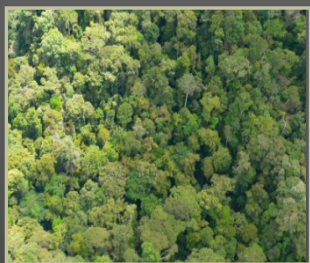


# Sustainable forest management as a tool for reducing emissions for deforestation and forest degradation

## SFM and Climate Change Mitigation Options



Forest Day - UNFCCC-COP 13  
Nusa Dua, 8 December 2007

Side Event SFM for REDD –  
from Acronyms to Implementation in the tropics

International Tropical Timber Organization



Jürgen Blaser and Carmenza Robledo



# (Tropical) Forests play a central role in climate change

Forests are vulnerable



Forests emit GHG

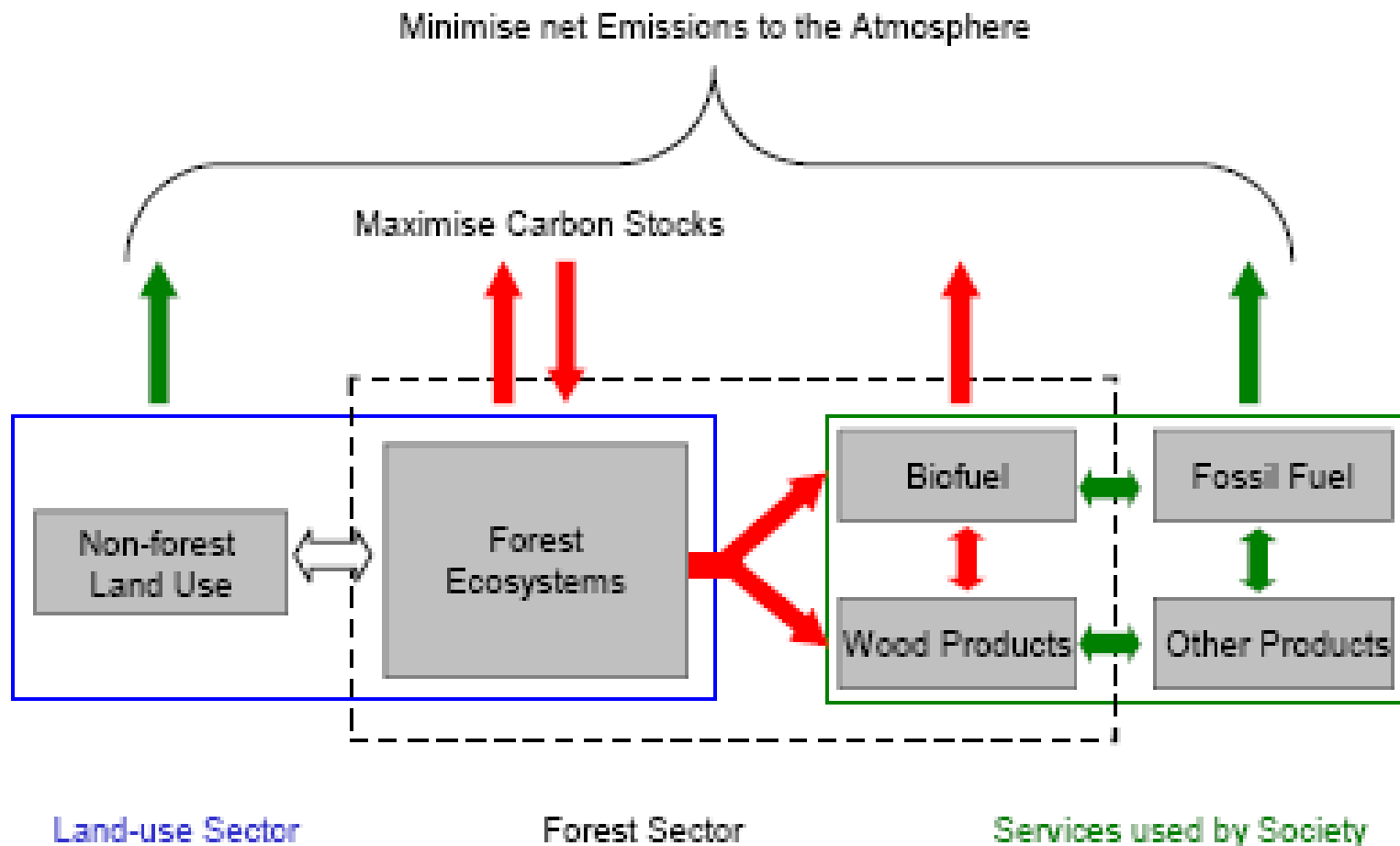


Forests can increase resilience,  
fix and maintain carbon

# Forests can increase resilience, fix and maintain carbon

- ⇒ If average CO<sub>2</sub> concentration continues to increase to 550 ppm or higher, tropical forests will become highly vulnerable and risk to become an additional factor to increased GHG concentrations in the atmosphere
- ⇒ Need to increase resilience of forest trees and ecosystems in the same time as using forests as a mitigation option.
- ⇒ Forest mitigation potentials: Huge!!!!
  - REDD: 3.76 GtCO<sub>2</sub>e per year, >>100 GtCO<sub>2</sub>e until 2030)
  - Afforestation/Reforestation: min. 18.7 GtCO<sub>2</sub>e until 2030
  - Forest Restoration: estimated to 117 GtCO<sub>2</sub>e until 2030
