AVOIDED DEFORESTATION WITH SUSTAINABLE BENEFITS: CHALLENGES FOR TANZANIA (and elsewhere!)

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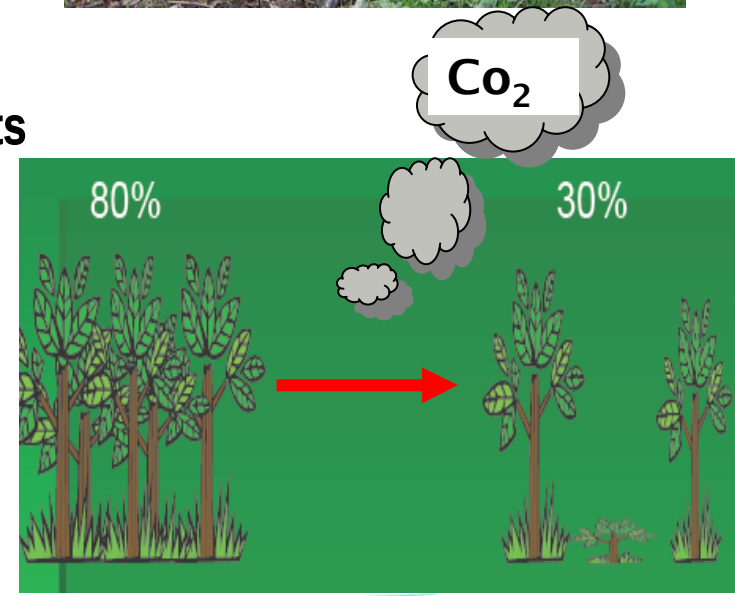
ASB Partnership for the Tropical Forest Margins
Propoor Rewards for Environmental Services in Africa

World Agroforestry Centre (ICRAF)

Why REDD?

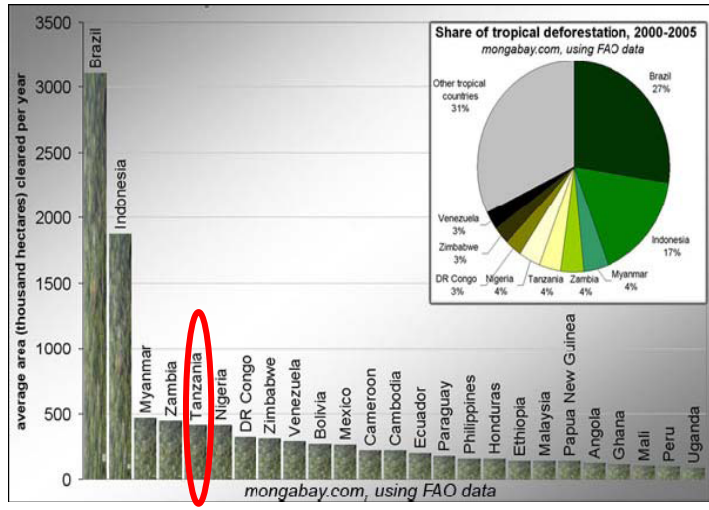
- forestry in developing countries represent 15% of GHG emissions.
- AD ruled out of Kyoto
- Stern Report + PNG and Costa Rica efforts, brought AD back on the UNFCCC agenda.
- COP13 decision encourages capacity building & demonstration for REDD.
- Ad hoc Working Group progress suggests REDD likely to be included in post 2012 regime.
- Interesting developments in the US and prospects for inclusion in the ETS.

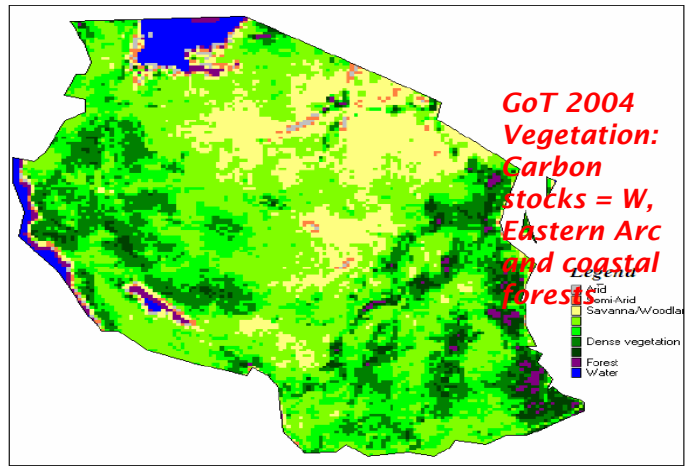


Prospects for REDD in Tanzania

- **Annual Forest Carbon Emissions in Tanzania between 2000 – 2005 = 37.6 MtC (Gibbs et al, 2007)**
- **Average Annual deforestation in Tanzania 1990 – 2000 = 400,000ha= 0.99% (4th / 12th in world) (FAO STATS)**
- **Tanzania relatively well prepared due to reforms of forest governance and Norway support**

(Kenya, Madagascar, Ghana, Liberia, DRC, Gabon getting first round of FCPF support).





