


Mitigation options in tropical forests including in post 2012 climate regime

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ITTO

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inter
cooperation

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Forests play a central role in climate change

Forests can increase resilience of people and ecosystems,
fix and maintain carbon



**Mitigation and adaptation options in the forest sector
need to be fully understood and used in the context of
promoting sustainable development**

Working definitions

Sustainable Forest Management

Managing (permanent) forest to achieve one or more clearly specified objectives of management with regard to the production of a continuous flow of desired forest products and services (e.g. carbon) without undue reduction of its inherent values and future productivity and without undue undesirable effects on the physical and social environment.

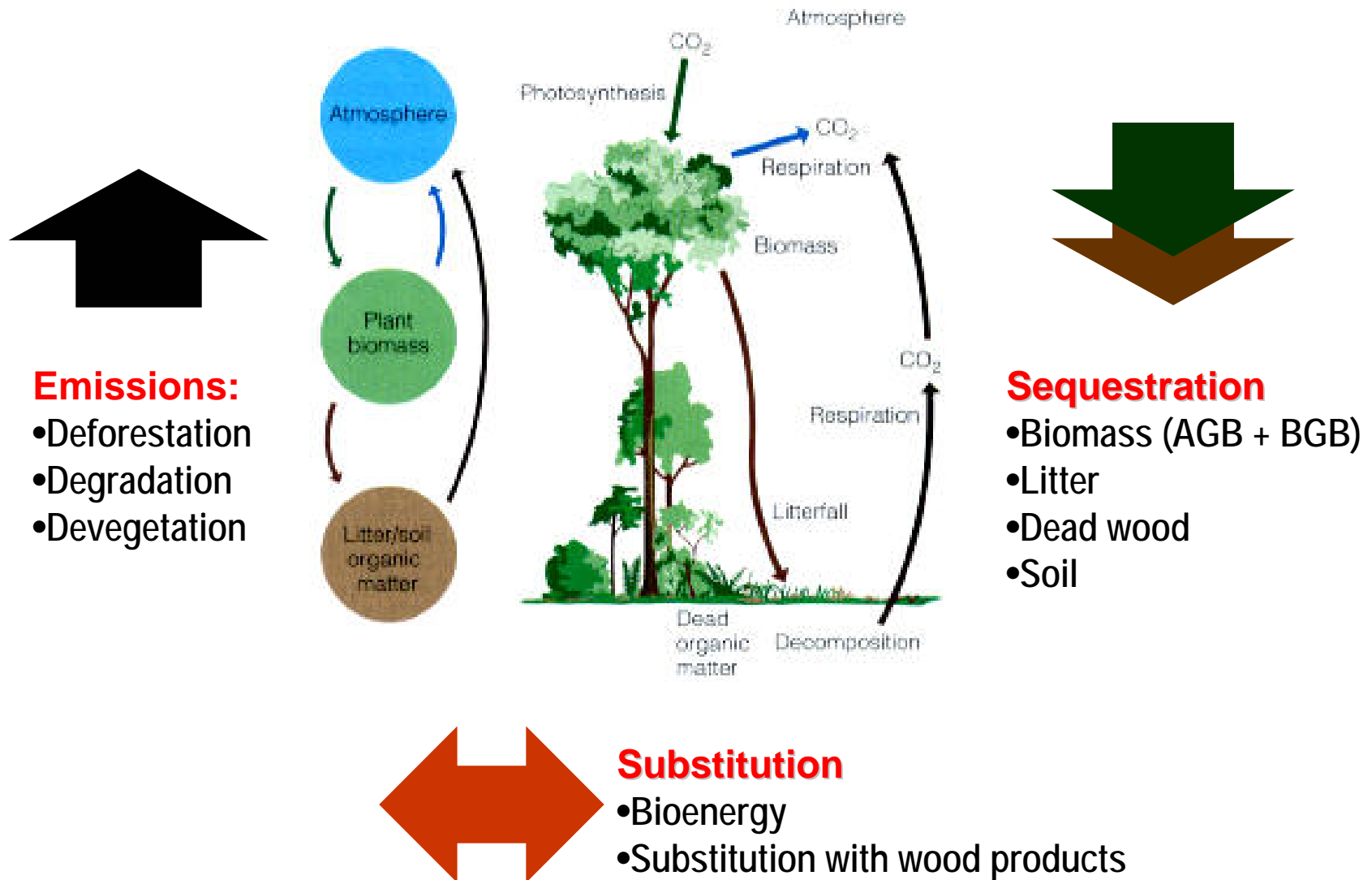
Forest Restoration

Enhance and accelerate natural and artificial processes of forest regeneration on forest land in order to regain the elastic capacity of the forest ecosystem after it has been degraded.

