

REDD+ Forest Monitoring and Policy Options Analyses training (courses)

FAO initiative to enhance knowledge, capacity and better
decisions about forest resources

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Drivers of Land use Change

- In the *COP Draft decision -/CP.16* - “Outcome of the work of the Ad Hoc Working Group on long-term Cooperative Action under the Convention”
 - § 70. “Encourages developing country Parties to contribute to mitigation actions in the forest sector by undertaking the following activities, ... circumstances”:
 - (a) Reducing emissions from deforestation;
 - (b) Reducing emissions from forest degradation;
 - (c) Conservation of forest carbon stocks;
 - (d) Sustainable management of forest;
 - (e) Enhancement of forest carbon stocks;
 - ...and how will this be possible without analyzing and addressing the drivers of land use change.

Therefore

- the importance of analyzing the drivers of land use change, forest degradation and deforestation is emphasized.
- (C 68) “Encourages all Parties to find effective ways to reduce the human pressure on forests that results in greenhouse gas emissions, including actions to address drivers of deforestation.”
- And how to you find effective ways ... tools .. means?
 - Well that is analyzing
 - It is choosing options and
 - Choosing the most cost effective options
- So collecting data about LUC and data/information that can support the analysis of LUC causes is important.

So ... what are the drivers of land use change – some examples???

- Degradation (“...direct human induced ...”)
 - Non-sustainable fire wood collection and grazing
 - Slash and burn agriculture
 - Commercial forestry
 - Mining, infrastructure, etc.
- Deforestation
 - Combinations of above and
 - Agriculture
 - Active conversion (farming, oil palms, etc.)
- Very difficult to create deforestation by clear-cuttings only....
- And by definition deforestation is LUC ... timber harvest by itself can never create deforestation!



The main causes of deforestation

- subsistence farmers practising shifting cultivation,
- cash crop smallholders and
- large companies that clear land for crops and cattle.
- Together, these account for three-quarters of all tropical deforestation (IPCC 2007).
- ... but of course this is often following road-building and forestry
- normally not to far from a frontier of infrastructure



But – let's check them one by one ...

- Non sustainable fire wood collection and overgrazing ... where the forest are close to its natural borders.
 - E.g. dry forests & high altitude forests
 - Slow ... but steady process....
- Slash and burn agriculture ... often in fairly fertile areas.
 - Tropical and sub-tropical regions (nowadays)
 - Can be sustainable or non-sustainable with or without permanent LUC
 - Main reason in vast areas to degradation and deforestation
 - How to stop this ???

- Commercial forestry
 - Often in high forests with huge carbon pools
 - May lead to deforestation in tropical and subtropical regions – but not by forest harvest only
- Mining and infrastructure
 - Mining important in some countries like Guyana
 - Infrastructure (cities, roads, industrial areas, etc) important in most countries

- Agriculture and active conversion (farming, oil palms, etc.)
 - Tropical, subtropical and temperate regions
 - Can we stop farming?
 - How did we do in Europe 100 years ago???
 - More rational agriculture
 - More intensive farming with
 - Fertilization, high yielding crops, high yielding cows, etc.

All LUC

- Are created by human activities
- Where human expansion need the land for different purposes
- Therefore (as presented before)
 - Important to not only monitor the forest variables
 - But also social, economic and other potential explanation variables.
- The observations of the forest as such is not enough!

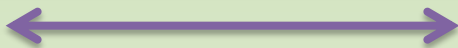
Policy options analyses

- All decisions are thought to lead to a better world!
- Within the REDD+ framework decisions are thought to lead to (in short)
 - less carbon emissions,
 - Sustainable forestry (carbon mitigation...) and
 - higher global carbon enhancement,
- but how do we get there?
- and how will decisions affect the outcomes of the atmospheric carbon?

The forest and the forestry affects GHG in mainly three ways



1. Deforestation and degradation
 - causes increased CO₂ levels in the atmosphere.
2. New forest areas (increased forest areas) and more dense forests
 - Will enhance the carbon stock in woody and other vegetation.
3. Woody biomass can replace (substitute) fossil fuel and other energy effective material that are energy effective:
 - Fossil fuel contributes with "new" CO₂ – which renewable biomass does not – that is less CO₂ is emitted!
 - If steel, aluminum and concrete (energy demanding materials) are replaced with wood (solar power) the emissions will decrease in the long run!



