

The role of forests in climate change and the issue of financing it



An overview

TFD Dialogue
New York, 24 April 2009
Jürgen Blaser

jblaser@intercooperation.ch

INTERCOOPERATION, Bern, Switzerland

Land and Forests (2007)

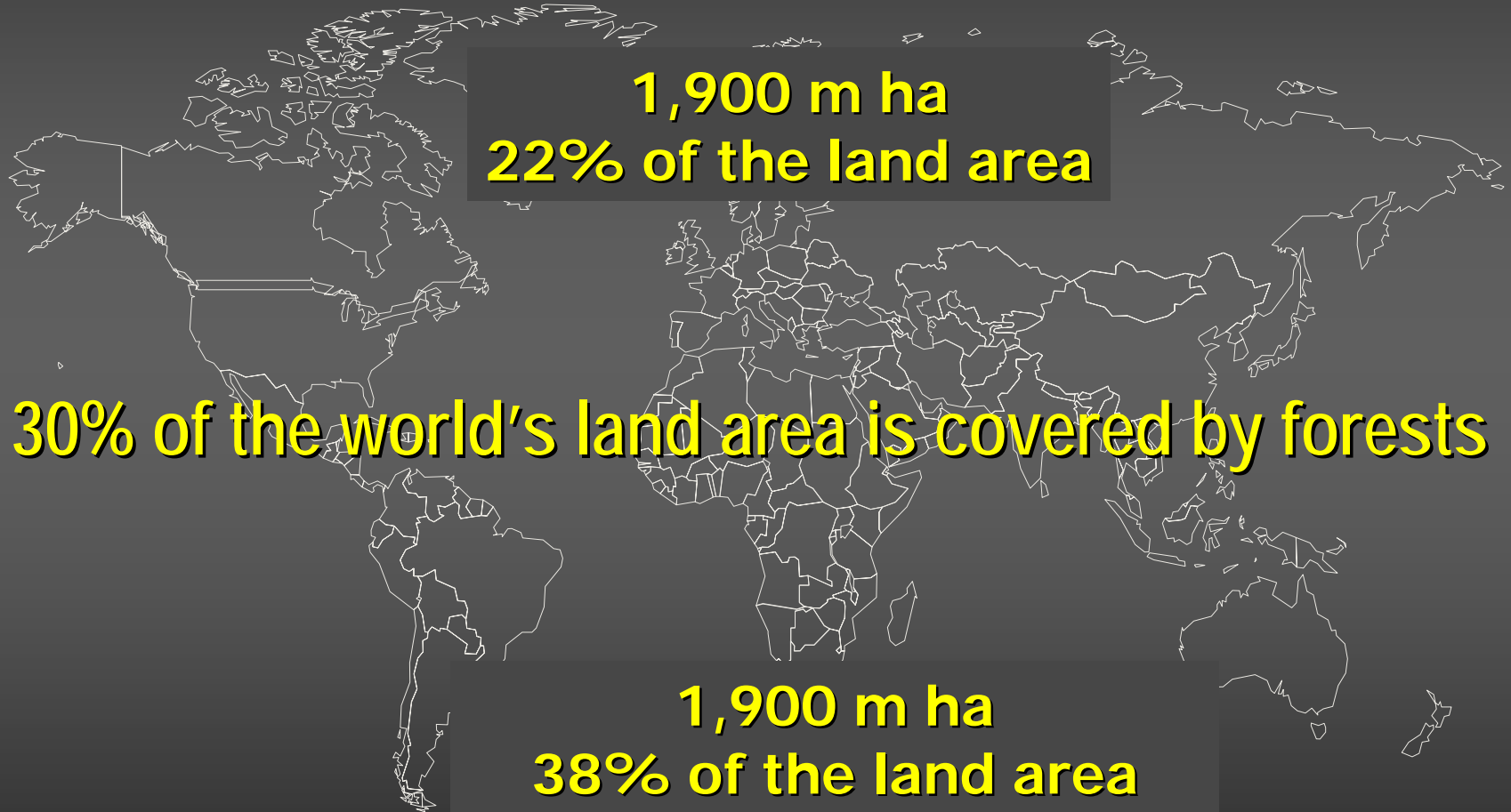
« North »: temperate and boreal

1,900 m ha
22% of the land area

30% of the world's land area is covered by forests

1,900 m ha
