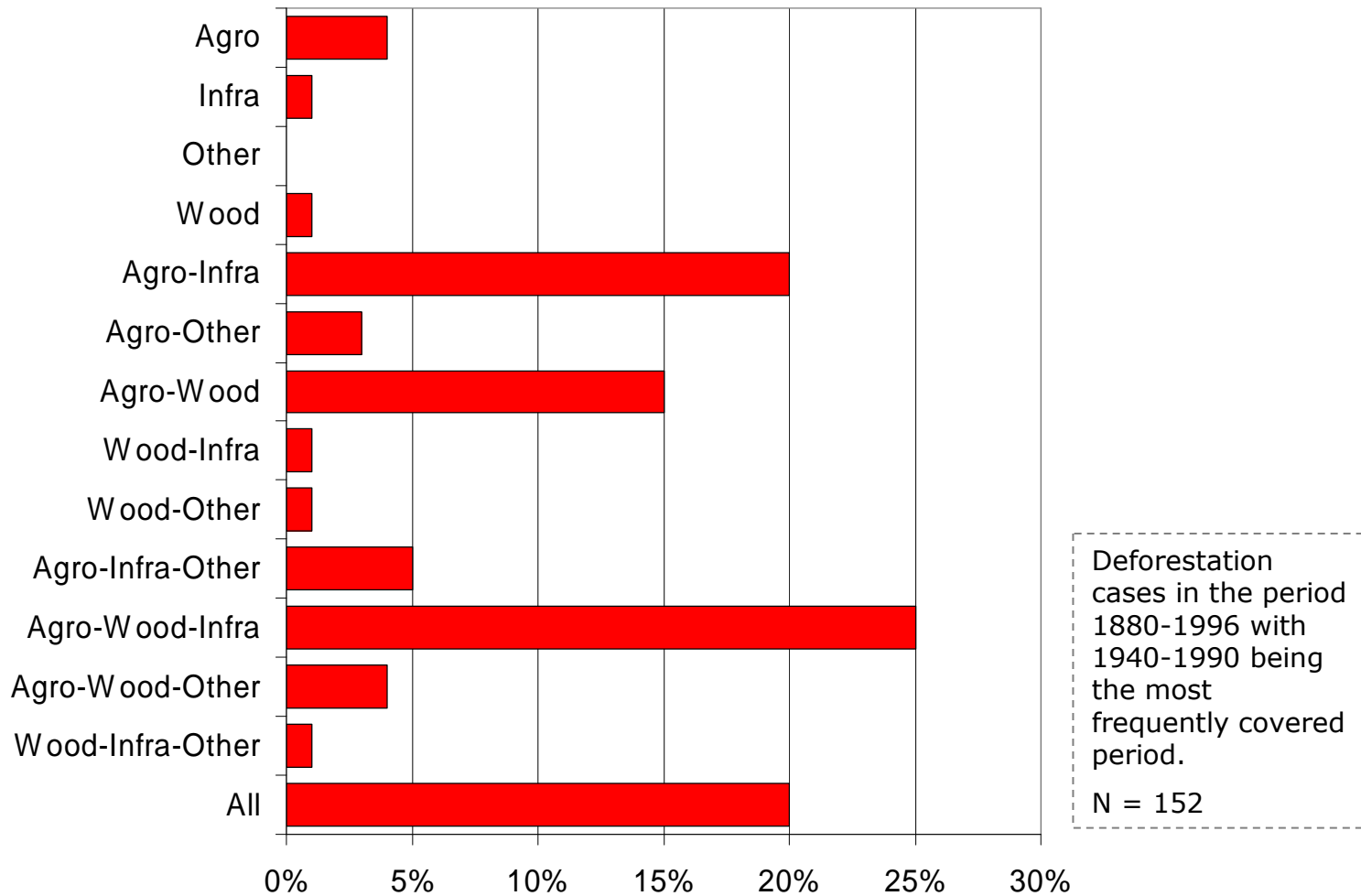
- *Ecosystem services* are functional properties of ecosystems that contribute to human welfare
  - Maintenance of biodiversity
  - CO<sub>2</sub> sequestration
  - Watershed protection
  - Soil protection
  - Scenic beauty
  - Protection services
  - ...



