TREES FOR THE FUTURE

REDD+ Decisions – Strategic v.s. Operational decision needs

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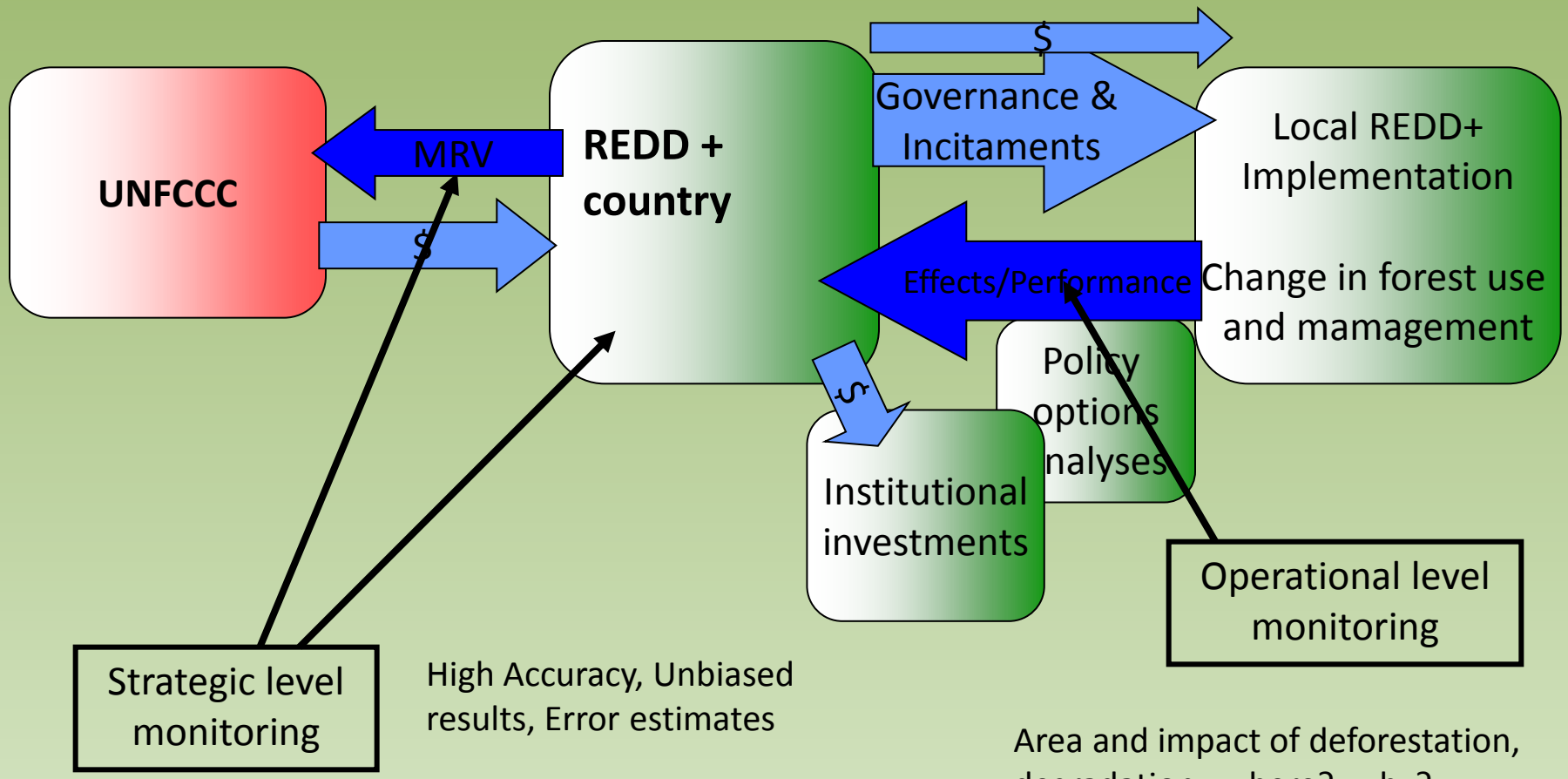
NFG

Diverse monitoring needs



High Accuracy, Unbiased results, Error estimates

Relatively expensive measurements.
Sample based (full cover not needed)

Area and impact of deforestation, degradation , where?, why?
No need for error estimates or statistical known errors

To exemplify differences between strategic and operational based data

- FRA data from Sweden and/or Russia
  - Sweden sample based plot inventory …. (strategic inventory)
  - Russia – collection of subjectively inventoried data on thousands and thousands of stands in Russia. (Operational inventory)
  - Swedens data will give accuracy and precision data on state and changes
  - Russias inventory instead have knowledge abou he percentage of stands that need sanitary cuttings because of insects etc. However no statistical ”grading” can be done.
- Neither of the inventories are actually better than the other – but has different purposes
  - The Swedish NFI will give support to strategic decisions like the balance between the growth of the forest and the utilization of the forest, the carbon state and change, volumes in different diameter classes in different counties, etc.
  - The Russian NFI so far has more concentrated on actual operational decision needs on the stand level, not being able to predict with accuracy the possible cutting levels or the carbon stock or changes…

“Sometimes it better to be more or less correct than exactly wrong”.