  - SFM: 6.6 GtCO<sub>2</sub>e until 2030
- ⇒ Forests are a mitigation option now and over the next 30 to 40 years as a necessary transitional measure towards a low carbon economy. Beyond that, there is too much speculation!!

# IPCC Fourth Assessment Report, Working Group III 15/05/2007: Chapter 9 Forestry



Forest mitigation strategies should be assessed within the framework of sustainable forest management ...

# Mitigation Options in Forestry

(fix and maintain carbon in the vegetation and soils)

<i>Mitigation options (general)</i>	<i>Mitigation options (in the forest sector)</i>
CO2 Sequestration	Afforestation (CDM: on land not forested since at least 50 years)
	Reforestation (CDM: on land not forested on/after 1.1.1990)
	Forest Restoration (Not defined in CC: restore degraded carbon stocks)
Emission Reduction of GHG	Reducing deforestation and forest degradation (REDD)
	Committing forests as carbon reservoirs
Substitution of C	Use of wood products

} SFM

# SFM: some 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.

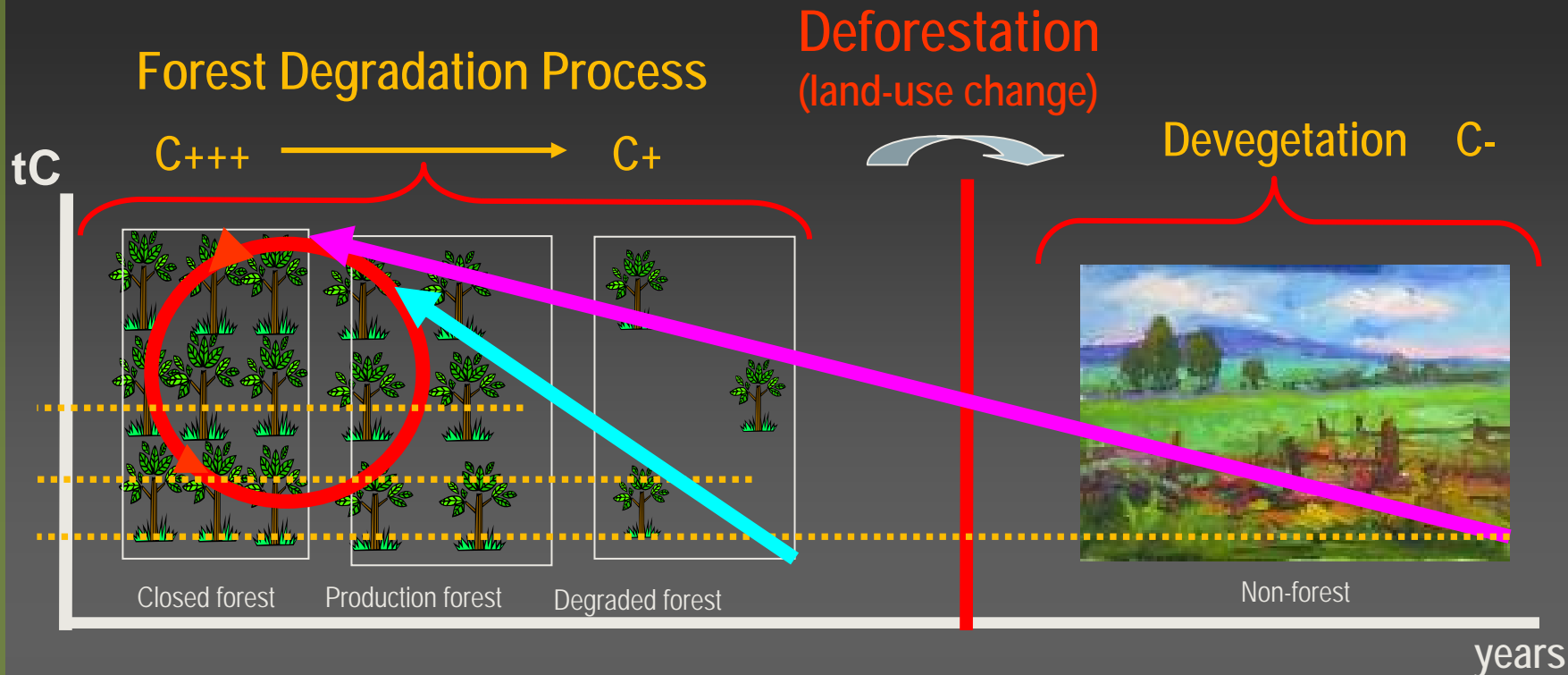
Forest degradation: The reduction of the capacity of a forest to produce goods and services. 'Capacity' includes the maintenance of ecosystem structure, functions and carbon stocks