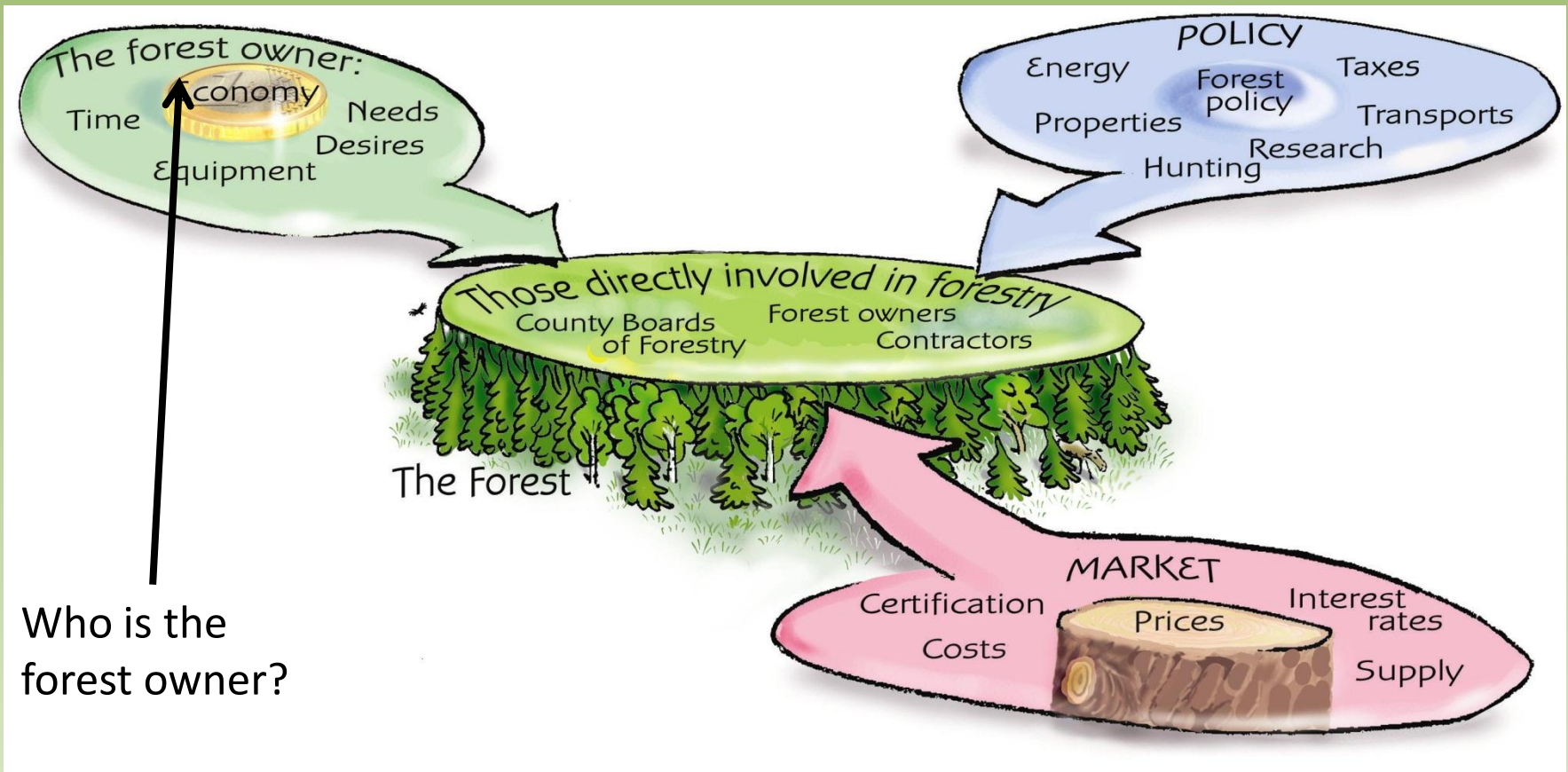
The policy decision making process



Policy options analysis

- ... how do we find out which policy measures will have the best effect – works the best?!
 - There are many options available
 - To countries – money transfers may be efficient incentives and an obvious option ...
 - Within countries it is not as obvious!

