What international schemes are there for reducing tropical deforestation?

Source: Millennium Ecosystem Assessment
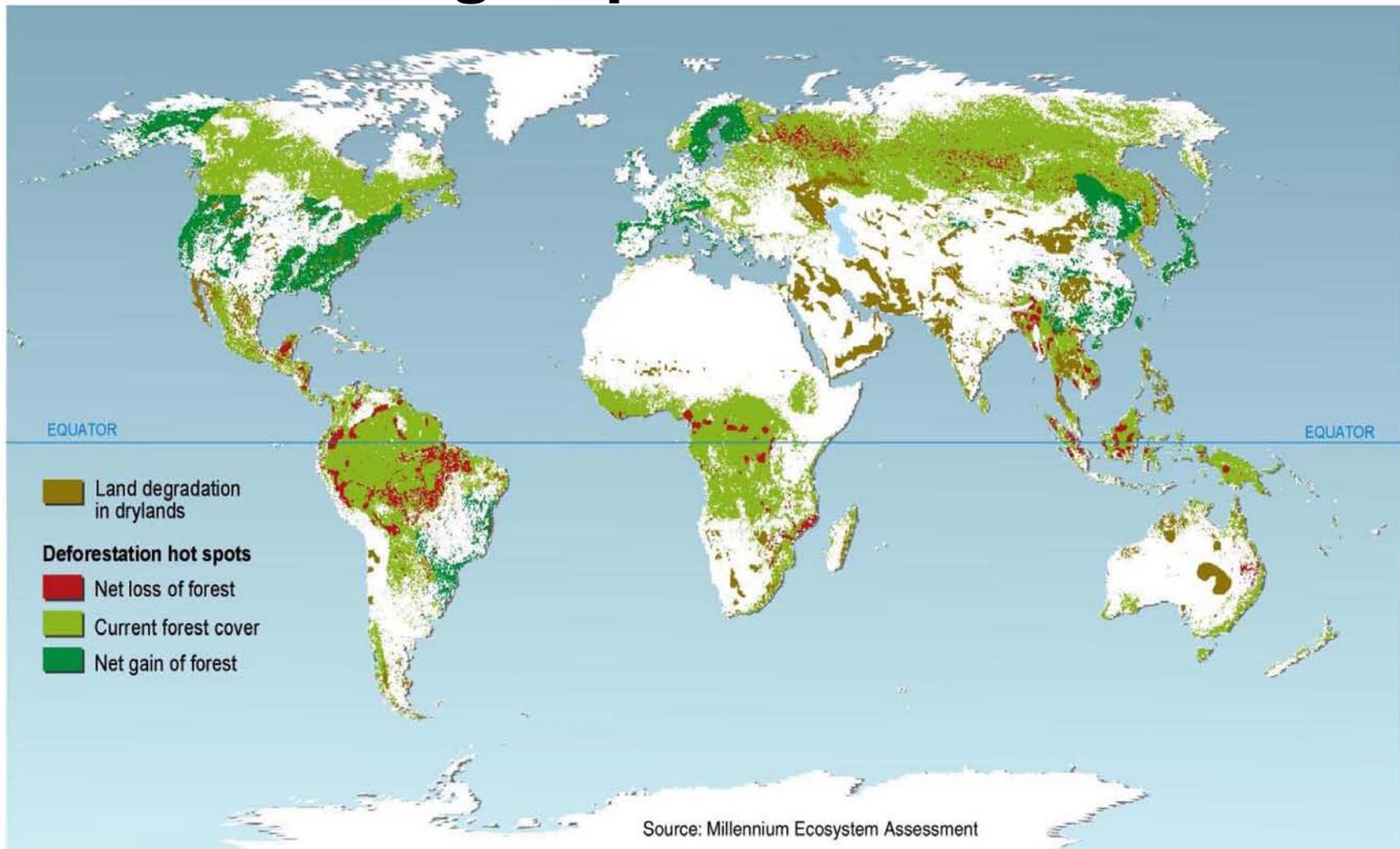
Alain Karsenty, Cirad

# Avoided Deforestation: the principle

- Tropical forests are not global public goods as resources are under national sovereignty and local control but they could be considered as such as ecosystems fulfilling environmental services

- Avoided Deforestation (AD) is often seen as an International Payment for Environmental Services

- AD mechanism proposed by PNG, Brazil and other countries (e.g. Congo Basin's countries), but each with different features

- Common points: financial rewards for countries reducing their deforestation rate, with carbon credits (Kyoto assets) <u>or</u> money equivalent (special fund to be set up)

- Major difficulties in the current negotiation process:
  - How to choose and set up baselines?
  - Should we take into account forest degradation (by logging)?
  - Should it be included as a Kyoto instrument (fungible credits, second commitment period 2013-2017) or independent (special credits or money) ?