# SFM and Permanent Forest Estate

*Permanent Forest Estate:* Land, whether public or private, secured by law and kept under permanent forest cover. This includes land for the production of timber and other forest products, for the protection of soil and water, and for the conservation of biological diversity, as well as land intended to fulfill a combination of these functions.

Management status, natural tropical PFE (m hectares), STFM 2006:

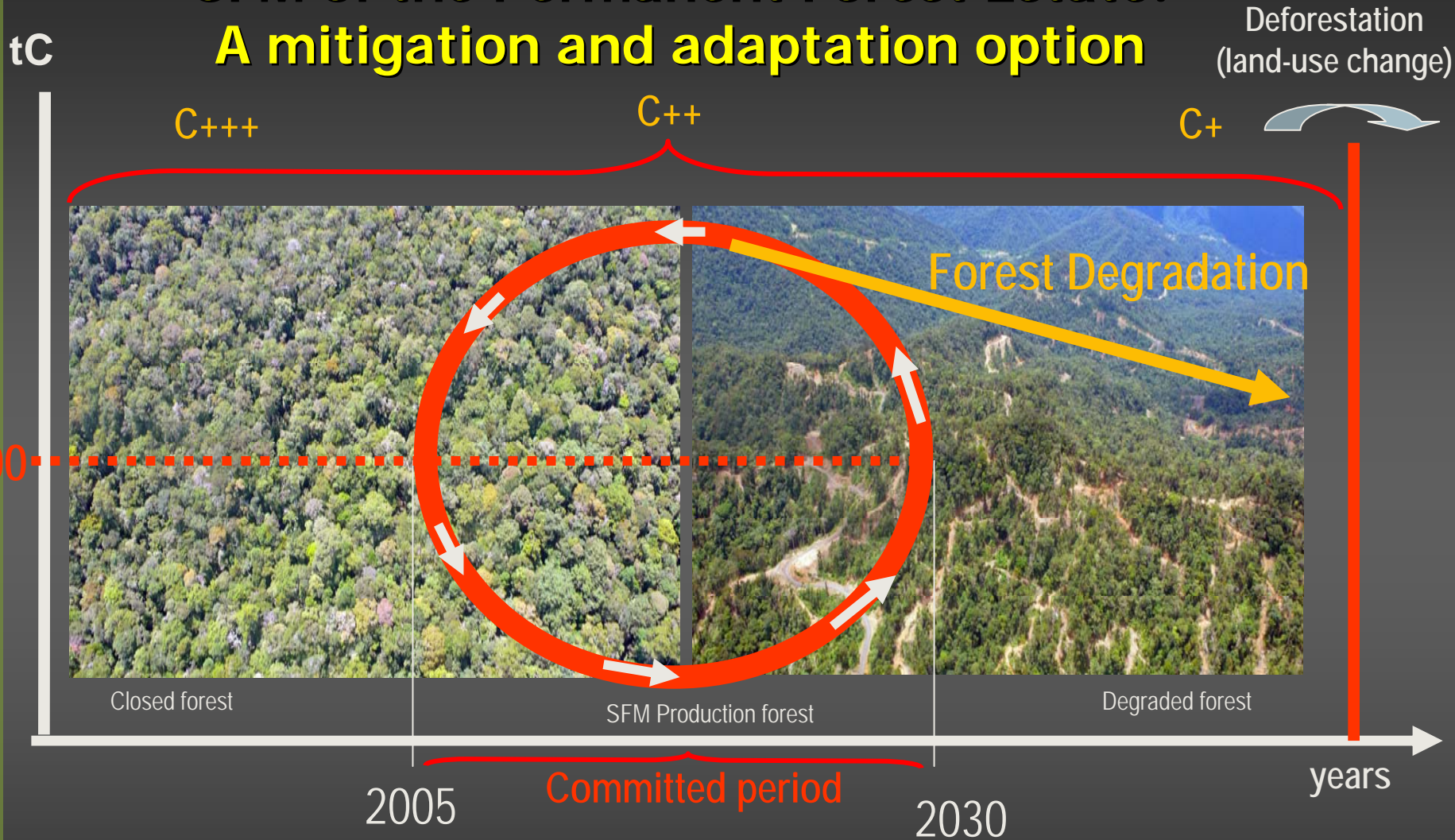
<b>Natural production PFE</b>	<b>Total area</b>	<b>353</b>	
	<b>With management plans</b>	<b>96</b>	
	<b>Certified</b>	<b>10.5</b>	Potentially not Sustainably managed
	<b>Sustainably managed</b>	<b>25.1</b>	
<b>Protection PFE</b>	<b>Total area</b>	<b>461</b>	
	<b>With management plans</b>	<b>17.8</b>	
	<b>Sustainably managed</b>	<b>11.2</b>	
<b>ALL</b>	<b>Total area</b>	<b>814</b>	778 m ha
	<b>Sustainably managed</b>	<b>36.4</b>	700 GtCO <sub>2</sub> e?