38% of the land area

« South »: tropical and subtropical



The central role of forests in climate change



Impacts on ecosystems, people and the wood chain

Forests are vulnerable



Forests emit GHG



Second most important source of GHG emissions

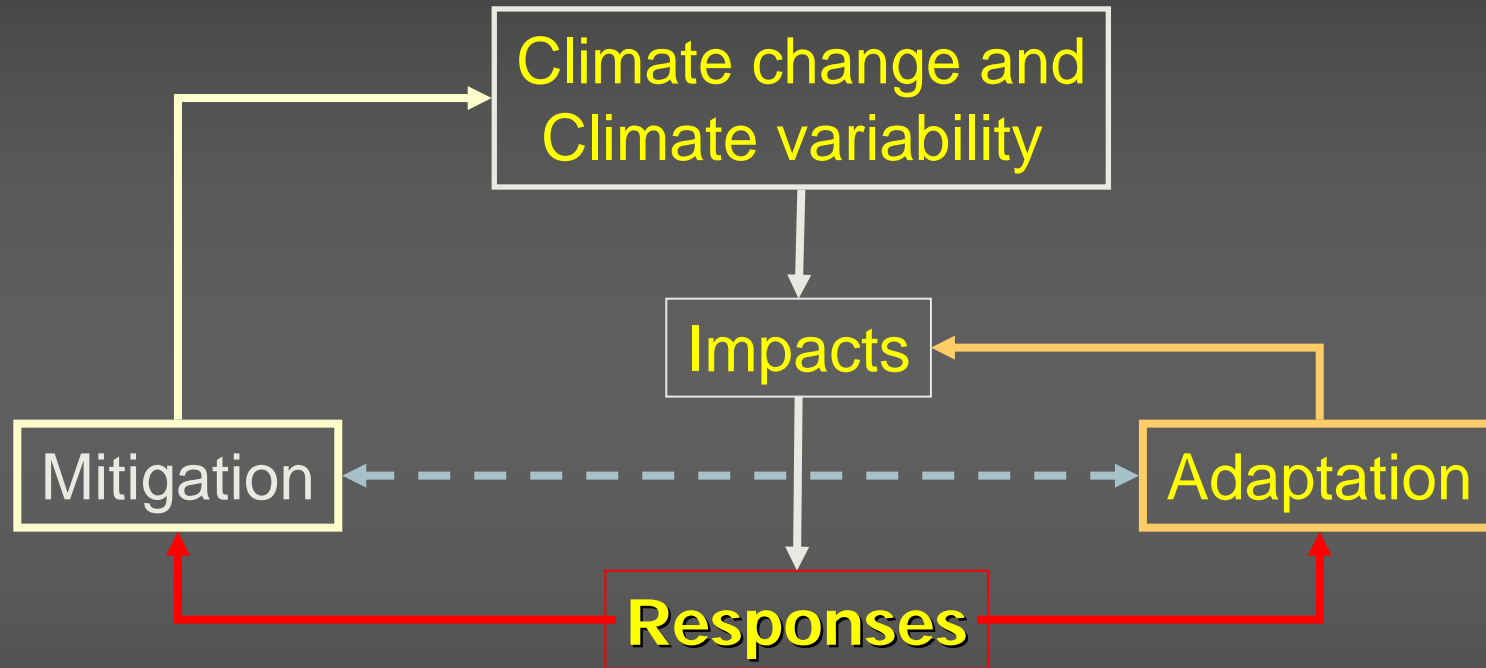
Forests can:

- increase resilience of people and ecosystems (= adaptation),
 - fix and maintain carbon (= mitigation).