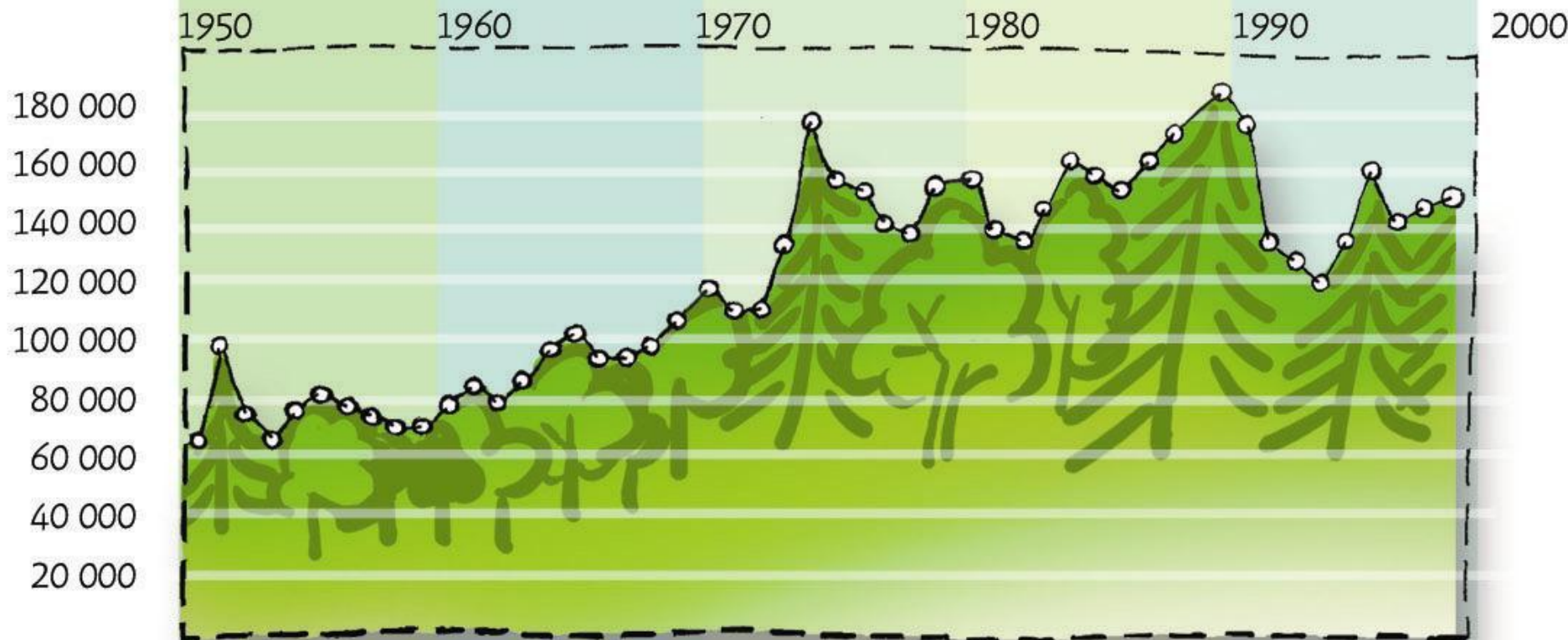
There are many policy means to reach the ultimate goal – “REDD+”



As an example in Sweden the lousy economy in the forest sector in the beginning of the 1990s strongly contributed to the drop in regeneration work