- Sustainable use of existing forest:
  - Emission reduction and managing carbon reservoirs: Considered in most of the REDD proposals for a post-2012 climate change regime
- Forest Restoration: Emission reduction + carbon sequestration
  - Not considered as a mitigation option yet
- Plantations & Agroforestry: Carbon sequestration
  - included in A/R CDM
- ..... **Initial carbon stocks**



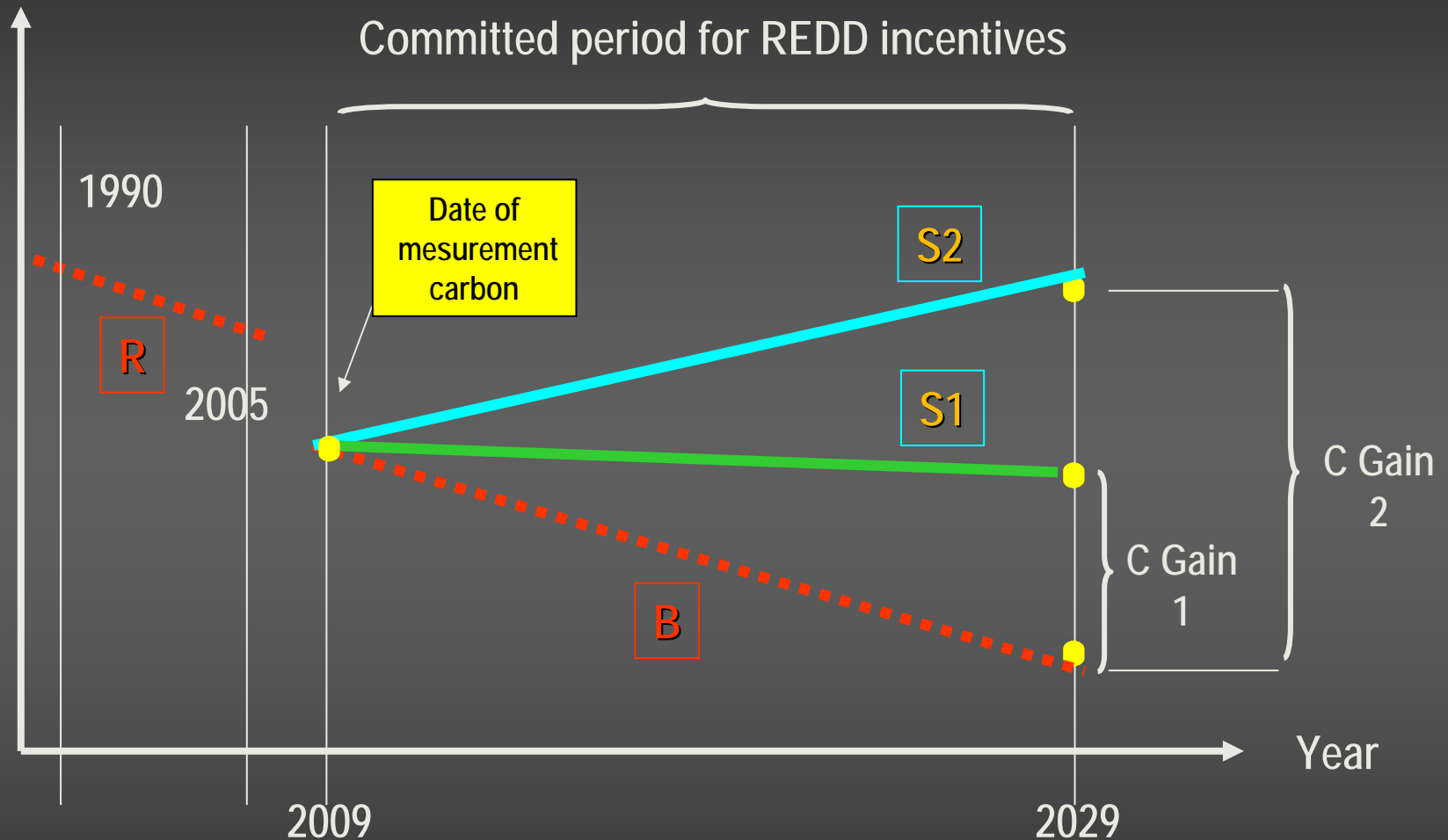
# SFM of the Permanent Forest Estate: A mitigation and adaptation option