REDD guidelines

2/CP.13 Reducing emissions from deforestation in developing countries: approaches to stimulate action .....

1. Improve data collection, estimation of emissions from deforestation and forest degradation, monitoring and reporting
2. Address the drivers of deforestation relevant to national contexts
3. Target reduced emissions from deforestation and forest degradation
4. Apply Good Practice Guidelines for LULUCF to report emissions
5. Undertake national demonstration activities with:
    - approval of host country
    - good measurement of changes relative to historical baselines,
    - national accountability, with sub-national activities
    - consistent with sustainable forest management re UNFF, UNCBD, UNCCD

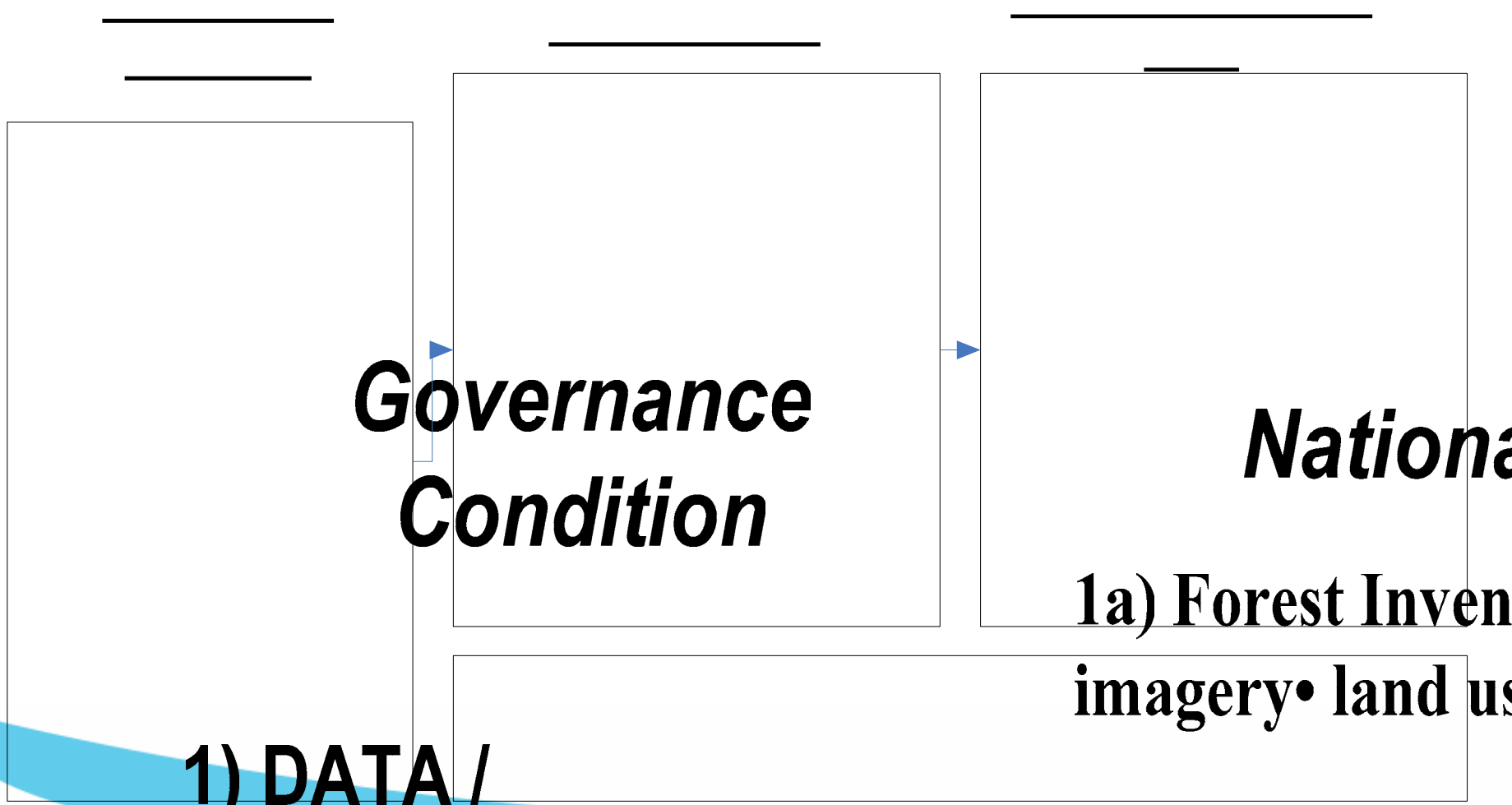
REDD guidelines

Forest Carbon Partnership Facility

Reddiness defined by readiness to produce emission reductions (ERs):

- **A REDD reference scenario, based on historic emissions**
- **Measuring, monitoring and verification system**