# How is (additional) reduction of deforestation assessed?

- Monitoring physical deforestation is difficult, but one can guess difficulties will be reduced over time
- More difficult will be to reach an agreement on the <u>benchmark</u> against which deforestation on the committed period is compared to
- Most proposals suggest deriving the baseline from an average of <u>past trends</u> of deforestation
- Some others (e.g. Congo Basin countries) claim an "adjustment factor" allowing them to increase their future deforestation, but keeping a possibility to be credited anyway
- Some researchers would prefer "predictive" baselines based on <u>anticipated rates of deforestation</u> country by country

Historical reference: winners and losers

- Indonesia and Malaysia have had and still have huge deforestation rates since the 1980s, but forest cover tends (or will tend) now to concentrate on highlands: lower trend of deforestation is expected for "mechanical" reasons
  - Future reductions likely to be "non additional"
- Peru, Bolivia, Congo Basin countries likely to be the "losers" with such baseline reference: they are asking the benchmark to anticipate deforestation trends
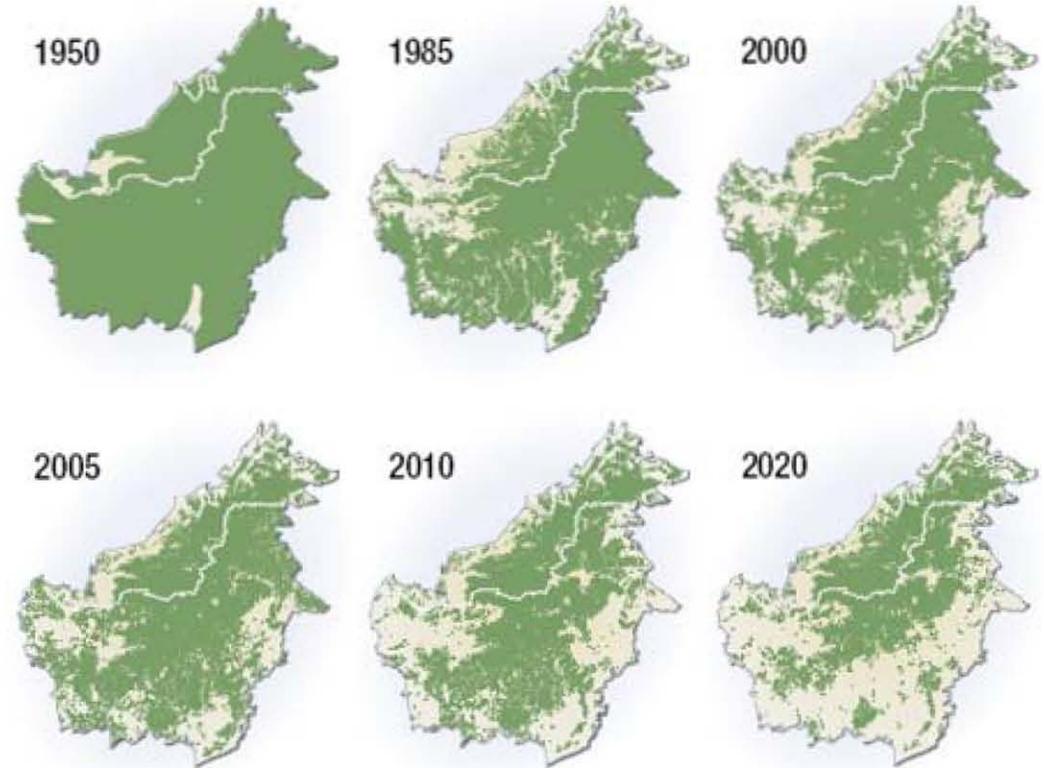
Can we predict deforestation rates?