----- Sustainable use of existing forest: Committing forests to keep existing carbon reservoirs over a given period of time

# A REDD model: Committed forests

Emission of  
tCO<sub>2</sub>



**R:** Setting a baseline of DD

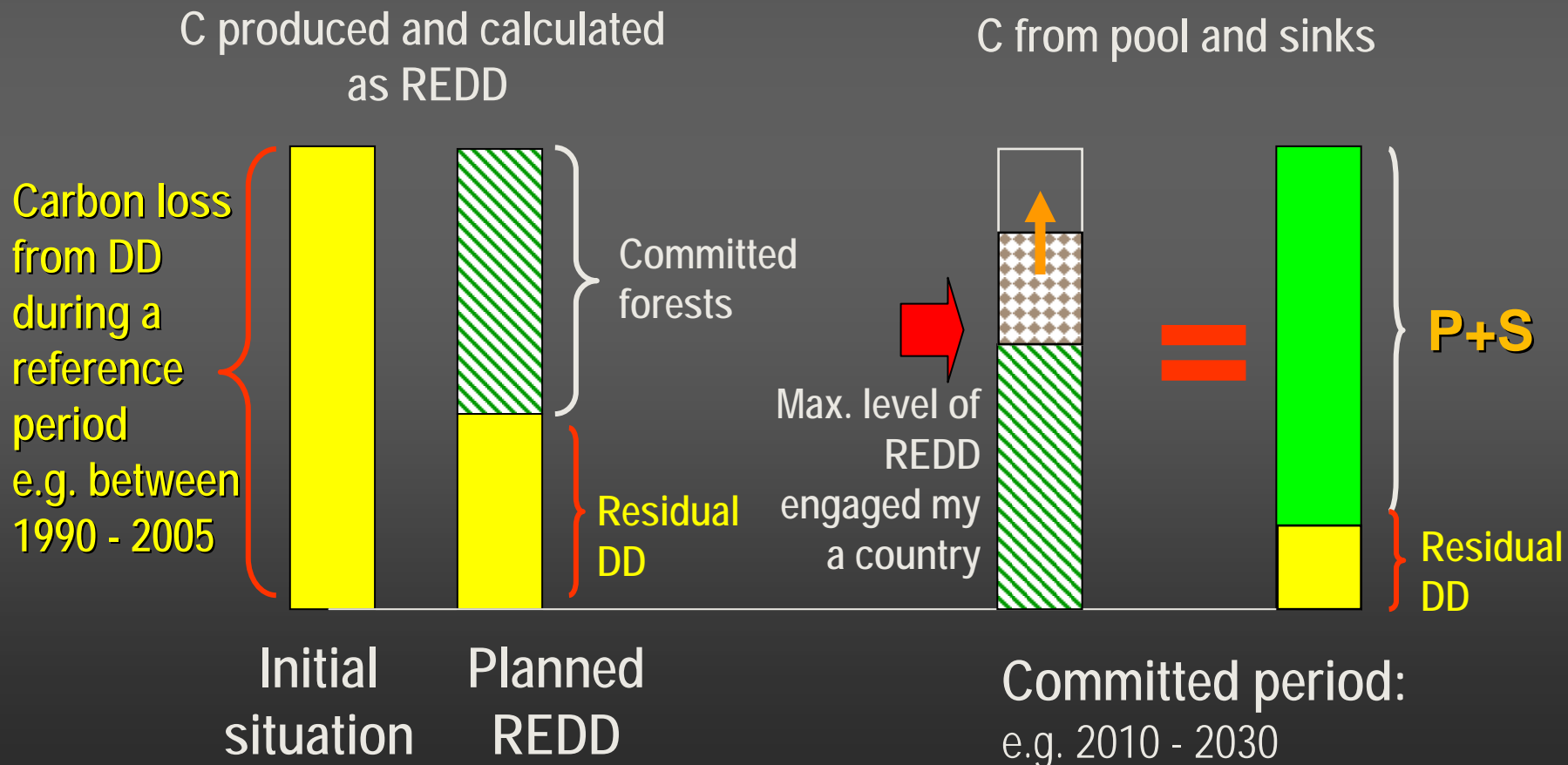
**B:** Baseline DD without REDD

**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

# Committed forests: the carbon model (national and/or project level)

$$CF_{\text{(nationally registered)}} = \sum (CM_{(1)} + CM_{(2)} + \dots * A_i)$$