- **An economically effective, efficient and socially equitable national REDD strategy formulated and vetted through a meaningful stakeholder consultation**
- **REDD implementation framework established:**
  - **National coordination of activities**
  - **National Registry**
  - **Ownership and distribution of emission reductions, etc…**

MULTI-LEVEL REDD READINESS ASSESSMENT FRAMEWORK



What should REDD worry about Sustainable Benefits?

- ER is an ecosystem service of landscapes with (potential) market demand.
- ER supply co-produced by a mix of private, collective, and public action / inaction.
- Many of those implicated by ER supply are not considered legitimate owners of carbon or co-resources and are excluded from revenue streams.
- Usually a mix of tradeoff and synergy between ER supply and supplies of other provisioning, regulating and cultural ecosystem services.
- Forests and trees are long-term, risky investments, tough to built, easy to burn, vulnerable to conditions .

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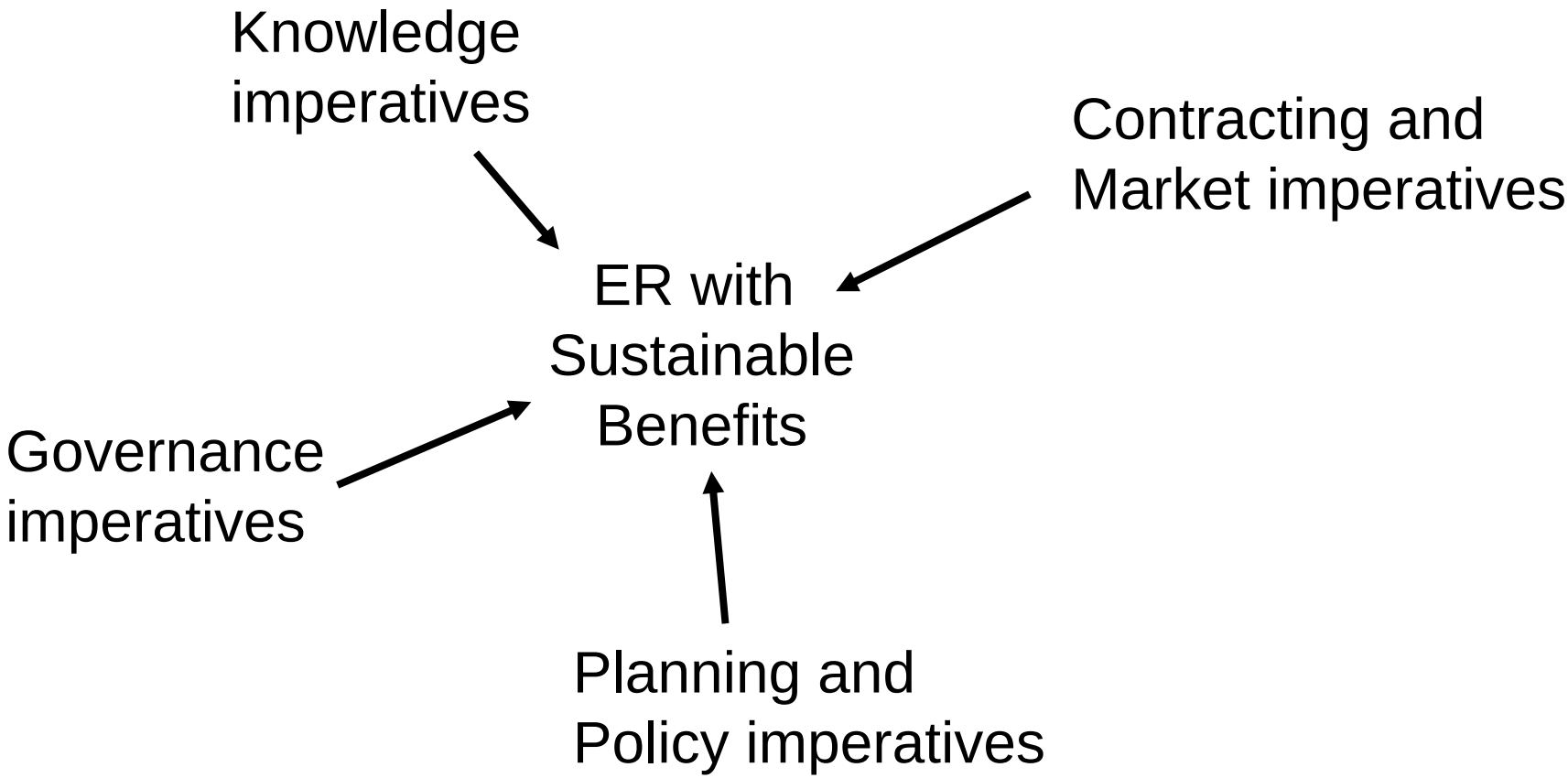
→ Complex value chains