Deforestation (1990-2000)
Deforestation (2000-2010)
Deforestation (2010-2020)
Deforestation (2020-2030)
Deforestation (2030-2040)
Deforestation (2040-2050)

0   300   600   900   1200   Kilometers
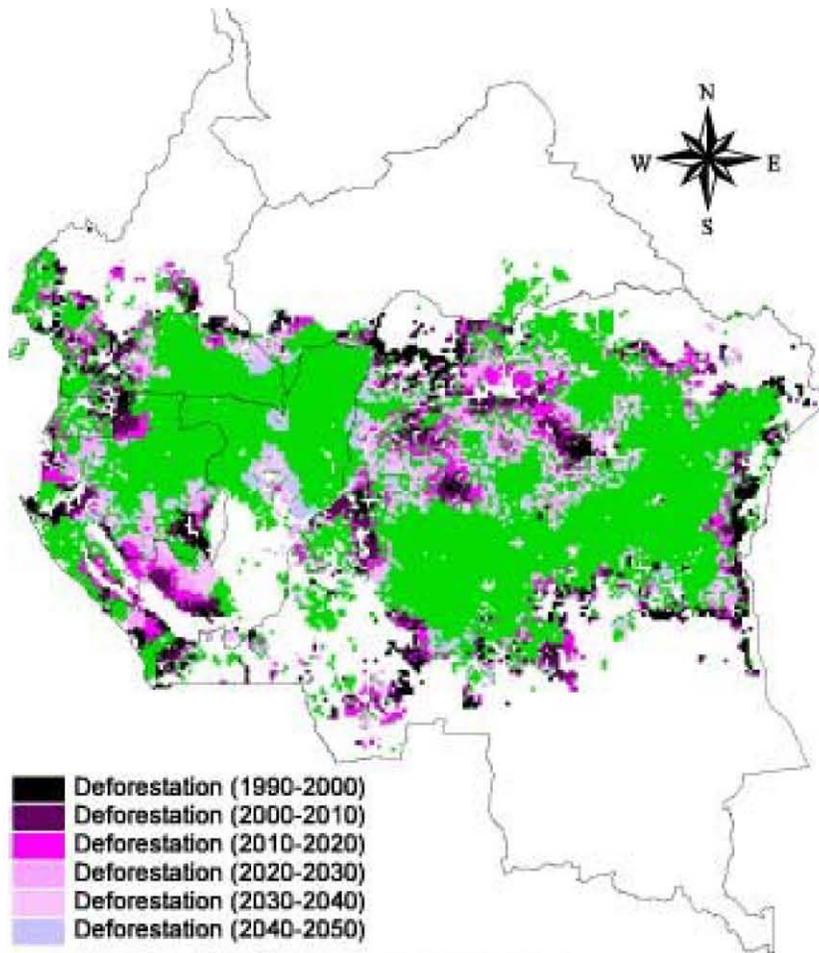
Modélisation de la déforestation en Afrique Centrale
Source: Laporte et Justice, 2000.

- An alternative solution would be to anticipate a likely "business as usual" deforestation rate on a future period
- Chomitz *et al.* (2007) suggest modeling land-use dynamics to calculate the baseline scenario
    – But they also pointed out a correlation between deforestation rate in the Amazon and beef price at farm gate. They also see a correlation with rainfall…
- A difference needs to be made between (quite) predictable variables (e.g. population growth) and guesses:
    – Who can predict often speculative prices for major agriculture commodities, such as soy, oil palm, beef….?
    – Who can predict the evolution of rainfall quantities and the risk of forest fires in the context of growing climate disorders?

An overestimation of governments' roles and capacities?