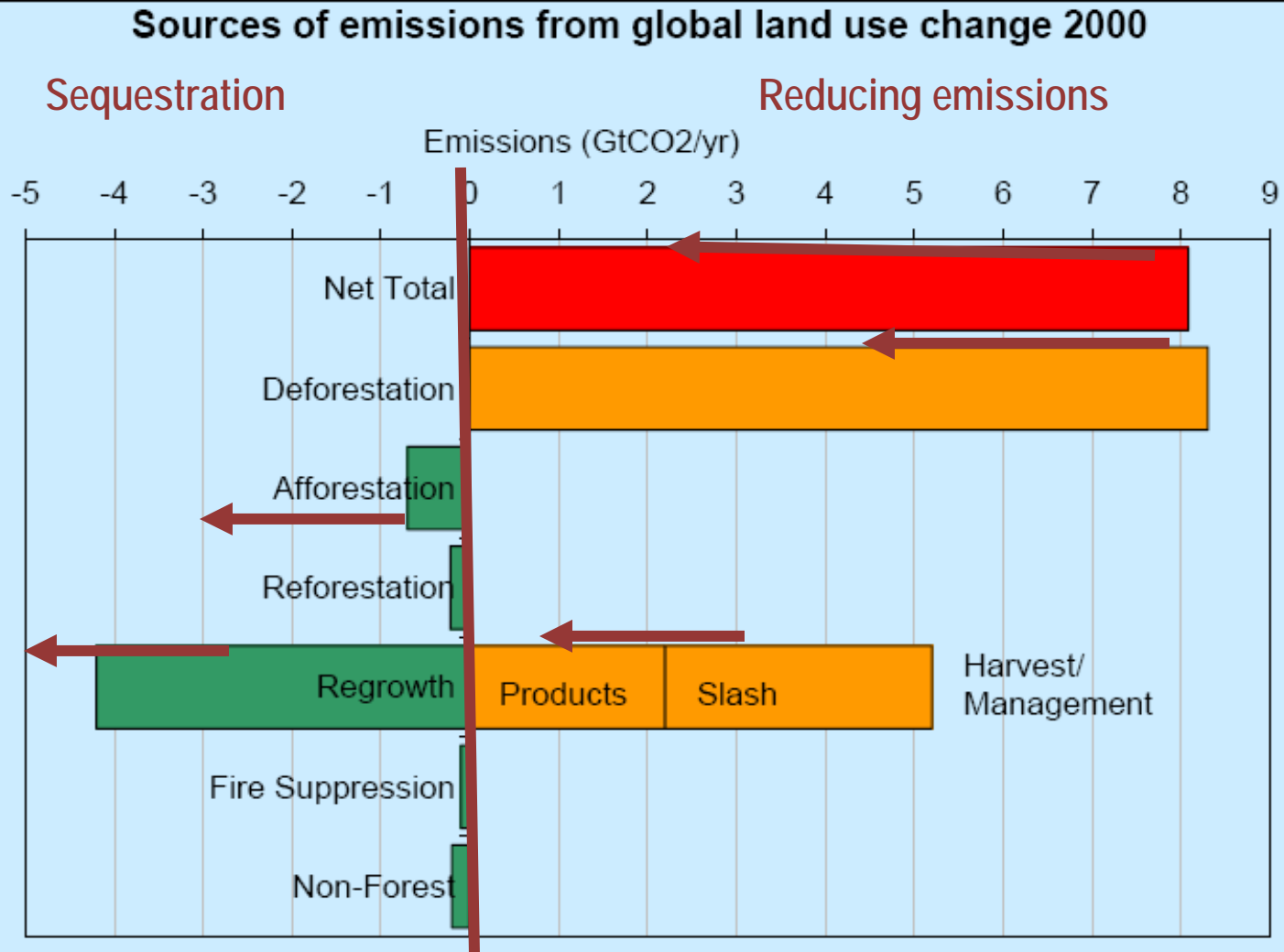
Forest degradation:

The reduction of the capacity of a forest to produce goods and services. 'Capacity' includes the maintenance of ecosystem structure, functions and carbon stocks

Carbon cycle in the forest



GHG emissions and sinks in forests ecosystems



Source: Reproduced from Baumert et al (2005)

Mitigation options

Mitigation options (general)	Mitigation options in UNFCCC/KP (forestry sector)	Forest management options
Reduction of GHG emissions	Reducing emissions from deforestation and forest degradation	Sustainable management of (natural) forests
		Committing forests for REDD
Carbon sequestration	Afforestation	Plantations, agroforestry
	Reforestation	
	?	Forest restoration, committing forest for C enhancement
Carbon substitution	Bioenergy Substitution through wood products	NTFP management, Biofuel plantation, sustainable wood production

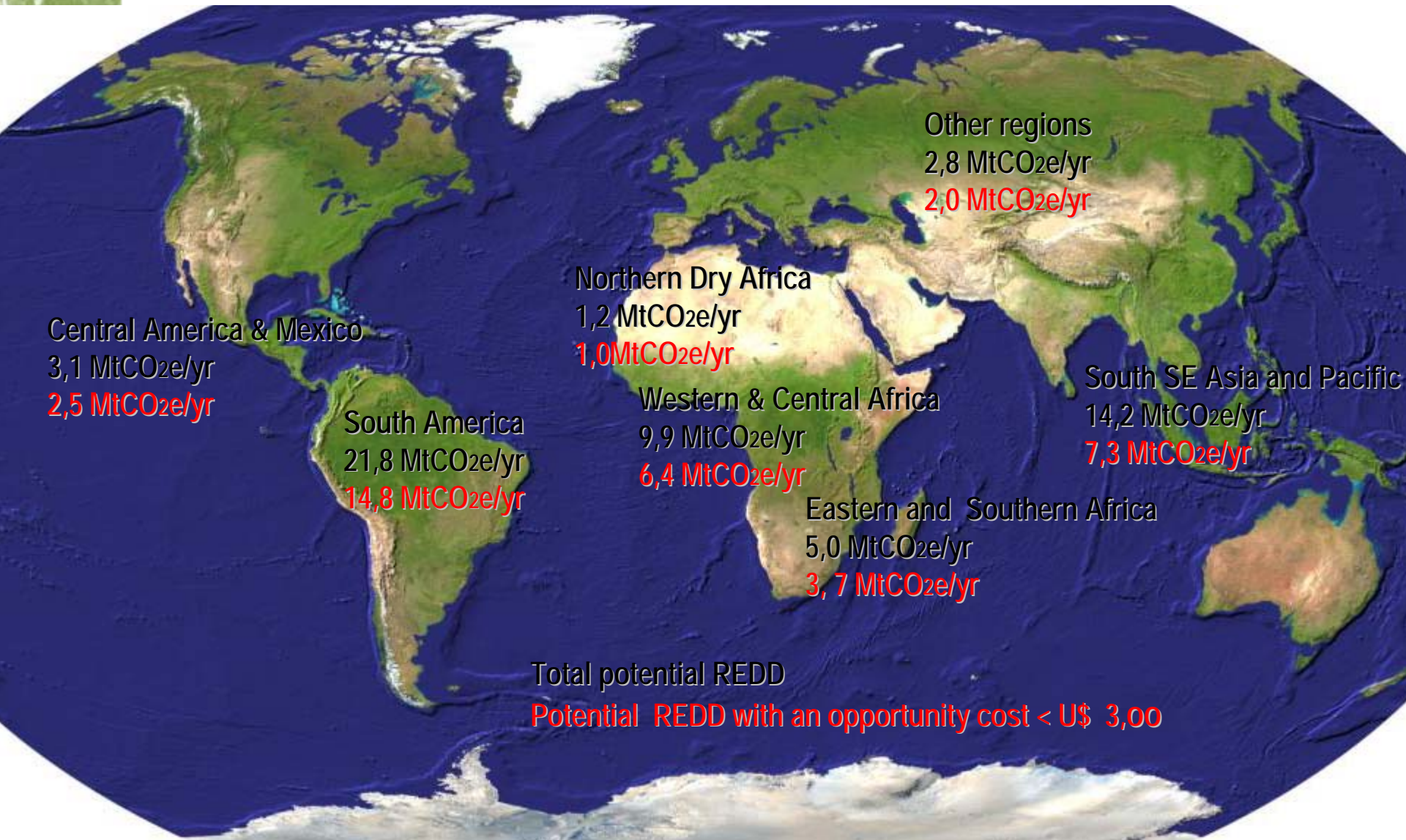
Reducing Emissions from Deforestation and forest Degradation – REDD -