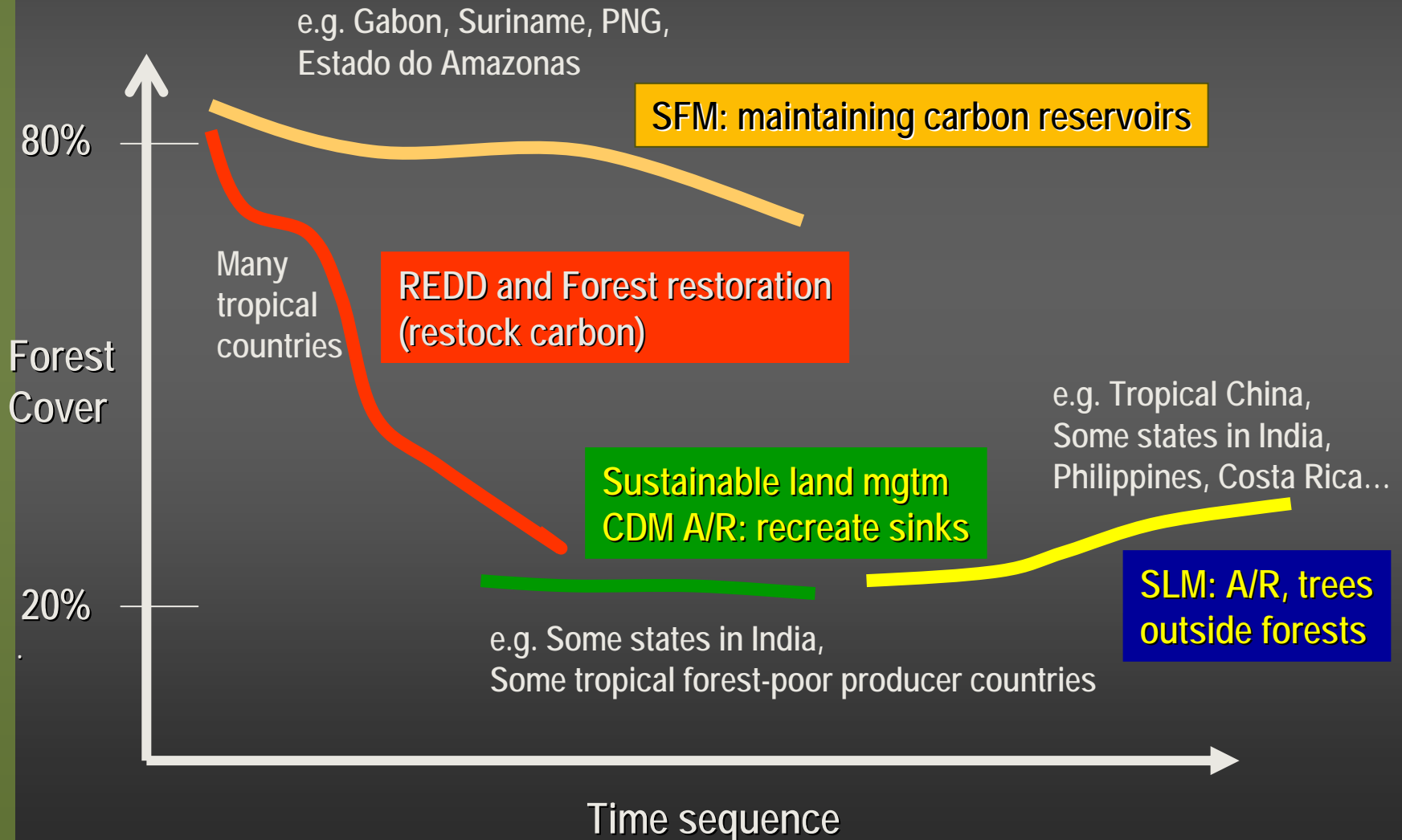
# Basic approach to commit forests

- ➔ Not all deforestation is undesirable. Deforestation is needed to feed people, to contribute to economic development. However, deforestation should be discouraged when:
  - it is economically inefficient;
  - it is a threat to environmental stability;
  - It leads to a significant loss of biodiversity/endangered species; and
  - it leads to social inequities and conflicts

