

***Conservation Incentives  
Agreements and « Avoided  
Deforestation » crediting scheme  
The challenge of implementation***

Alain KARSENTY,  
*CIRAD, France*

Romain PIRARD

*Post-Doc, Auvergne University (France)*

## PES oriented toward carbon sequestration or direct acquisition of biodiversity

- Various schemes : *Clean Development Mechanism* – CDM (carbon sequestration), *Conservation Easements* - CE (payment of the owner for conservation on his property), *Transferable Development Rights* - TDRs (exchange of development/deforestation rights), *Conservation Concessions* – CC (buying back of development rights on public lands).
- Difference of nature and scale:
  - CDM as carbon projects to foster plantations initiatives,
  - CE as a contract on private lands,
  - TDRs as a market mechanism to reach a cross-properties conservation compulsory target (e.g. 20 or 50% of rural property land remaining under forest cover) at lower opportunity cost.
  - **Conservation concessions** (CCs) can be viewed at local scale (pay farmers to cap their land development in order to protect biodiversity of environmental service ) but also at a larger scale (global alternative to logging in tropical forest areas of “high conservation value”): the “logging off” ultimate instrument (cf. Gullison et al., 2001).

# Nature of the instruments

- CDM is a project-based development instrument, whose risks are not very specific (leakage, additionality, reversibility) and can be evaluated with the classical evaluation toolbox (i.e. impacts, financial and economic...).
  - But high transaction costs practically prohibit CDM implementation for small-scale plantation (community-based, etc.) and additionality condition has led to the exclusion of industrial plantations.
  - Less of 0.5% of CDM projects registered by UNFCCC are forestry projects for carbon sequestration
- CE is a bilateral contract for privately owned-land, whether it is individual or common property (providing resolved the issue of who will be entitled to receive money).
  - But control costs are likely to be high in some situations (moral hazard, heterogeneity of the “community” impeding social control)
- TDRs is a voluntary exchange of rights mechanism on private lands under an exogenous (law) constraint.
  - But possible doubts on enforcement capacities (moral hazard), and additionality (will the seller would have effectively developed his land otherwise?)



# The case of Conservation Concessions

- Designed to work on public lands, and biodiversity-rich forests
- Based on a compensatory principle over time: local populations, Government, Forest industry
- Different scale and cases:
  - CCs on primary forests (generally too expensive)
  - CCs on logged-over forest: economic logging rent has gone, thus price is affordable (“second best”): buying back logging rights after the initial selective cut (as done generally in the tropics), then preserve (as long as funding is available)
  - CCs on customary-owned lands
- Founded on a harsh criticism of SFM (Rice et al., 2001), rebutted by Pearce, Putz & Vanclay (2003)
- A small-scale or large-scale objective?
- According to our understanding, in moist and dense tropical forest (which one is not biodiversity-rich?), the only limiting factor would be the money available for the purchasing of logging rights (the “logging-off” objective). It is a global alternative to SFM strategies endorsed by many governments (cf. Congo Basin)

## Large-scale Conservation Concessions : a fair deal?

- How to evaluate compensation ?
- Evaluate the foregone revenues from giving up “forest development” (i.e. logging and the associated industry): what is the “opportunity cost”?
- **Not only foregone taxes**, but lost (or non-created) jobs, and indirect economic opportunities lost by the change in land use (transportation, small-scale activities...). How to compensate this? To whom the “conservation investor” should give the money?
- **Highly variable price** according to existing institutional arrangements: logging taxes in Cameroon (set by competitive bidding), and average wages are at least 5 to 6 times higher than in Guyana, where CI has negotiated a CC with the Government

# The Ngoïla-Mintom (Cameroon) case

- A 830,000 ha of primary-like forest, once earmarked as « production forests » by the 1995 zoning plan (baseline scenario)
- A key area for making a large continuous conservation area crossing 3 countries
- NGO's and donors pressure on the GoC to consider a conservation concession alternative
- Unallocated by the GoC, still looking for financial compensation proposals from 'the international community'
- The opportunity cost of the conservation scenario has been estimated at US \$18.85 ha/year (potential raw benefits from conservation scheme included) (Karsenty, 2007)
- Very far from the \$1 ha/year suggested by Hardner and Rice (2002)

# The trouble with large-scale Conservation Concessions

- Are CC feasible only in countries where discretionary allocation of concession and patronage is dominating, but unfeasible under the rule of transparent competitive allocation?
- It is not unfair to guess that the Conservation organizations interest is to purchase development rights at the **lowest possible** (bargain) price to expand the area under conservation. But does it match local aspirations of people and national interest?