Direct drivers

- ***Commercial agriculture***
 - Commercial crops
 - Cattle ranching
- ***Subsistence farming***
 - Small-scale agriculture/shifting cultivation
 - Fuelwood and NTFP gathering
- ***Wood extraction***
 - Commercial (legal & illegal)
 - Fuelwood/charcoal (traded)



Reducing Emissions from Deforestation and forest Degradation – REDD -



Reducing Emissions from Deforestation and forest Degradation – REDD – Development Perspective

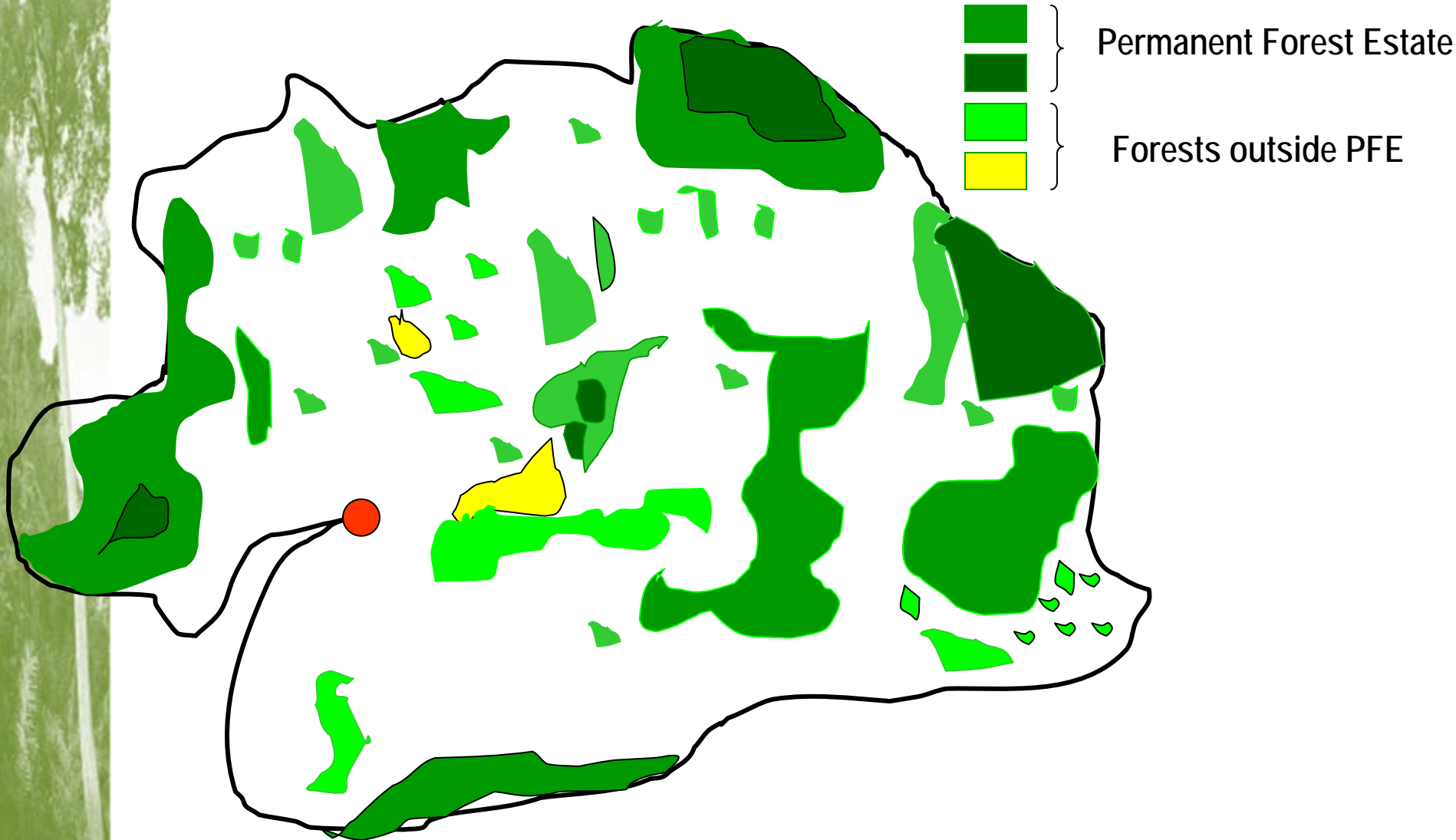
- ⇒ **Not all deforestation is undesirable:**
 - Social and economic pressures make it inevitable that substantial areas of what is still natural forest today will be converted to agriculture and other uses

- ⇒ **However, deforestation should be discouraged when:**
 - it is not efficient from an economic viewpoint;
 - it is non-sustainable – in other words, it is a threat to environmental stability; and
 - it leads to social inequities and conflicts.