- Data compiled from stand based subjective forest inventories (Armenian example). On the paper data looks very reliable, with two decimals and all… However, when scrutinized, the surface might crack.
- In an objective NFI 1998 the growth was measured to be to 2.86 $\pm$ 0.17 m^3/ha, yr. compared with the old official figure of 1.4 m^3/ha, yr.
- Also, stump measurements indicated the annual cuttings to be about 600000 m^3/ha, yr. (on 215 000 ha) which could be compared with the official maximum allowable cu of 100000 m^3/ha,yr. …..
- For many decision makers it was hard to accept the big differences between the old forest state (subjectively collected) operational figures and the sample based NFI. However it was concluded that the illegal cuttings were a big problem and not carried out in a sustainable manner.
- The forest policy had to be updated and for this process further local inventory processes were thus needed.

Both level of inventories are needed!

- For strategic decision making, reliable data without bias and with a known precision is needed.
- Often many different variables are needed that aren't normally inventoried in more operationally headed inventories (e.g. volume of dead woody debris, soil type and depth, etc.)
- On the other hand more operational inventories are also needed for operational decisions
- and can come about as a result of discussions set off from the objective inventory results.

Remote sensing – as this question has been raised

- Strategic use of remote sensing v.s.
- Operational use
- Let´s check some examples

Which area is deforested and which area is a forest?

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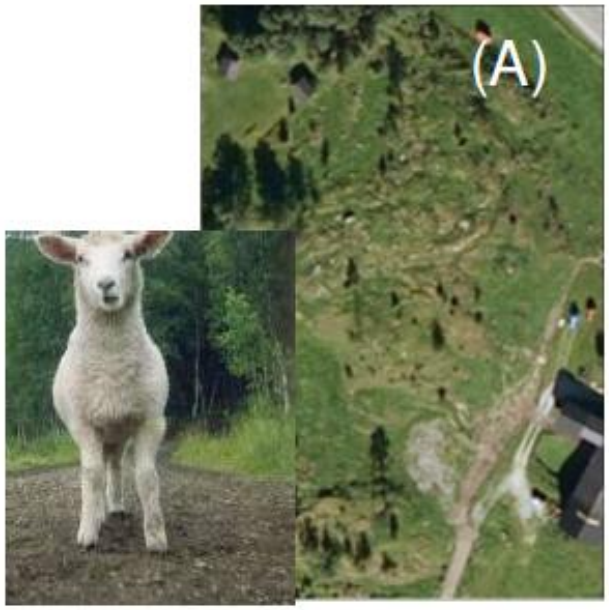
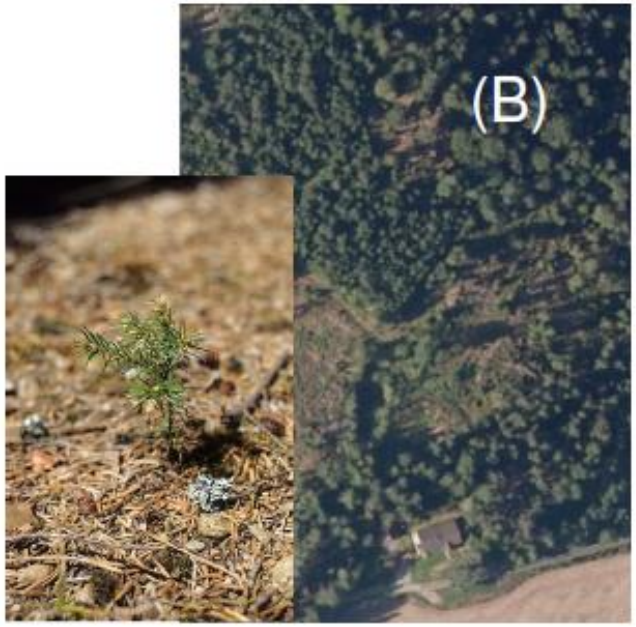
Land use Change versus Temporary Unstocked

FRA 2010 Deforestation Definition: The conversion of forest to other land use or the long-term reduction of the tree canopy cover below the minimum 10% threshold

IPPC 2006 Deforestation definition: The direct human-induced conversion of forested land to non-forested land.