# Why “conservation rights” are cheaper in poorest countries?

- According to Ferraro and Kiss (2002), annual payments for conservation range from US\$39/ha in the UK, \$9.9 in Tanzania and \$1.25 in Guyana, despite the biodiversity richness is likely to be ranked conversely
- Low “opportunity cost” is due to few development opportunities. It is likely that stakeholders readily sell their development rights at cheap price (high private discount rate)
- Opportunity costs is, by far, higher along the soy bean agricultural front in Brazilian Amazon or in a Kalimantan’s logged-over forests about to be converted in oil palm plantations; i.e. where forest liquidation is a real threat (a quite more serious threat on biodiversity than SFM and shifting cultivation in low population density area)



# Compensating at current poverty levels?

- Conservation rents to be served to the “sellers of rights” are likely to be “cheap” rents, indexed on the current poverty level of stakeholders (Government, communities), with the implicit assumption that their only projected future is of economic stagnation (thinking about Africa...).
- Likely to be the baseline used by the “conservation investor” to negotiate compensation levels
- Non-farm employments potentially provided by the conservation initiative (craftsman, eco-guards, etc.) are unlikely to replace lost (or non-created) logging, industrial and service jobs (wood-processing, transportation, by-products trade...)

# Is Avoided deforestation scheme the solution?

- Reduced Emissions from Deforestation in Developing countries : a scheme, with variations, proposed by PNG, Brazil and other countries
- Deforestation: 20 to 25% of CO<sub>2</sub> emissions
- Avoiding deforestation: would save carbon and biodiversity
- The bottom line: financial rewards for countries reducing their deforestation rate, with carbon credits (Kyoto assets) or money equivalent (special fund to be set up)
- How to assess the reduction?

# Seeing the past or the future?

- Most of the proposals suggests derive the baseline from an average of past trends
- Problem: how to deal with “environmental Kuznet curve” and changes in both the remaining forest resource stock and the degree of reliance on natural resources
- Indonesia and Malaysia have contemplated huge rate of deforestation in the 80 and 90’s, but the forest cover tend now to concentrate in highlands, beyond the forest economic frontier: lower trend of deforestation for mechanical reason.
- Would it be “fair” to reward Indonesia and Malaysia with regard to their past policies vis-à-vis the forest in the past decades?
- Central Africa recorded relatively low levels due to lack of investment in alternative land use; but if these countries enjoy higher development rates, their deforestation rates are likely to increase

# Is prediction feasible?

- The alternative solution is to anticipate a likely “business as usual” deforestation rate on a coming period
- Chomitz et al.(2007) are suggesting modeling land-use dynamics to calculate the baseline scenario. They pointed out a correlation between deforestation rate in Amazon and beef price at farm gate. They also see a correlation with rainfalls...
- Difference to make 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 rainfalls quantities and the risk of forest fires in context of growing climate disorders?
- No risk of national pressures on experts work to “worsened” the baseline?



# An overestimation of government's' role and capacities

- Most of the factors influencing deforestation variation rates are beyond the reach of the governments (i.e. cash crop commodities prices,
- In a complex system, measuring the impact of given public actions in terms of how many hectares are (not) deforested constitutes a genuine challenge: Kaimowitz and Angelsen (1999) have shown the uncertain effects of single variables (such as agricultural progress) on deforestation
- If deforestation is reduced, how to separate the effect of public policies and the other factors which occurred independently of the government will?

## Refinements do not overcome the basic difficulty of fixing what factor is responsible for less deforestation

- Schlamadinger's proposal: a window of anticipated deforestation rates rather than a single rate number
- Slipping (or dynamic) baselines: probably more satisfying, but the governments will not have visibility on their "corrected target". Likely "negotiated targets" rather than computed baselines
- Several developed countries are against ex-ante baselines as they fear some tropical countries would behave strategically, increasing their deforestation before the commitment period to degrade their baselines.
- Another difficulty: would governments credited in commitment period # 1 be asked to reimburse the financial assets in case the deforestation rate jump in period # 2?

# Overlooking the political economy of deforestation ?

- Public policies often do favor deforestation, when they are backed by some social and economic forces (i.e. paper pulp and oil palm producers in Indonesia and Malaysia, cocoa “planteurs” in Côte d’Ivoire, soy agro-businessmen in Brazil...)
- Will governments reverse their social alliances for the benefit of carbon credits whose prices are volatile (see EU’ market current situation) and which will be paid several years after the public actions?
- Example of land tenure: Governments have a real economic interest, at present, to secure land rights, but most of them don’t adopt policies aiming at that.

# A new source of “hot air”?

## ● Two risks :

- (i) some countries might be rewarded for lower deforestation rates that are due to external reasons (e.g., a drop in soy market prices or higher rainfall). A typical issue of additionality, then of efficiency.
- (ii) possible real voluntary efforts would not be rewarded due to the adverse impact of external factors. A typical issue of equity.



# Working with countries to remove “perverse incentives”

- Enhancing existing tools (World Bank “conditions”, FLEG program, international negotiations...) for suppressing obvious “perverse incentives” such as incentives for overinvestment in the timber and paper industry, land tenure that favours only agricultural activities, taxation systems that lead to the degradation and conversion of natural forests, weak governance with poor law enforcement...
- Helping developing countries to resolve the land tenure issue (insecure or unrecognized land and resource rights, seems more urgent and promising on a long term perspective)
- Helping countries to move faster along their “Kuznet environmental curve” with mutually agreed sustainable development paths.