- Many (most?) factors influencing deforestation rates are beyond the reach of the governments (i.e. cash crop commodities price changes, currency rates…)

- In a complex system, it is a challenge to measure the impact of given public actions in terms of how many hectares are (not) deforested

- If deforestation slows down, how do we disentangle the effect of public (or private) policies and the other factors which occurred independently of the government action?
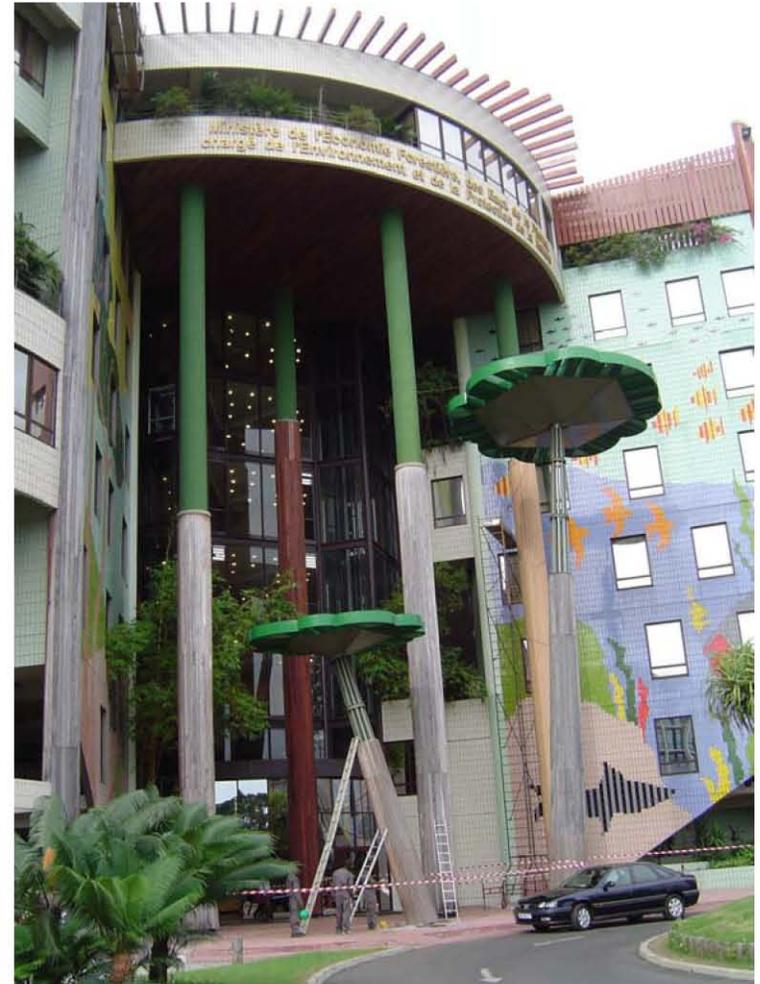
Ministry of Forests and Environment, Gabon

Measurement and imputation of various factors influencing deforestation: a framework for analysis

	Exogenous factors	Non intentional Endogenous factors	Intentional Endogenous factors	Private initiatives
Type of measures	*Examples:* Change in Agricultural commodity prices; Extended climate disorders	*Examples:* Modification of the interest rate; Cut in fertilizer subsidies	*Examples:* Stringent enforcement of land-use change laws	*Examples:* Round table with soy producers to reduce forest conversion
Possibility to impute deforestation reduction to public action	Non imputable	Imputable	Imputable	Case-specific
Possibility to quantify net impact on deforestation	(N.A.)	Difficult / Very difficult	Possible	Case-specific

Carbon credits or other financial incentives?

- From a "Kyoto-inside" perspective: fears that AD scheme might generate new huge quantities of "hot air" with a downward pressure on the price of emission permits
  - Recent report from CDM executive board suggests 20% of carbon credits are "non additional"…
- An alternative:
  - "De-couple" from Kyoto instruments: <u>money</u> instead of carbon credits through an <u>international fund</u> to tackle deforestation
  - Target, <u>in priority</u>, field actors instead of the Governments
  - Use a range of PES to favor changes in farmers' productive practices and reward genuine conservation efforts (case-by-case assessment)
  - Working with governments to remove "perverse incentives" (inappropriate subsidies, fiscal systems…) and overcome structural threats, such as land tenure insecurity, weakness and corruption within controlling institutions and the justice…