Example: Deforestation and Clear-cutting in Norway

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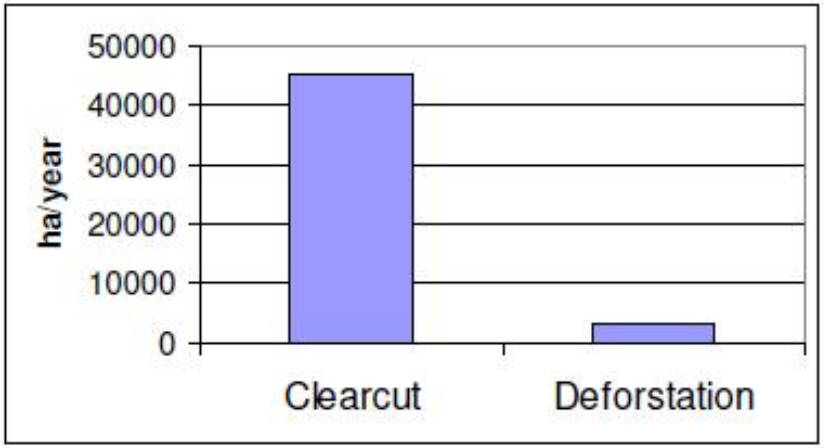
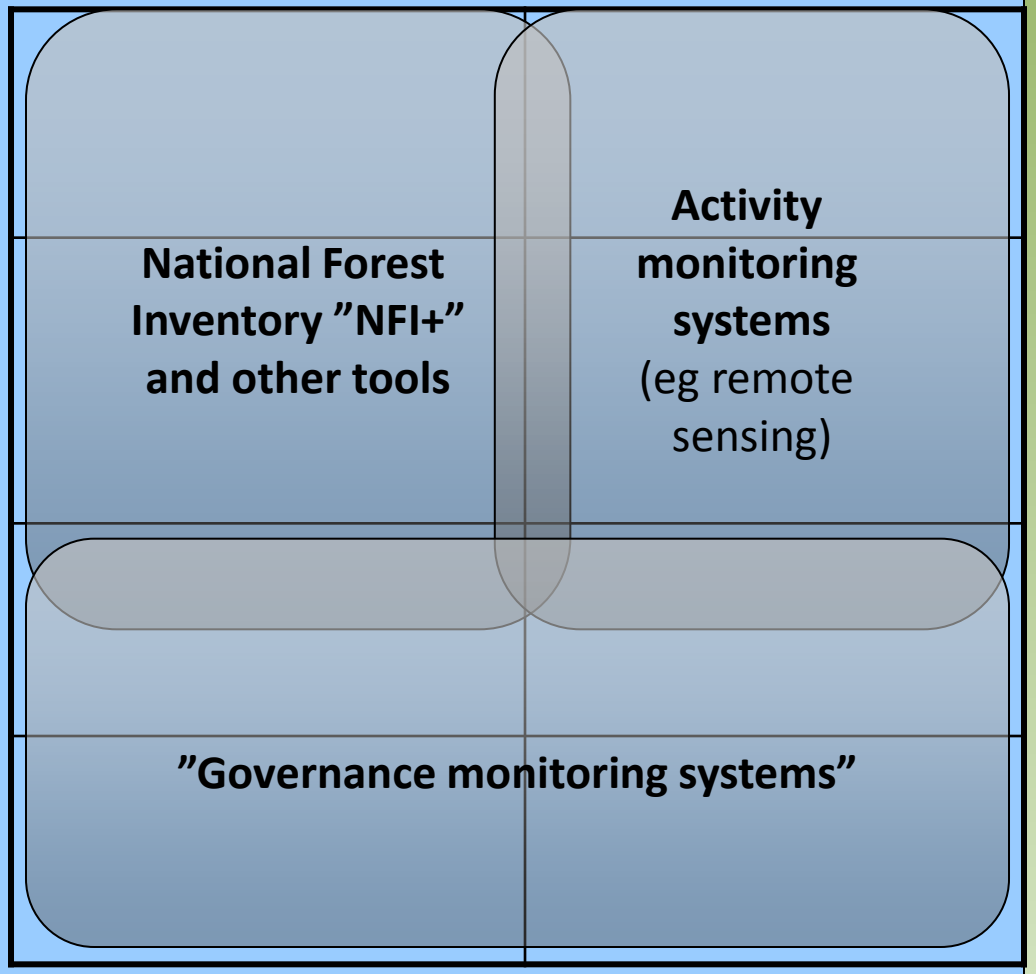