The *Committed Forest Approach* is an alternative for defining what forests should be committed as long-term carbon reservoirs

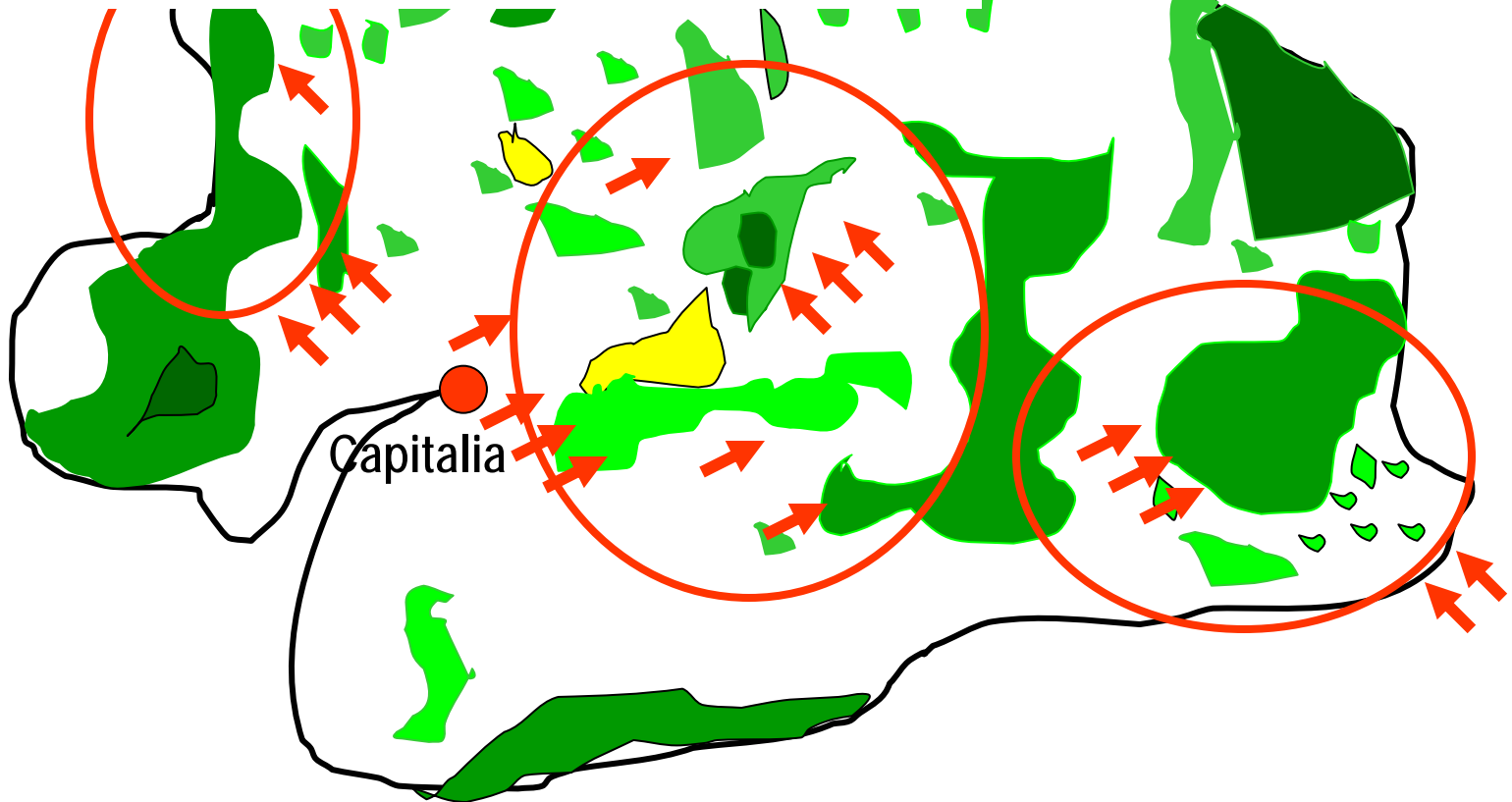
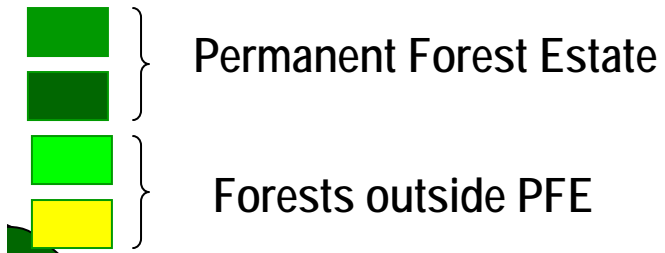
Cuzaland: Forest Area