The case for an **International Fund** for tackling deforestation

- Seeing AD as an umbrella for local PES, not as an international PES…
- A Fund can provide the financial support for policies and reforms needed to curb deforestation
- Would need a mechanism to be abounded on sufficient and sustainable basis (taxes?)
- No more risk of "hot air", but the additionality issue remains especially with the lowest opportunity cost areas
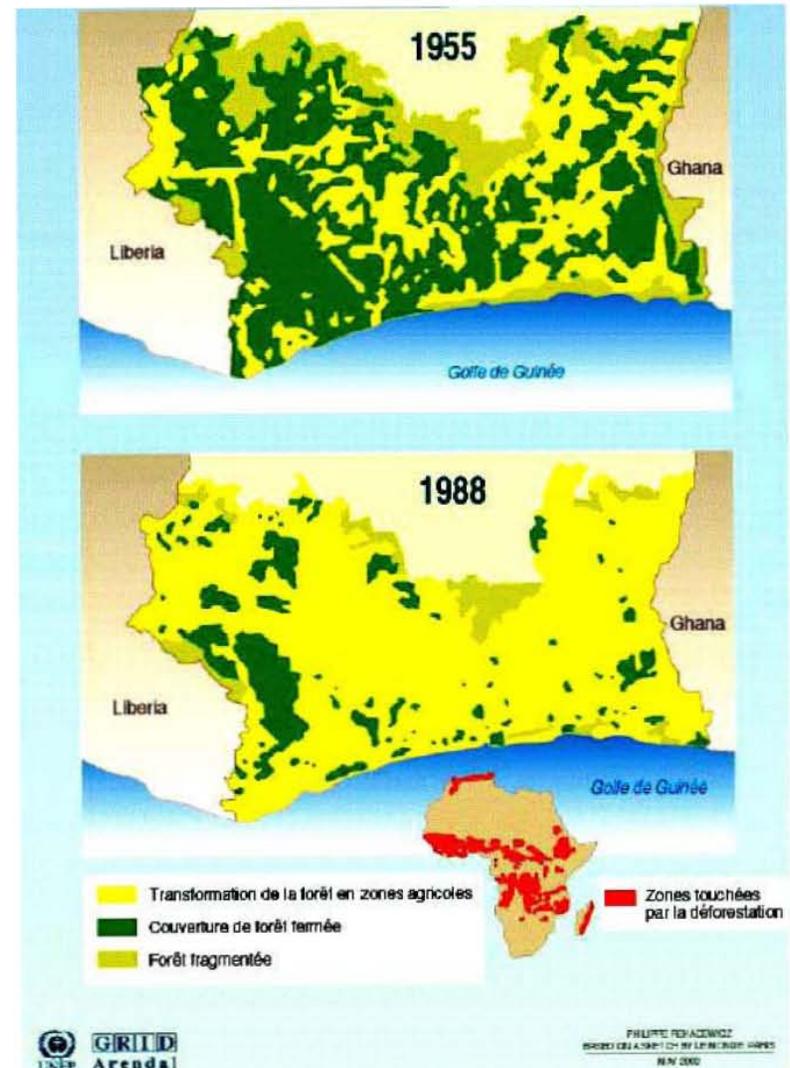
Past deforestation in Côte d'Ivoire