# Continuous depletion of forests



# Tropical deforestation can rarely be explained by one single direct driver...



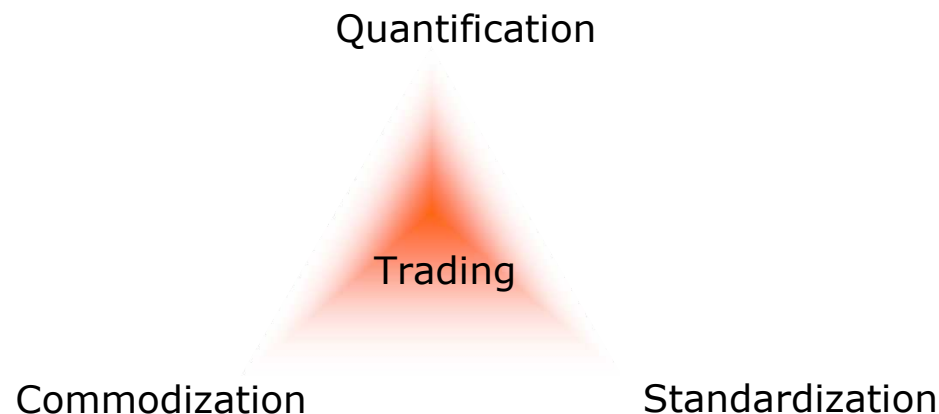
Source: Geist H. J., Lambin E.F. (2002) Proximate Causes and Underlying Driving Forces of Tropical Deforestation

## Sustainable or protective use has low economic value

- Typical succession of land use change in e.g. Brazil
  - Extraction of valuable timber by timber industry (boom)
  - Burn biomass and livestock farming (3-4 years) → degradation
  - Cash crops → requires investments (fertilizer, soil preparation) → collapse

## Value of ecosystem services

- Studies on total economic values (incl. non-use values, intrinsic values), few studies on local use values → high total economic values do not hinder tropical deforestation
- Most ecosystem services are public goods → no economic value
- Difficulty of commodization:
  - Carbon currencies: tCO<sub>2</sub>e, tCERs, ICERs, ERUs, AAUs, RMUs, etc
  - Biodiversity: Comparability of biodiversity index values?
  - „Currencies“: ha, species, certificates (?)



# Demand side motivations and their implications for quantification, valuation

- “Polluter pays” approach, offsets
  - Reaction to negative env. impact that needs to be offset by an equivalent positive impact → Requires quantification of impact and offset
  - Usual suspects: Mining industry, agricultural industry, road construction (?)
- “Beneficiary pays” approach
  - Motivation often inherent in business plan; proactive.
  - Env. benefits translate into economic benefit → quantifiable
  - Example: Sustainable watershed management to avoid filtration technology in case of hydropower plant or beer brewery
- “Contribution to human welfare”
  - May include engagement in regions to be managed sustainable (e.g. tourists, landholders, cons. Orgs.)

## From carbon stocks to forest ecosystems

- Forests are more than carbon stocks
  - How to provide additional investments for additional services?
- REDD has a potential to sustain forest ecosystem services
  - Quantification and commodization of other ecosystem services, to attach additional value and attract investors
- Combination of conservation mechanisms
  - REDD
  - Payments for ecosystem services
  - BBOP
  - Governmental protection

# Thank You!



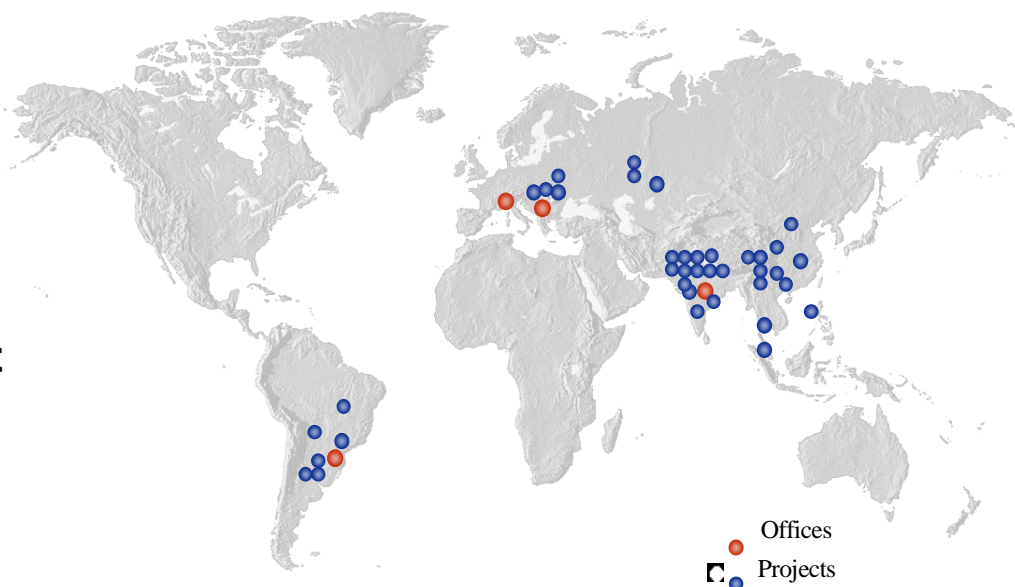
**Carbon Financing**



**Carbon Asset Development**



**Carbon Risk Management**



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