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

Forests in the UNFCCC



... maintaining and increasing ecosystem C pools and C sequestration – reducing emissions from biosphere

... maintaining and increasing ecosystem resilience – reducing vulnerability

Some facts with Forests in Climate Change: Forests can increase resilience, fix and maintain carbon

- ➔ If average CO₂ concentration continues to increase to 550 ppm or higher, forests will become highly vulnerable → high risk that Climate Change will influence some sources of GHG emissions:
 - Forests are a mitigation option now and in the future. Forests take 20 to 40 years, a necessary transitional measure to transition to a low-carbon economy
 - Need to increase resilience of forests and ecosystems at the same time as using forests as a mitigation option.
- ➔ Nevertheless, the potential of forests as a mitigation option is huge (Forest Conservation, Reforestation, Forest Restoration)
 - ➔ **How to deal with these new risks and potentials?**
 - ➔ **How do these risks and potentials influence CC financing?**
- ➔ If best mitigation options are adequately implemented, there is great potential to also address co-benefits (adaptation, biodiversity, ...)

The role of SFM in climate change

Adaptation

Maintaining and increasing ecosystem resilience – reducing vulnerability

⇒ Forest ecosystems are affected by climate variability

What are the direct and indirect impacts

- forest-dependent people?
- on the forestry production of
- at the landscape level

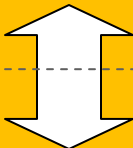
⇒ How can forest management contribute to ecosystem resilience (and ecosystems)?

Forest management agenda that includes a CC adaptation analysis and measures can increase the value of forests

"Avoid the unmanageable and manage the unavoidable.." (Sigma Xi)



**Adaptation Funds and other fund instruments,
Not subject of our dialogue**

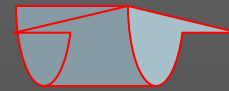
Mitigation option	Mitigation objective	Mitigation policy instrument	Forest/Land Management Option
Reduce GHG emissions	Reducing deforestation	REDD ("first D")	(1) Committing forests as carbon pools (through e.g. enforcement of law, creation of new protection areas, payments for environmental services in form of contractual agreements to retain forests)
	Reducing degradation	REDD ("second D") 	(2) Restoring lost carbon pools (through various forms of sustainable/multiple-use forest management such as sustainable timber yield management, community forest management; PES in the form of credits per ton carbon sequestered, ecological restoration of degraded forests)
Increase CO2 sequestration (removals of CO2)	Enhancing existing (degraded) forests (restoration of lost carbon pools)	REDD Plus	
	Creating new forests and tree cover	CDM A/R (outside forests)	(3) Creating new carbon pools (through planted forest; agroforestry; rehabilitation of degraded lands; agro-sylvo-pastoral systems)

(1) Committing forests as carbon pools

100 tC/ha → 65 tC/ha



Forest



Deforested

Reducing/Avoiding Deforestation
(land-use change)

----- Sustainable use of existing forest:

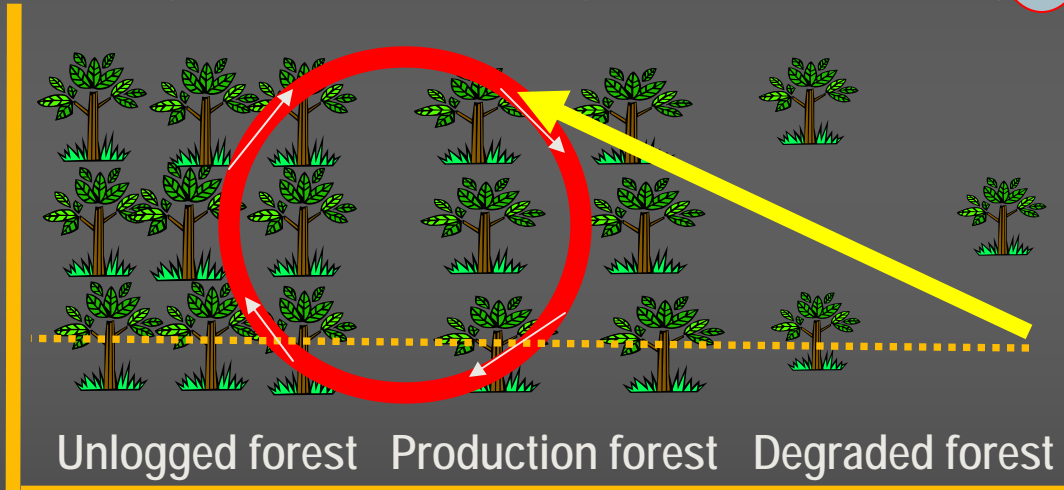
- REDD → 3.76 GtCO₂e per year, about 77 GtCO₂e until 2030
- In production forests: carbon gain through silvicultural mgmt.
→ 6.6 GtCO₂e until 2030