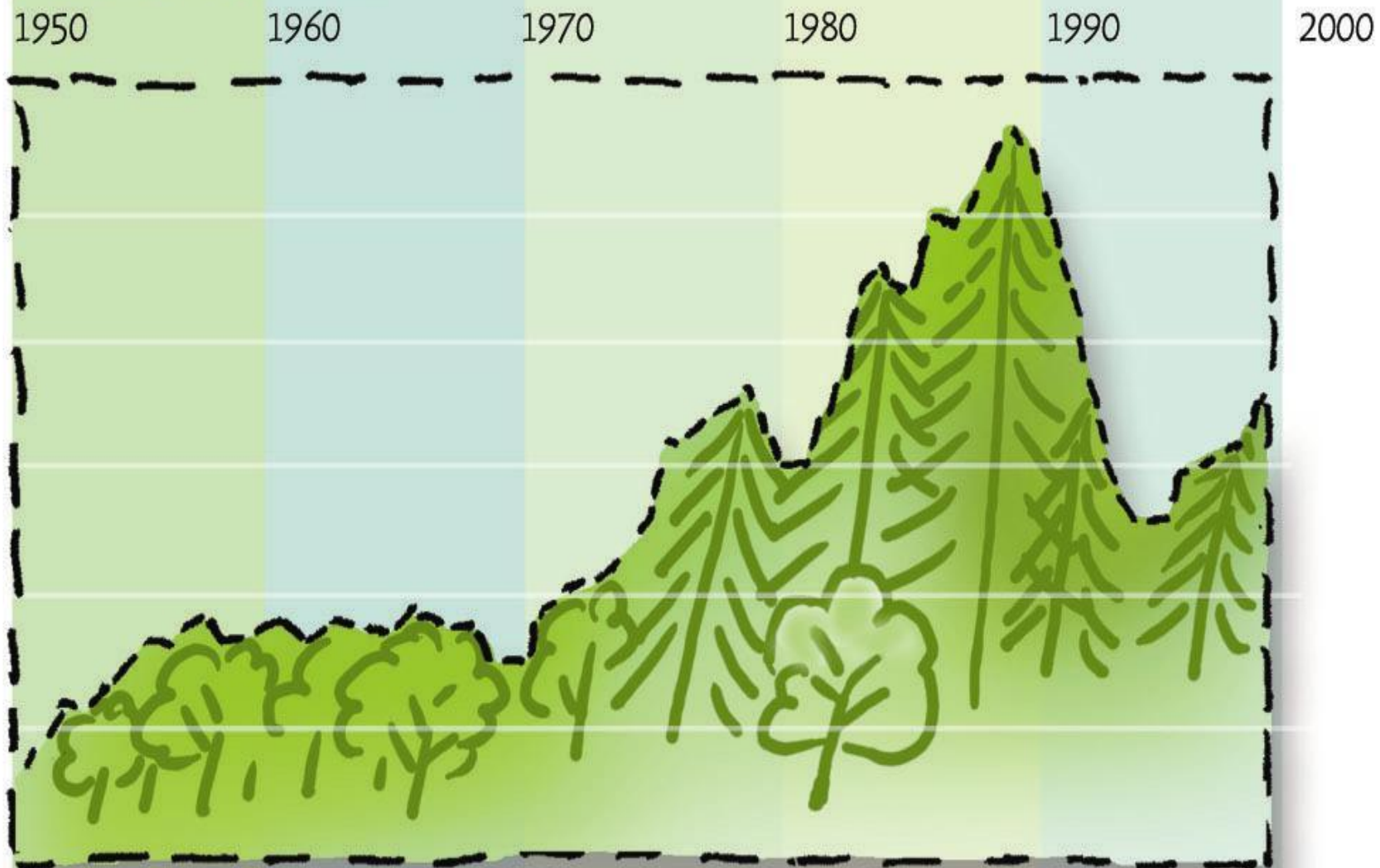
Value produced by the forest sector 1950 - 1998

(millions of SEK units, price levels of year 2000)



Total investments in regeneration and pre-commercial thinning 1951 – 1999

(1000 SEK units, average on forest area and actual area pre-commercially thinned, price levels of year 2000)



Will you find deforestation in countries...

- ...where there are forest owners?
 - a really big issue!!!!
 - Political issue therefore we will not mention it...
- But ... if the forest is there, you are poor, you have the time and the muscles and the governance is not perfect ...

- It is less smart to wait for someone else to grab what is there ...
- The land value (for the individual) and therefore the land rent is zero!
- The fertilizer (in the case of slash and burn) is for free!
- The incentives for sustainable forestry do not exist. Why use the forest sustainable when my kids won't get a piece of the cake anyway?
- There is a risk of getting caught – if there are rules and governing agencies against deforestation – but the benefit might outweigh the risk.

Are we addressing the correct issues???

- Will REDD+ money (PES – Payments for Environmental Services) transferred to the regions or villages make real difference?
- Are there possibly other solutions and policy means within countries to reduce the deforestation and degradation issues?
- To successfully implement REDD+ other policy means are necessary to address and analyze if possible and efficient to work with.

There are many policy means to reach the same goal – REDD+

- Land tenure and land owner rights
- Subsidies
- Legislation and good/better governance
- Inventories and Information
- Industrial growth and other poverty reduction
- and better more efficient agriculture
 - More intense and smaller areas
 - Fertilization
 - Will give a higher supply of food ... with lower rent on forest-agricultural activities...
 - Compare with Sweden

According to Angelsen...

- Four types of policies could reduce deforestation:
 - policies to depress agricultural rent,
 - ...like higher supply from intensive agriculture, costs of the land (ownership, legislation),
 - policies to increase and capture forest rent,
 - ...like ownership, PES, information and good advices, certification (if better paid logs ..) ...
 - policies that directly regulate land use and
 - Like legislation
 - cross-sector policies that underpin the first three.

Trees for the Future

The best time to plant a tree is 20-years ago. The second-best time is now.

A lush green forest scene with tall trees and dense foliage. The text "Thanks!" is overlaid in the center.

Thanks!

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