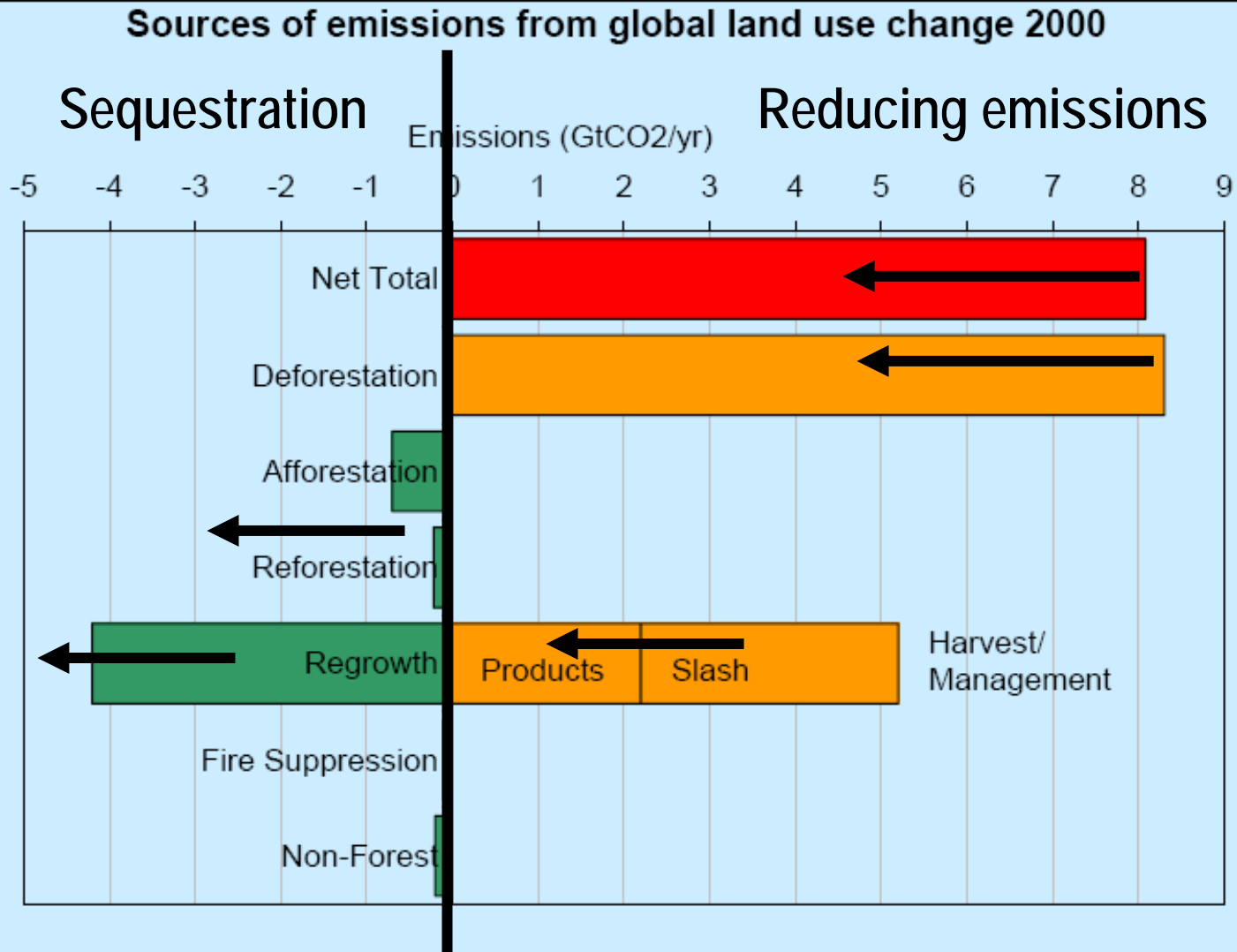


- ➔ How to commit and manage forest areas as carbon reservoirs?
  - Use the concept of Permanent Forest Estate
  - SFM includes a range of activities that are in line with REDD: maintaining existing carbon reservoirs + forest restoration + A/R

# Mitigation options in tropical forests: distinct situations, different approaches needed



# SFM and forest mitigation AIM: Moving the national baseline scenario



Source: Reproduced from Baumert et al (2005)

# What forests to commit?

## SFM (incl. REDD, A/R and Forest restoration): an instrument to maintain carbon pools and support sustainable development