(2) Restoring lost carbon pools

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

Deforestation
(land-use change)

100 tC/ha → 65 tC/ha → 25 tC/ha



Forest Degradation

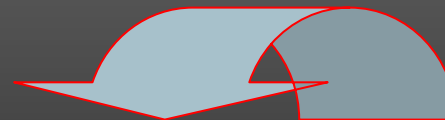
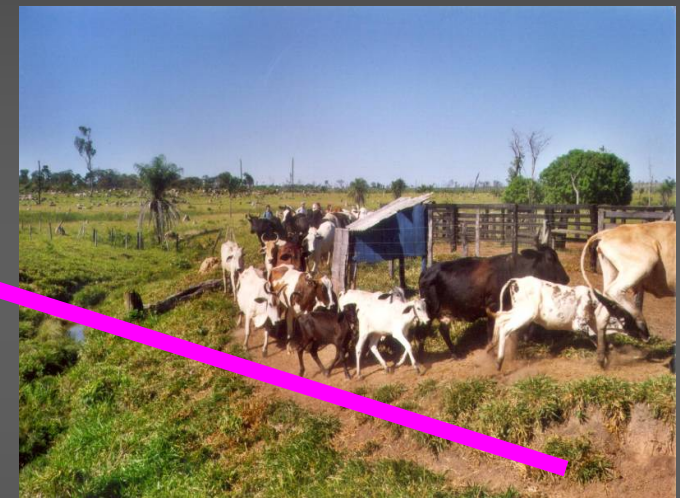
Forest Restoration Process

 Sustainable Forest Management

Forest Restoration =
Carbon sequestration
in forested areas
→ estimated at 117
GtCO₂e up to 2030