→ Multiple sources of inefficiency

→ Multiple risks

→ Multiple co-benefits / disbenefits

Imperatives for ER with sustainable benefits



Imperatives for design for sustainable benefits

Knowledge imperatives:

- **Forest and carbon inventories developed through effective partnerships between international science groups and local institutions, following best practice guidelines**
- **Understand links between land cover / carbon inventories, land uses and livelihoods**
- **Identify stakeholders in different land uses and what motivates their behavior**
- **Understand tradeoffs associated with alternative land uses (employment, economic returns, CO2e, biodiversity)**
- **Identify and quantify direct and indirect drivers of tree cover and land use change, especially those outside forestry sector (agriculture, energy, mining)**
- **Identify major risks and threats to ER**
- **Effective and open communication with stakeholders (role for the media)**

Imperatives for design for sustainable benefits

Governance imperatives:

- **Property rights to carbon and partner resources (forests, farmlands, soils, water)**
- **Governance systems for carbon and partner resources**
- **Sustainable, equitable, transparent and fair distribution of benefits – it's the right thing to do, it increases sustainability, reduces perverse incentives, and increases investor confidence**
- **Re-examine and deal with 'legal' and 'illegal' forest practices – eg charcoal**

Imperatives for design for sustainable benefits

Planning and policy imperatives:

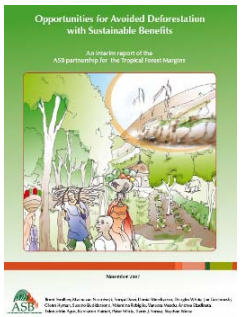
- **Fully inclusive consultative process, informed by scientific expertise and analysis (eg IFCA process in Indonesia)**
- **Address policy inconsistencies and distortions shaping deforestation (eg pulp from primary forests, illegal charcoal)**
- **Determine how to make REDD more consistent with other development, poverty reduction and planning objectives and vice versa (at all levels of planning)**
- **Bring REDD into national policy debates on related topics (eg biofuel production, domestic energy security, paper, …)**
- **Secure funds for no-regrets technologies (eg promote improved cookers like bednets)**
- **Clarify and present case on REDD to international interests**

Imperatives for design for sustainable benefits

Contracting and market imperatives:

- **Nested hierarchy approach matches to forest governance and government decentralization**
- **Ethical codes for buyers / investors (eg notification, prior and informed consent, etc)**
- **Take accounts of major risks (eg fire – insurance, banking)**
- **Payoffs scheduled matched to farmer and community needs and ER returns**
- **State contingent contracts to account for shifts in drivers (eg payments adjusted or contracts renegotiated to account for major changes in C or commodity markets)**
- **Contract terms account for real needs and opportunities of farm population**