- ⇒ The permanent forest estate
  - Protection forests
  - Production forests
- ⇒ Quantification tools
  - National baseline scenario (national forest inventory; register of committed forests)
  - Local accounting of social and economic costs and benefits, carbon monitoring
- ⇒ Which actors?
  - Direct forest users
  - Forest owners
- ⇒ What incentives?
  - Adapted to local needs
  - Transformed in CERs that are internationally marketed

# Committed Forests through SFM: The overarching issues

- creates co-benefit that counts (timber, biodiversity, soil conservation)
- potential to generate annual funds in the order of several billion US\$
- Alternative development pathway: if well designed, implemented and policed, at national and local level, can directly benefits rural /forest dependent people
- Maintain a realistic perspective on the potential to commit forests:  
Countries with a high potential income from REDD score low in governance:
  - Do not succeed in lowering D&D rates;
  - Unable or unwilling to pass incentives to the real D&D drivers).

→ An obvious Link: FLEG and REDD

Hence a need for a two-fold approach:

- Voluntary forest mitigation targets and national baseline setting
- A market-driven scheme to be focused on implementation at the level of committed forests



# Committed forests

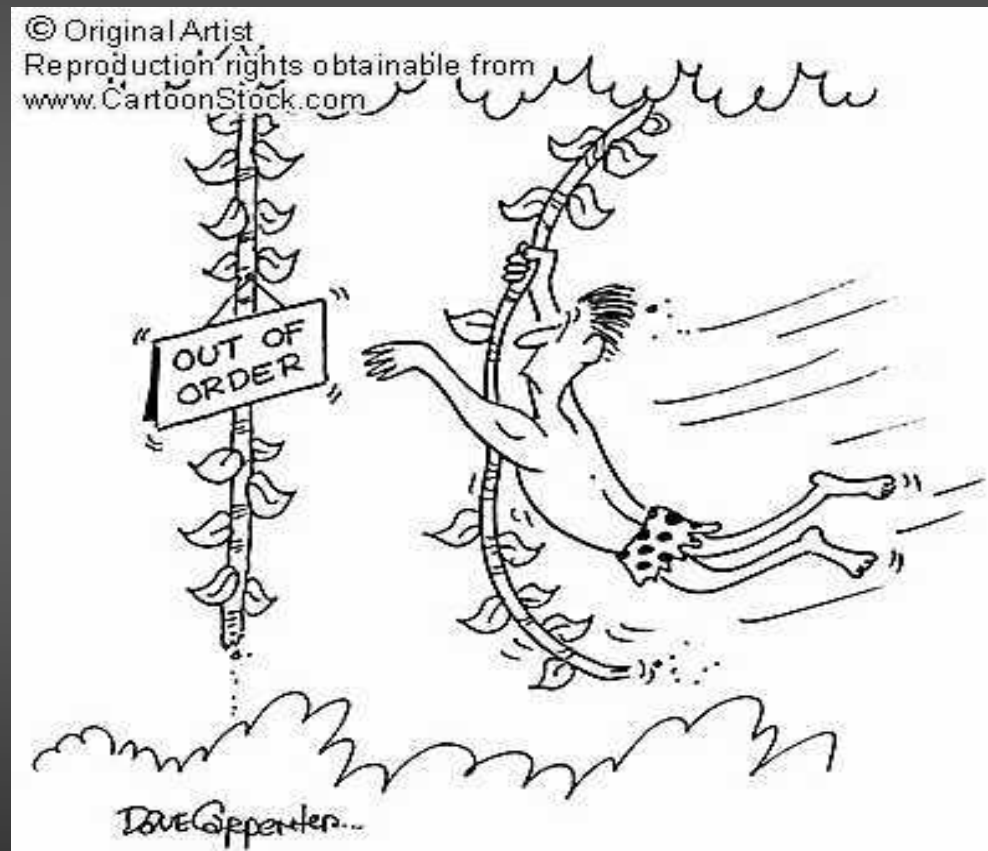
## Final considerations

- ➔ REDD/SFM, CDM A/R and forest restoration are transitional measures towards a low carbon economy. They will happen in the next 30 to 40 years. The action is now!
- ➔ Climate change might progress faster than expected and can jeopardize the mitigation options in forestry. Adaptation and enhancing resilience is thus also of importance
- ➔ Thus the forest sector has to react now. Not negotiate on details (e.g. methodologies, leakages, additionality) , but get the big picture right.



# And finally a Reminder: UNFCCC agenda is not a forestry agenda!

Climate change will not wait on the foresters. If we spoil it, we spoil it!



*Thank you for your attention*