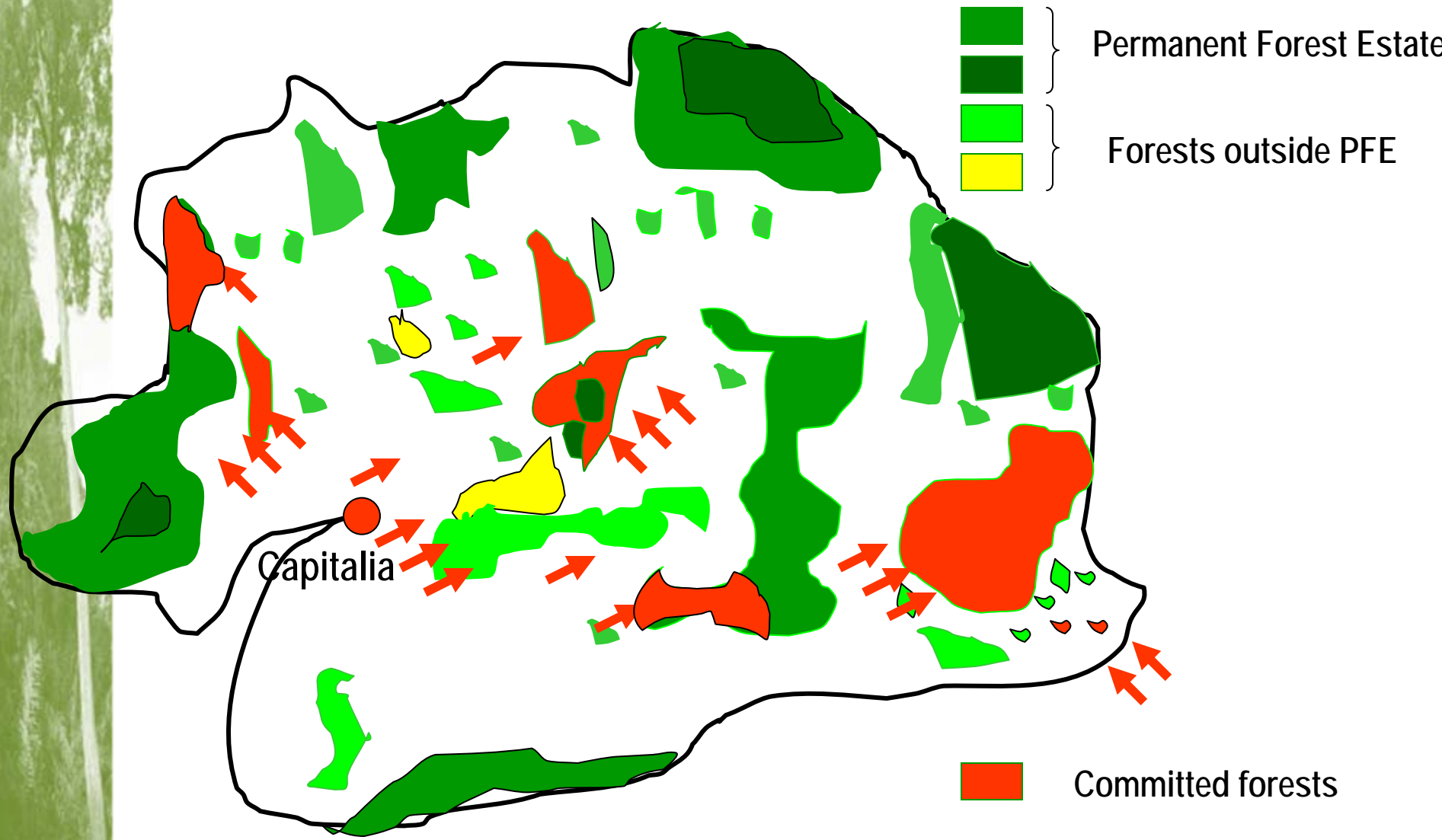
Cuzaland: Hotspot Deforestation Areas

Principles:

- ✓ National sovereignty
- ✓ Sustainable development
- ✓ Consistency with decentralization
- ✓ Environmental integrity
- ✓ Stakeholder consultation
- ✓ Alignment with the UNFCCC process



Cuzaland: Committed Forests for Emission Reduction



A vertical strip of a forest landscape on the left side of the slide, showing green trees and a path.

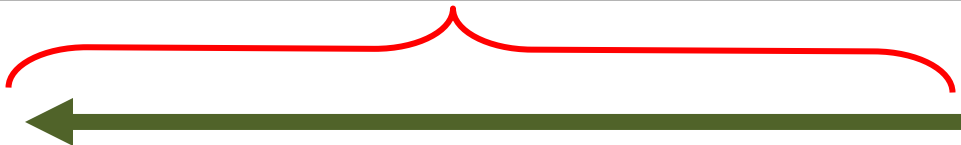
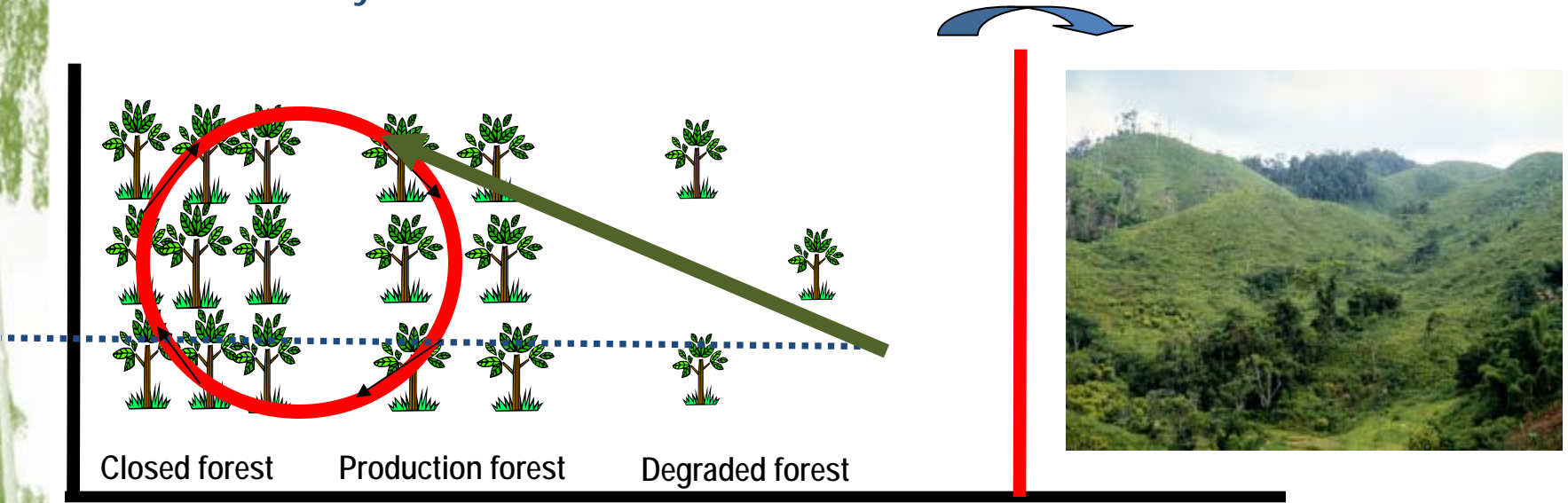
Carbon sequestration