(3) Creating new carbon pools

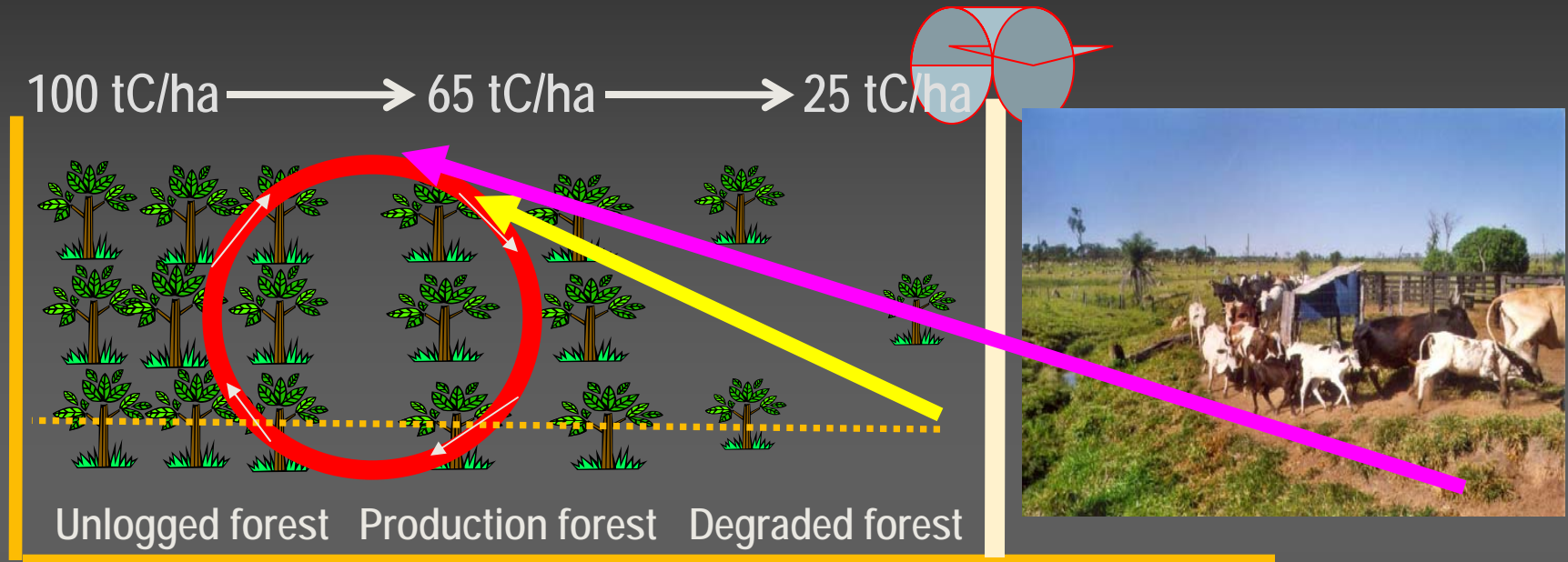
100 tC/ha ← 65 tC/ha ← 25 tC/ha



- Planted forests & Agroforestry: Carbon sequestration
 - included in A/R CDM
 - **min. 18.7 GtCO₂e up to 2030**

→ Forest Degradation Process →

Deforestation
(land-use change)



----- Sustainable use of existing forest:

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

Silvicultural Mgtm. → 6.6 GtCO₂e until 2030

----- Forest Restoration: Carbon sequestration

→ Not clearly considered as a mitigation option yet

→ estimated at 117 GtCO₂e up to 2030

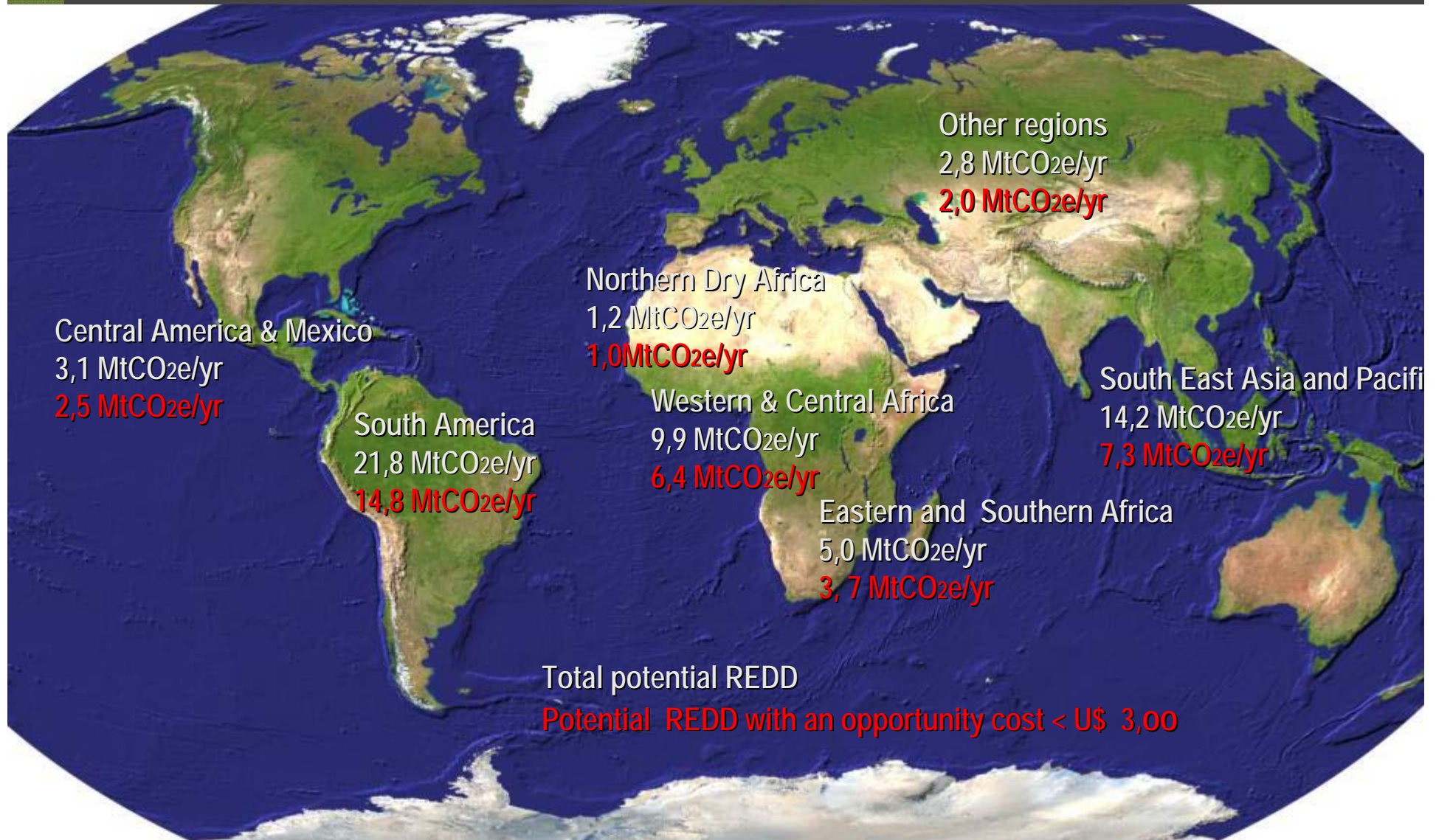
----- Plantations & Agroforestry: Carbon sequestration