ASB approach to the knowledge imperatives



www.asb.cgiar.org

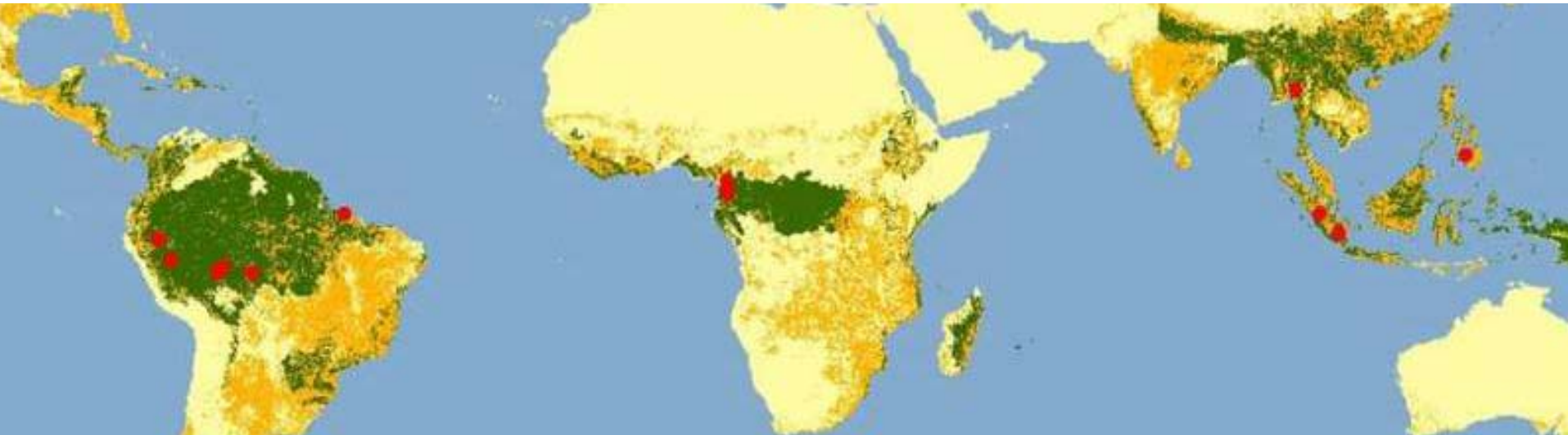


Table 4.1 ASB meta land use systems and representative systems at the study sites

	Indonesia			Peru	Cameroon
ASB meta land use	**Jambi**	**Lampung**	**East Kalimantan**	**Ucayali, Peru**	**ASB benchmark site**
Forest	Undisturbed forest Logged over forest-high density Logged over forest-low density Undisturbed mangrove Logged over mangrove Undisturbed swamp forest Natural regrowth-shrub	Undisturbed forest Logged over forest-high density Logged over forest-low density Undisturbed mangrove Logged over mangrove Undisturbed swamp forest Logged over swamp forest Natural regrowth-shrub	Undisturbed forest Logged over forest-high density Logged over forest-low density Undisturbed mangrove Logged over mangrove Undisturbed swamp forest Logged over swamp forest Natural regrowth-shrub	Residual forest: Previously logged with some selective logging continuing and NTFP extraction. Tree canopies of 95, 80, 65, 50%.	High forest—relatively intact with some selective logging in the past. Some hunting and the gathering of NTFPs. Secondary forest—also important for collection of NTFPs.
Tree-crop systems	Home garden Coconut Rubber agroforest Cinnamon agroforest Coffee agroforest Rubber Oil palm Tea plantation	Home garden Coconut Rubber agroforest Cinnamon agroforest Coffee agroforest Rubber Oil palm Damar agroforest Fruit-based agroforest Coffee	Agroforest Rubber agroforest Cinnamon agroforest Coffee agroforest Rubber Small scale oil palm Large scale oil palm Plantation	Oil palm	Extensive cocoa—low productivity with limited use of fungicides (Akok only). Extensive cocoa with /fruit—same as above except fruit surpluses are marketed (Awae only). Intensive cocoa with fruit—more intensive use of fungicides and labour results in higher yield (500 kg/ha) (Awae only).
Crop/fallow systems	Agriculture Rice field	Agriculture Rice field Sugarcane	Agriculture Rice field	Shifting cultivation mosaic --combination of forest patches, pasture and annual crops Short fallow -- secondary forest converted to 3 years of annual crops (rice, maize, cassava, plantain, beans) followed by 2 to 6 years of fallow	Mixed food crop /short fallow rotation - groundnuts, cassava, plantain, okra, cocoyams, maize, leafy vegetables Long fallow rotation -- melonseed / plantain / long fallow rotation.
Other	Settlement Grass Open peat Cleared land	Settlement Grass Open peat Cleared land	Settlement Grass Open peat Cleared land	Native grasses or *Brachiaria*	