Additionality v. Affordability
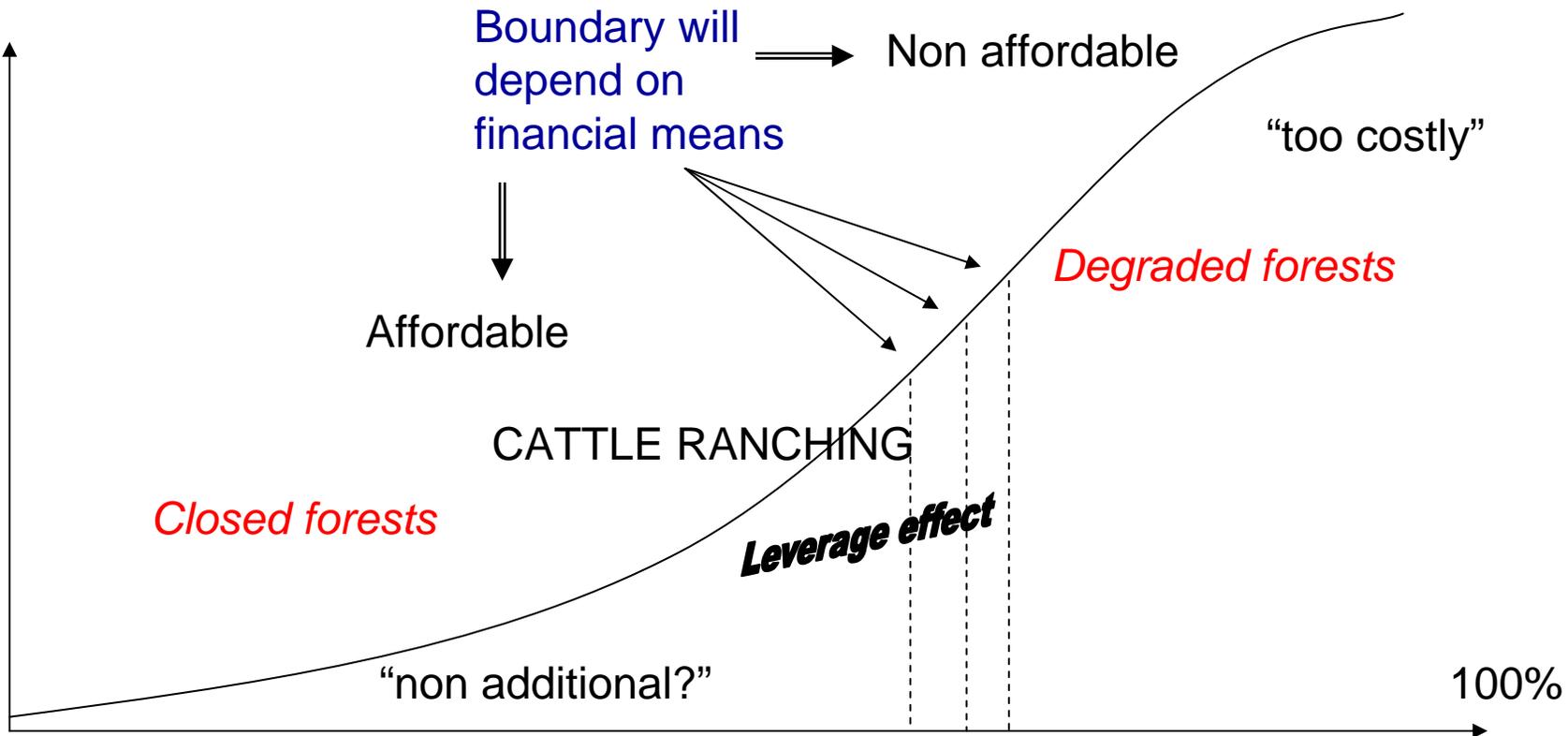
The "compensation" concept: toward a generalization of financial claims?

- The minimum condition for the success of any scheme is strong signals of political will to enforce the law:
  - Paying stakeholders for law observance is a contestable (and contested) principle which might incite law compliers to become non-compliers…
  - **The risk is to be told:** "*if you don't pay me I will allow my forests to get cleared*", making it difficult to concentrate payments only on "objectively threatened forests"
- Indonesia wants to be paid US$5-$20 per hectare not to destroy its remaining forests (Reuters, Oct. 8 2007)
- Minister of Environment of DR Congo : « *Nous acceptons de contribuer à l'équilibre du climat, mais nous exigeons 3 milliards de dollars pour tout ce que nos forêts apportent comme bien pour résorber le dioxyde de carbone dégagé par les pays industrialisés* » Xinhua, Oct. 2, 2007).

Economic efficiency and the responsibility principle

- Financial rewards (to governments) for standing forests **without regard for policies carried out** would be extremely costly and of doubtful effectiveness
- Environmental responsibility must not be a claim addressed to Northern countries only: **the other side of the coin of the** (uncontested) **sovereignty** (on forest resources) **should be the responsibility** vis-à-vis the forests as global environmental services providers
- Conditional rewards of genuine efforts of governments and local actors could be a more acceptable negotiation basis
- The ultimate condition is (still) the collective choices and collective/individual behaviors: forests are converted for feeding beef, producing biofuels, pulp… we are consuming more and more…