→ included in A/R CDM

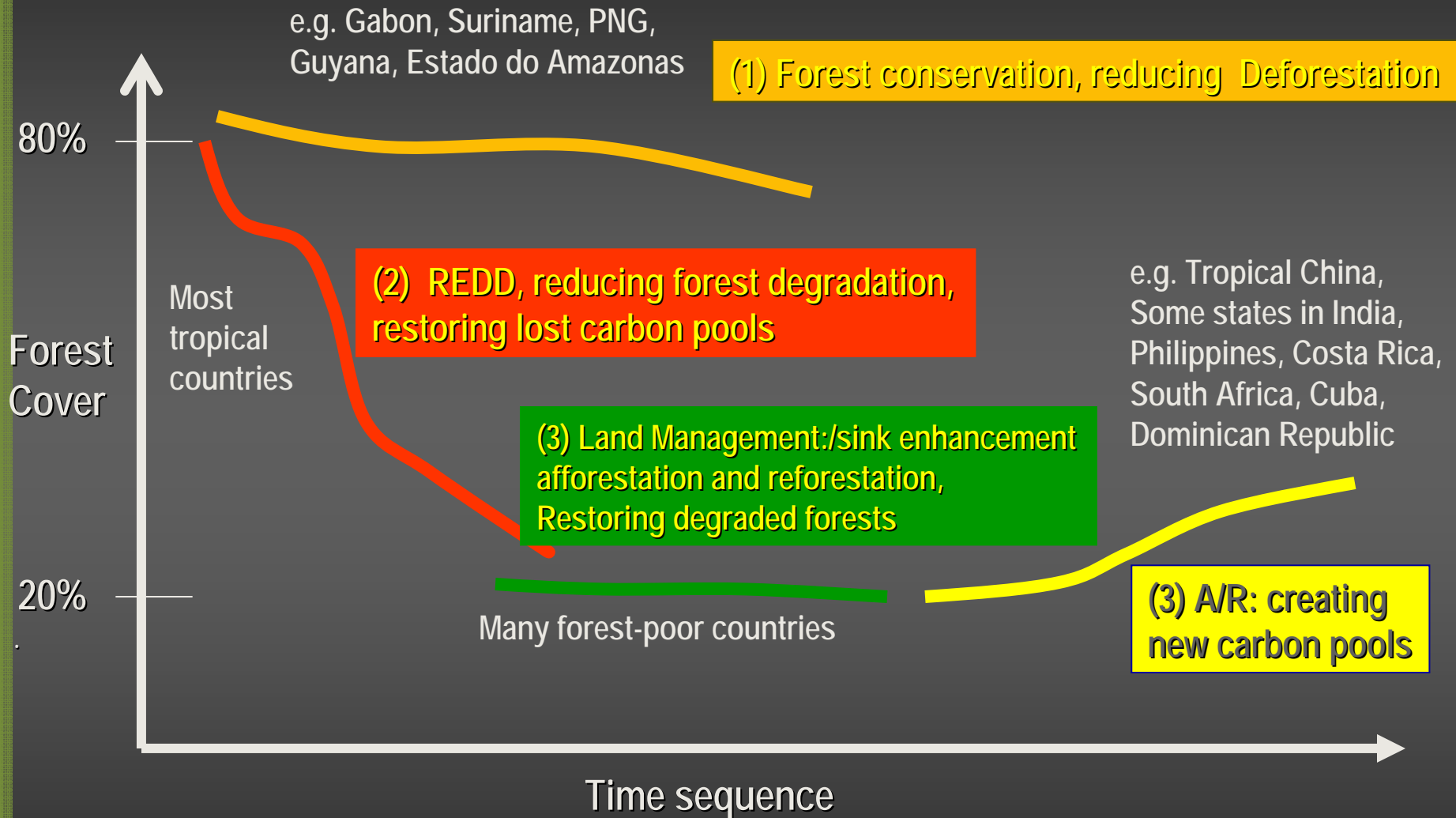
→ min. 18.7 GtCO₂e up to 2030

A carbon
potential
worth several
billion US\$

Forest-based mitigation potential (REDD)



Distinct situations, distinct C approaches



→ Different forest landscape carbon options,

→ needs differentiated approaches also in respect to financing

Land use context : Agriculture and forestry

Different roles – different values

⇒ Agricultural land:

- Food security
- Production of Non-Food crops (e.g. biofuels)

⇒ Forests:

- Environmental services
- Trees as renewable energy source
- Living space of rural communities
- Illusion of sustainable forest management

Interdependence
at landscape level

Financing agriculture and forestry are fundamentally different. Carbon financing is a PES

Conversion of forests to other land-use = deforestation
Unsustainable forest use = **Degradation** of forests

Emissions of GHG (CO₂, CH₄, N₂O) : appr. 6.2 Gt CO₂e/y, about 18-25 % of global emissions
Reducing emissions from Deforestation and Forest Degradation: REDD, REDD+
Maintaining carbon reservoirs: Forest Conservation and Sustainable Forest Management (SFM)
Creating new forests / Restoring lost carbon pools (A/R, forest restoration)

Main challenges in developing forest mitigation options (REDD, REDD+, CDM A/R)

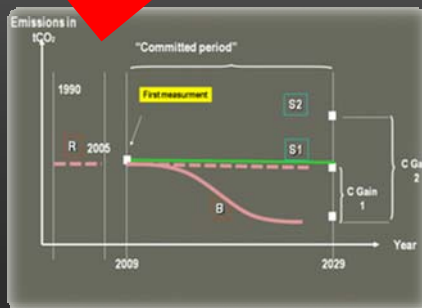
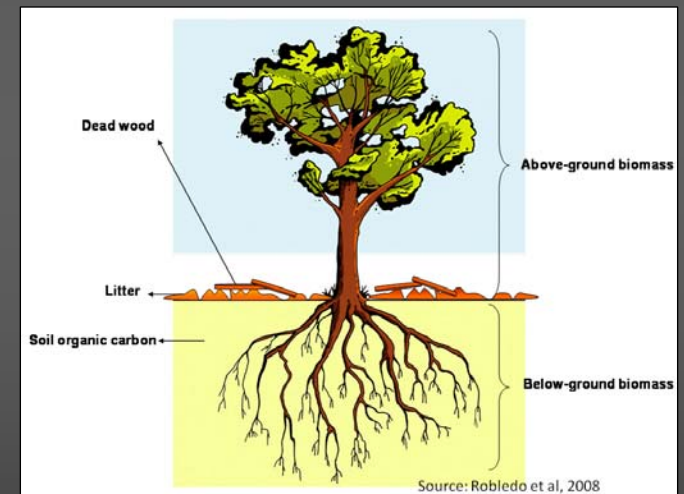
- ⇒ **Policy:** sector governance, tenure security
- ⇒ **Science:** assessment/monitoring of forest carbon pools
- ⇒ **Financing:** market and/or fund based?