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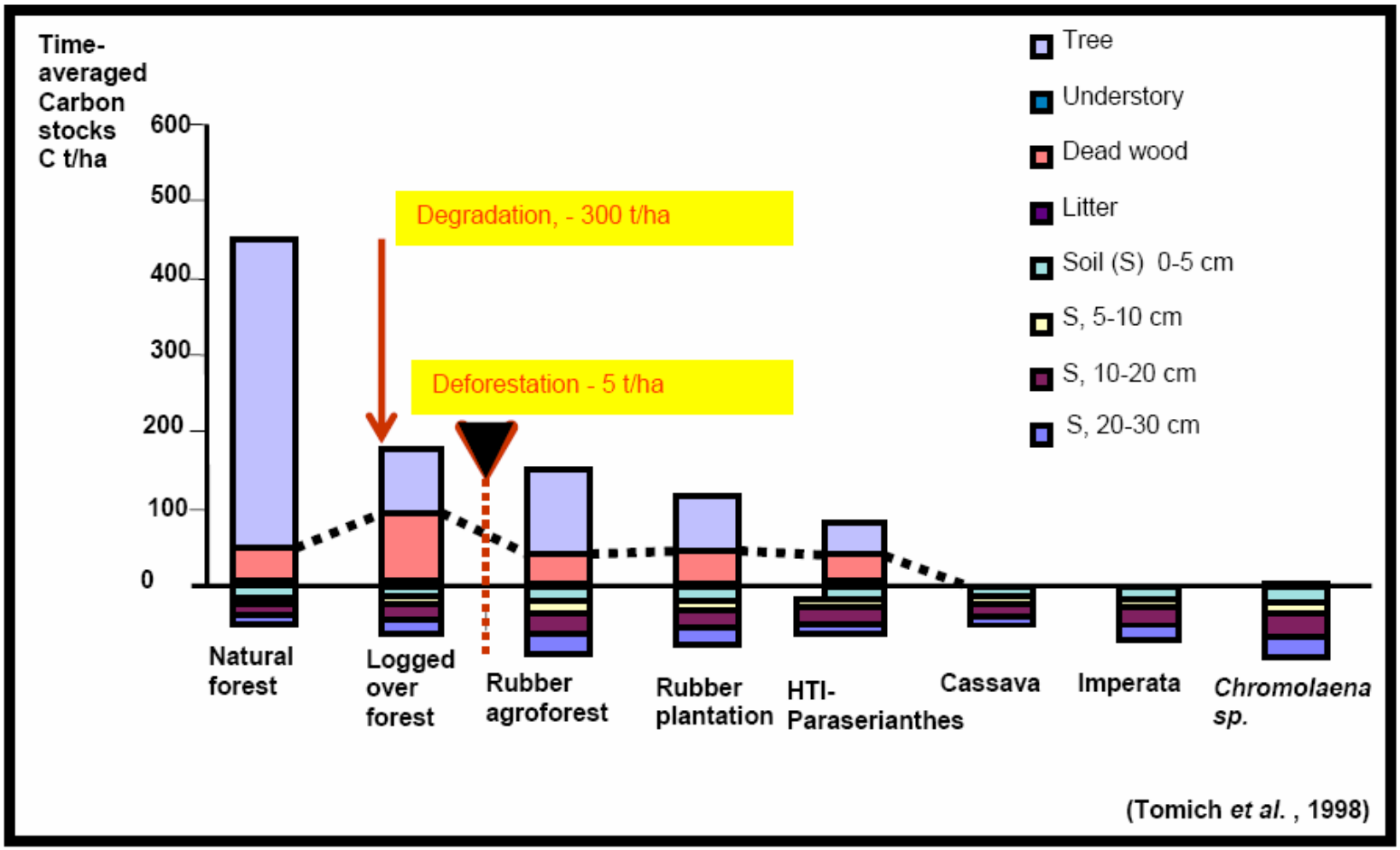
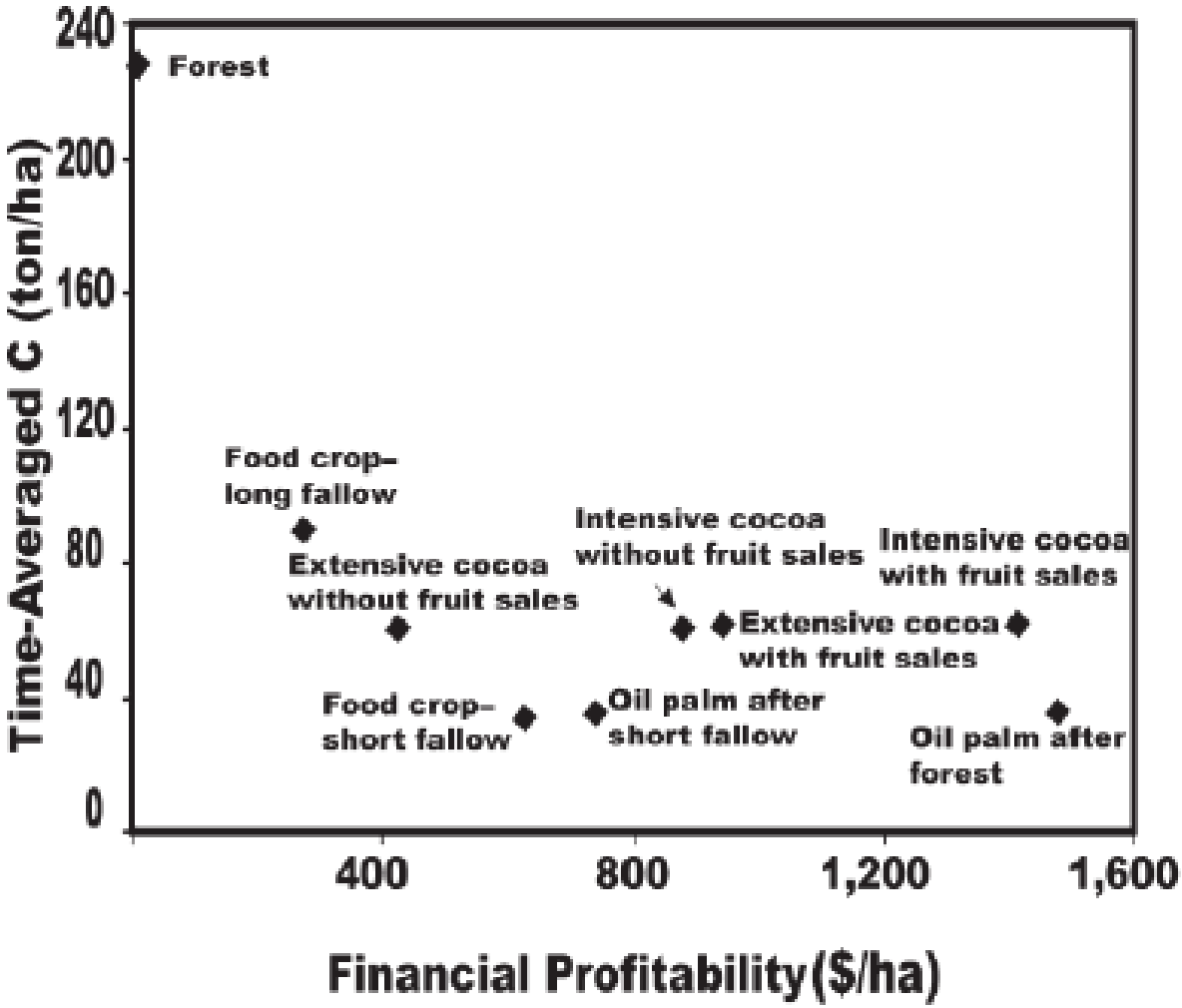
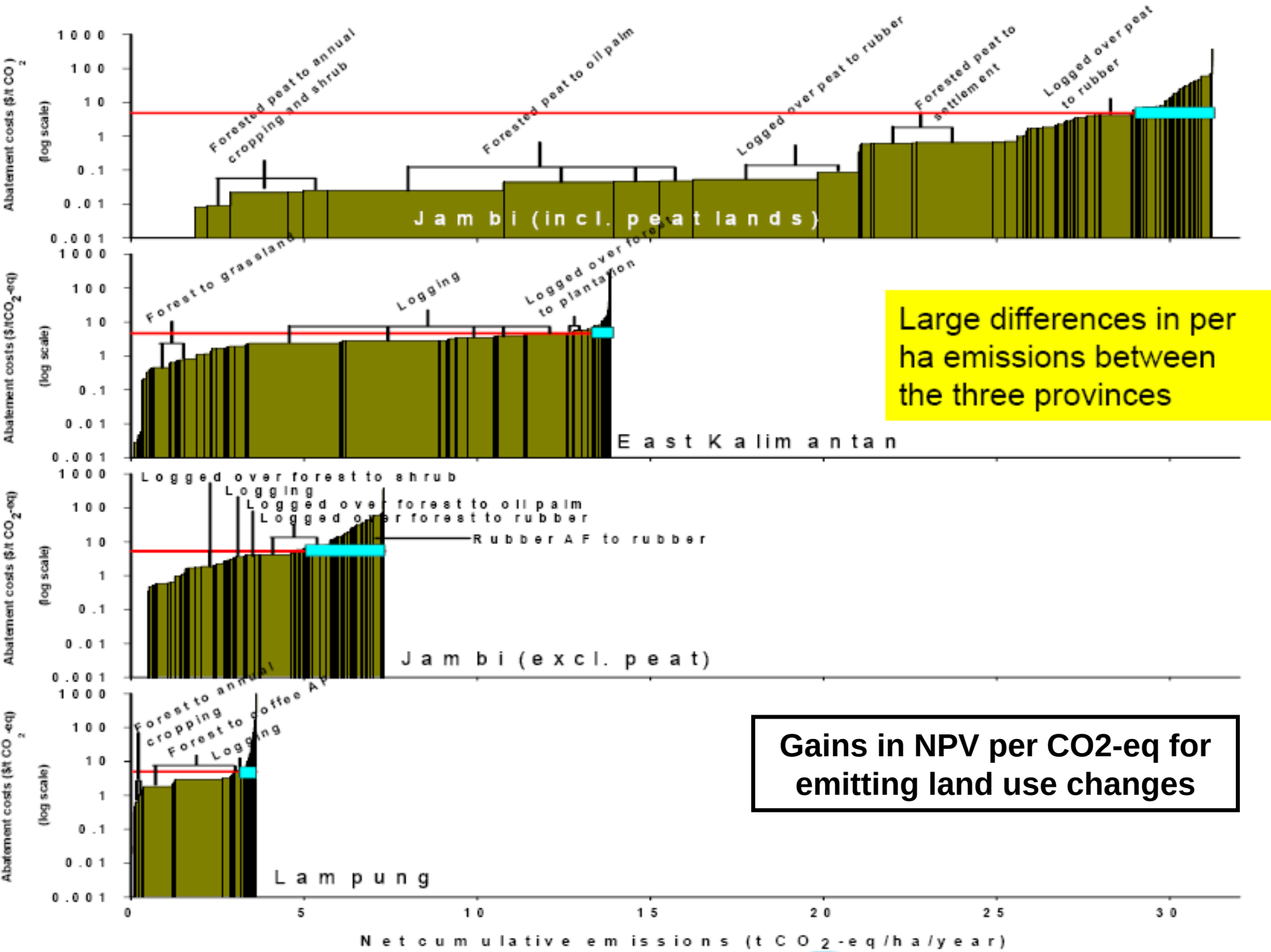
Figure 1.1 - Land use change and C stock at the ASB site in Jambi, Indonesia, 1995)





Source: Vosti, Gockowski and Tomich, 2005, p.429.


Abatement costs ($/t CO2) (log scale)
1000
100
10
1
0.1
0.01
0.001
Forested peat to annual cropping and shrub
Forested peat to oil palm
Logged over peat to rubber
Forested peat to settlement
Logged over peat to rubber
Jambi (incl. peatlands)
Forest to grassland
Logging
Logged over forest to plantation
East Kalimantan
Logged over forest to shrub
Logging
Logged over forest to oil palm
Logged over forest to rubber
Rubber AF to rubber
Jambi (excl. peat)
Forest to annual cropping
Forest to coffee AF
Logging
Lampung
0
5
10
15
20
25
30
Net cumulative emissions (t CO2-eq/ha/year)
Large differences in per ha emissions between the three provinces
Gains in NPV per CO2-eq for emitting land use changes

Asante Sana!!

More at: www.asb.cgiar.org
http://presa.worldagroforestry.org

Pro-poor Rewards for Environmental Services in Africa

World Agroforestry Centre
TRANSFORMING LIVES AND LANDSCAPES

ASB