Forest Restoration

Forest Degradation Process

Carbon	+++	→	+
Protective functions	+++	→	+
Biodiversity	+++	→	+

Deforestation
(land-use change)



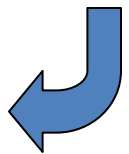
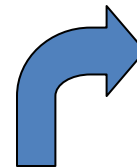
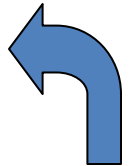
Forest Restoration Process

○ Sustainable Forest Management

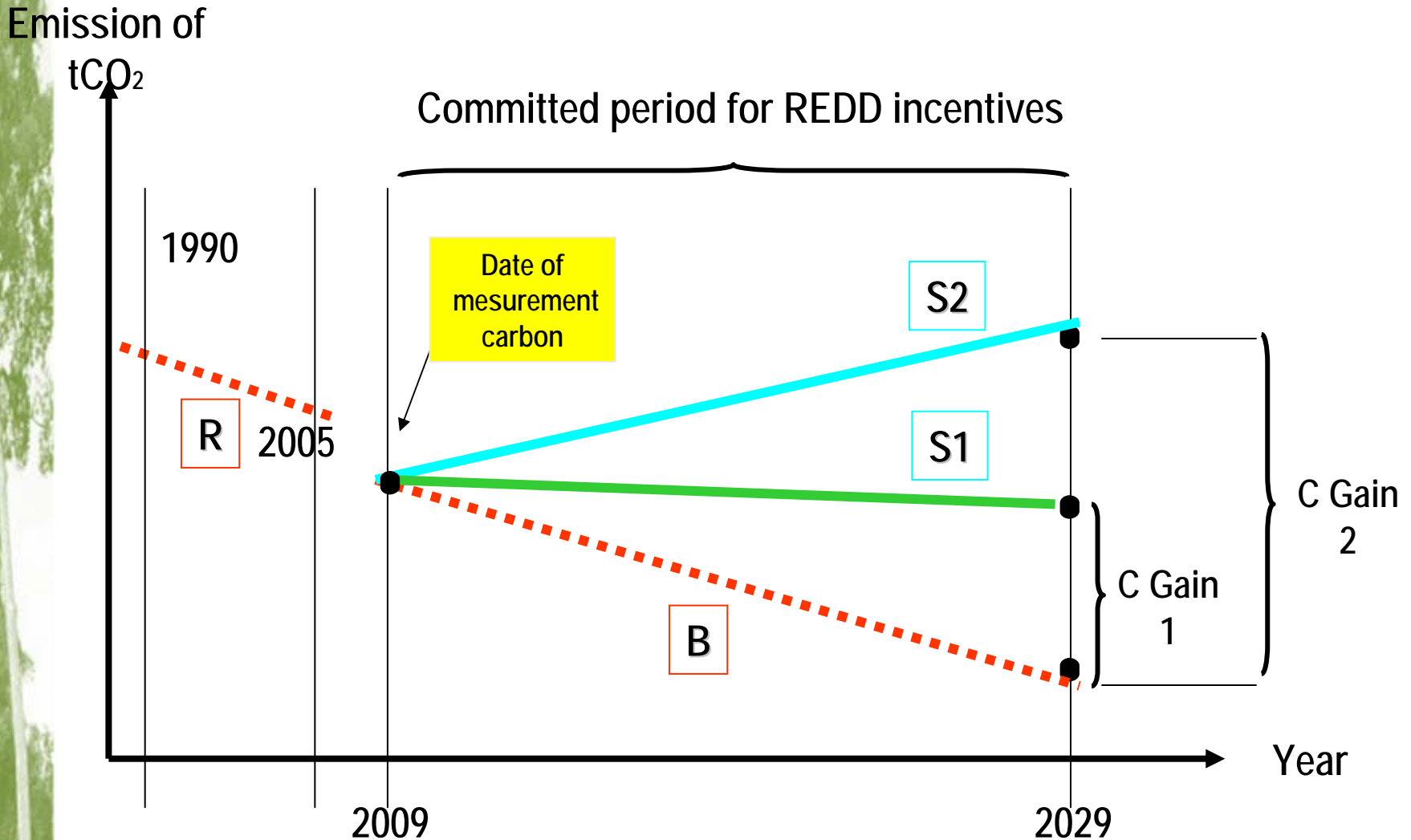
Elements of landscape functionality

- Stability:
Ability to retain (and/or restore) forest landscapes while adapting to changing environmental, social and economic conditions
- Functional flexibility:
Ability to respond to varying needs, demands and changing priorities and values of people
- Ecosystem integrity:
Ability to protect biodiversity and nature