Additionality

⇒ **Leakage**

⇒ **Environmental**

⇒ **Socio-economic impacts**



What has already been agreed?

Agreements for the First Commitment Period of the Kyoto Protocol (2008–2012)

- ⇒ **Annex I (industrialized countries) → committed countries of the KP**
 - Forest management (Art. 3.4)
 - Afforestation, Reforestation and Avoided Deforestation (Art. 3.3)
 - Bioenergy
- ⇒ **Non-Annex I (developing countries)**
 - Using the CDM
 - Afforestation and reforestation (11 approved methodologies)
 - Bioenergy (1 approved methodology yet)
 - Piloting REDD → FCPF, UN-REDD, voluntary market

The use of wood products is not eligible at all for the first commitment period (neither Annex I, nor non-Annex I countries)

What is under negotiation – to be negotiated?

Post 2012 Regime

→ to be agreed by COP 15 in Copenhagen in end of 2009

Bali Action Plan and Forests (December 2007)

- Which countries will agree to make what type of commitments?
- Which forest mitigation options will be eligible in industrialized countries?
 - Role of harvested wood products
- Which forest mitigation options will be eligible in developing countries?
 - REDD, REDD+ and its financing mechanisms?
 - CDM (including A/R) → Kyoto Protocol
 - Role of other forestry activities such as SFM and forest restoration?
- How to develop a financial system for REDD/REDD+?

Some consideration on financing mechanisms in the CC mitigation context



TFD Dialogue
New York, 24 April 2009

Financing forest mitigation

(within the broader financial mechanism of the UNFCCC;
AWG-LCA framework)

⇒ Financial Mechanism:

- Revenue raising
- Revenue disbursement
- Oversight

⇒ CC-Forest finance payment modalities

- Payer – Payee?
- Donor – Donee?
- Contributors – Recipients?
- Restitution payment ?
(payer owes earmarked funds to the payee)

Revenue raising

(within the broader financial mechanism of the UNFCCC;
AWG-LCA framework)

- ⇒ Who contributes how much?
 - ⇒ Additional, common but differentiated responsibilities
 - ⇒ Markets or fund-based financing (the later mainly public), or both?

- ⇒ Fragmented or consolidated financing?
 - ⇒ Decentralized versus centralized financial flows?
 - ⇒ National level versus sub-national, project level, or nested?

- ⇒ The political dimension of a financing approach?
 - ⇒ Conditionality criteria (used directly or indirectly) *versus* the need to tackle the problem where it appears!

Revenue disbursement

(within the broader financial mechanism of the UNFCCC;
AWG-LCA framework)

- ⇒ How to ensure a fair distribution of (probably) inadequate funds?
- ⇒ How do deal with mismanagement?
 - ⇒ Governance in forest resource use; corruption, misappropriation of funds
- ⇒ How to ensure the principle of „pay the fair share, get the fair share“?

→ **Accountability is a serious issue**

Oversight

(within the broader financial mechanism of the UNFCCC;
AWG-LCA framework)

- ⇒ How to deal with the financial „MRV support regime“?
- ⇒ Ex-post payments versus upfront/during implementation?
 - ⇒ What is required (how high the standards)?
 - ⇒ How to monitor compliance?
 - ⇒ How much money is needed to be credible, verifiable?

→ **A yet largely unknown component in forestry**

What financing options for forest mitigation?

<i>Forest mitigation objective</i>	<i>Mitigation policy instrument</i>	<i>Approach to financing</i>
Reducing deforestation	REDD ("first D")	FUND-based? Donor – Donee? Restitution funding?
Reducing degradation Enhancing existing (degraded) forests (restoration of lost carbon pools)	REDD ("second D") REDD Plus	Fund or/and Market-based?
Creating new forests and tree cover	CDM A/R (outside forests)	MARKET-based Payer – Payee Project level

Defining commonalities, divergences and fracture lines between stakeholder groups

- ⇒ REDD Scope
- ⇒ REDD Financing Options (revenue raising)
 - Voluntary fund
 - Direct market mechanism
 - Hybrid/market linked mechanism
- ⇒ Benefits and Participation
- ⇒ REDD Activities, Measurement, Reporting and Verification (revenue disbursement)