- ➔ Forest restoration has many colateral positive effects besides C sequestration
- ➔ Carbon payments could increase competitiveness of FR



A REDDrestoration model: Committed forests



R: Setting a baseline of DD

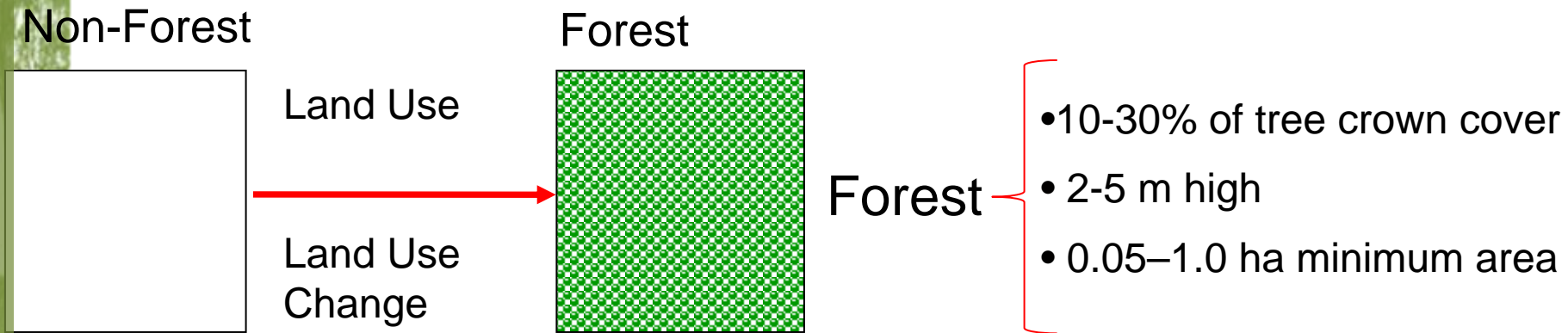
B::Baseline DD without REDD

S1: Scenario 1: based on C potential and local stakeholders objectives: low priority in respect to committing forests: Forest conservation

S2: Same as S1, but high stakeholder priority in respect to committing forests: Forest restoration

Aforestation/reforestation in the CDM

Eligible Activities under CDM until 2012



- Reforestation
 - If land was non-forest on 31st December 1989 and at the start of the project
- Afforestation
 - If land was non-forest for a period of at least 50 years before starting the project

Current situation of the A/R CDM

Assets

- Available tools:
 - eligibility, additionality, calculation of sample plots, other emissions, etc
 - ENCOFOR, TARAM...
- Methodologies:
 - 10 full-scale methodologies
 - 2 small-scale methodologies
 - 1 consolidated methodol.
- Capacity building

Burdens

- High complexity
- High transaction costs
- Difficult financial feasibility
- Hard contracting conditions
- Low carbon prices

Only 1 registered project

→ Clear need for simplification after 2012

Carbon substitution



Biofuels

- Available methodologies
- Belongs to the energy sector

Concerns

- Impacts on food security and environment (e.g. water availability)
- Carbon balance

Wood Products

Not eligible yet
(neither for developed countries or developing countries)

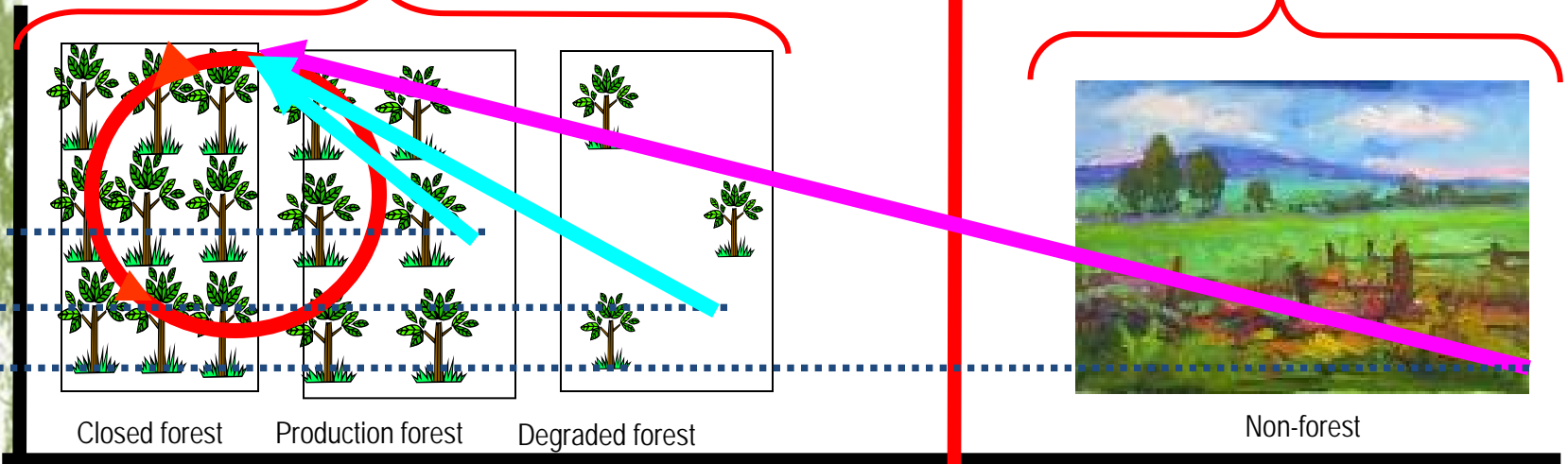
Forest Degradation Process

tC

C+++ → C+

Deforestation
(land-use change)

Devegetation C-



----- Sustainable use of existing forest: years

REDD → 3.76 GtCO₂e per year, about 77 GtCO₂e until 2030
SFM → 6.6 GtCO₂e until 2030

----- Forest Restoration: Carbon sequestration
→ Not clearly considered as a mitigation option yet
→ estimated at 117 GtCO₂e up to 2030

----- Plantations & Agroforestry: Carbon sequestration
→ included in A/R CDM
→ min. 18.7 GtCO₂e up to 2030

Substitution: Potential in bioenergy is uncertain
Substitution through wood is not accountable yet

The landscape reality...

Do we really need 7 different projects/accounting systems?

Protected Primary Forest
REDD + Management

Plantations
CDM bioenergy

Degraded Primary Forest
C sinks through restoration

Secondary forest
Restoration + Management

Secondary forest
REDD

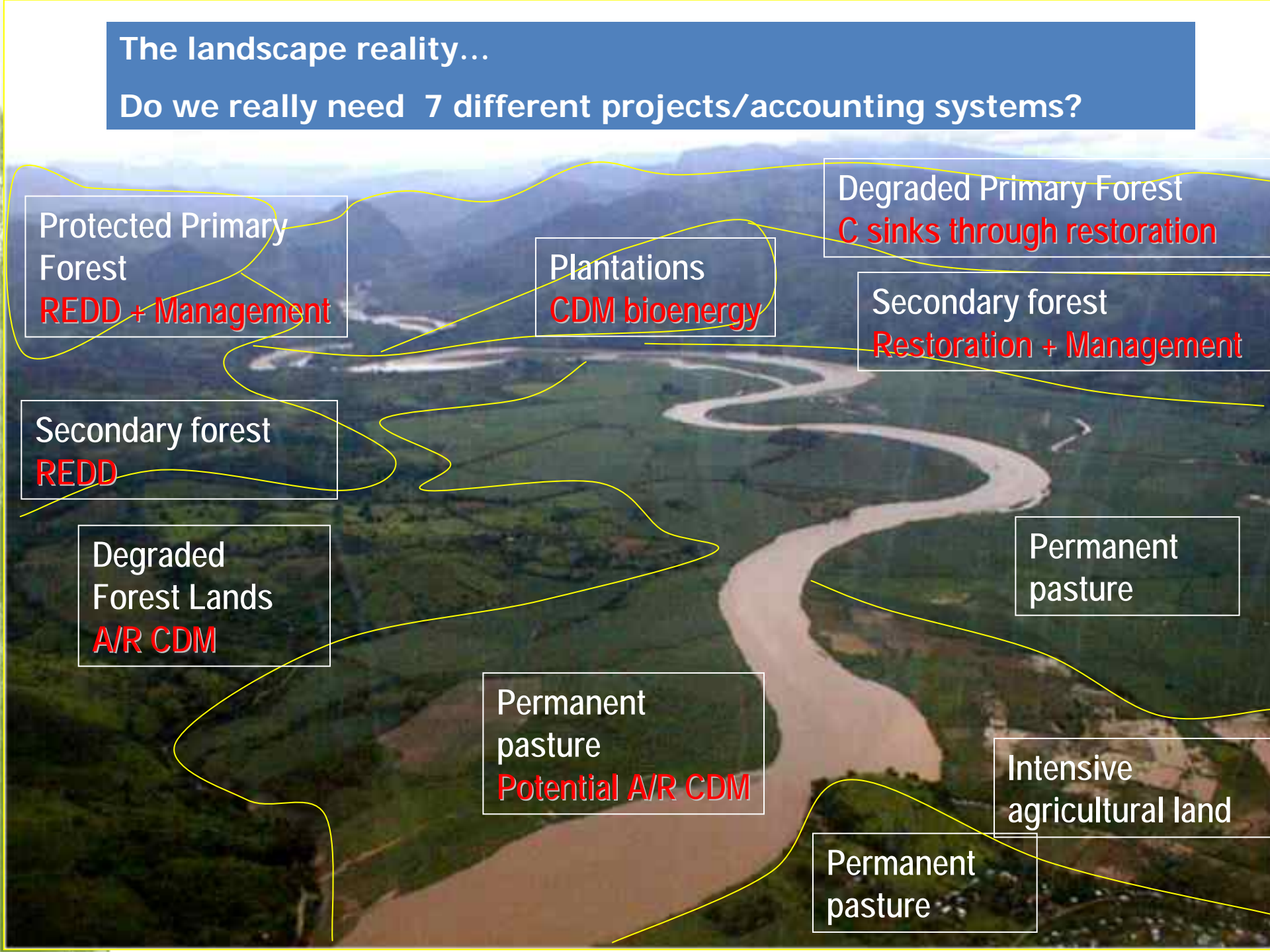
Degraded Forest Lands
A/R CDM

Permanent pasture
Potential A/R CDM

Permanent pasture

Intensive agricultural land

Permanent pasture



It is key to using mitigation options in the forests for promoting sustainable development

Mitigation options in the forest sector:

- REDD
- Forest restoration
- A/R
- Forest management
- Biofuels
- Wood products



SFM

MDG:

- 1. Eradicate extreme poverty and hunger
- 3. Promote gender equity and empower women
- 7. Ensure environmental sustainability
- 8. Develop a global partnership for development



Open questions:

- land tenure and ownership of carbon credits
- incentives: design, C allocation, distribution
- integral approach to SFM: TFP, NTFP, ES
- methods for C accounting

Forest governance is at the center of any effort to use forest mitigation options

Challenge ahead

Post 2012 regime → to be agreed by COP 15 in
Copenhagen

- **Bali Action Plan and Forests**

- Which countries will agree to make commitments?
- Which forest mitigation options will be eligible in industrialized countries?
 - Role of wood products
- Which forest mitigation options will be eligible in developing countries?
 - REDD and payment mechanisms
 - Simplifying the CDM
 - Role of other forestry activities, such as restoration or management?

What is the role of ITTO?



Thank you for your attention!!

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