Generally the Clear cut area is much larger than deforested area when Sustainable Forest Management is carried out

WHAT? (examples)	Strategic level	Operational level
Carbon (emission activities)	GHG inventories	Activity data Mitigation proxies
Environment (services, products, multiple benefits, safeguards)	Biodiversity Wood and non-wood products Displacement	Land use Conservation Reversals
Social safeguards	Policy coherence with development goals	Livelihood impact
Governance	Regulatory framework Transparency/Accountability	Enforcement/Compliance Transparency/Accountability

REDD+ MONITORING FRAMEWORK

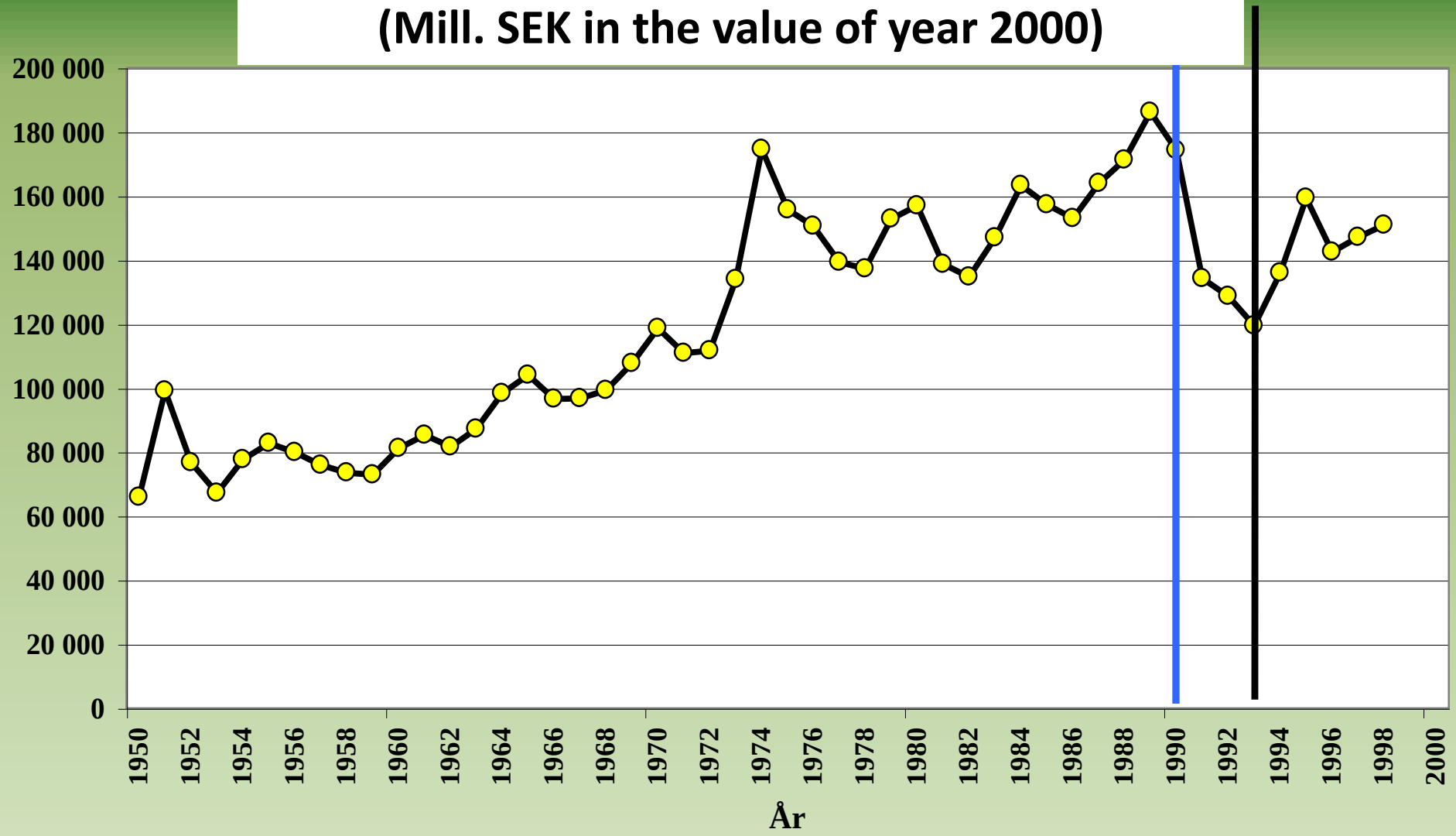
KEY OPERATIONAL TOOLS
(different info needs)



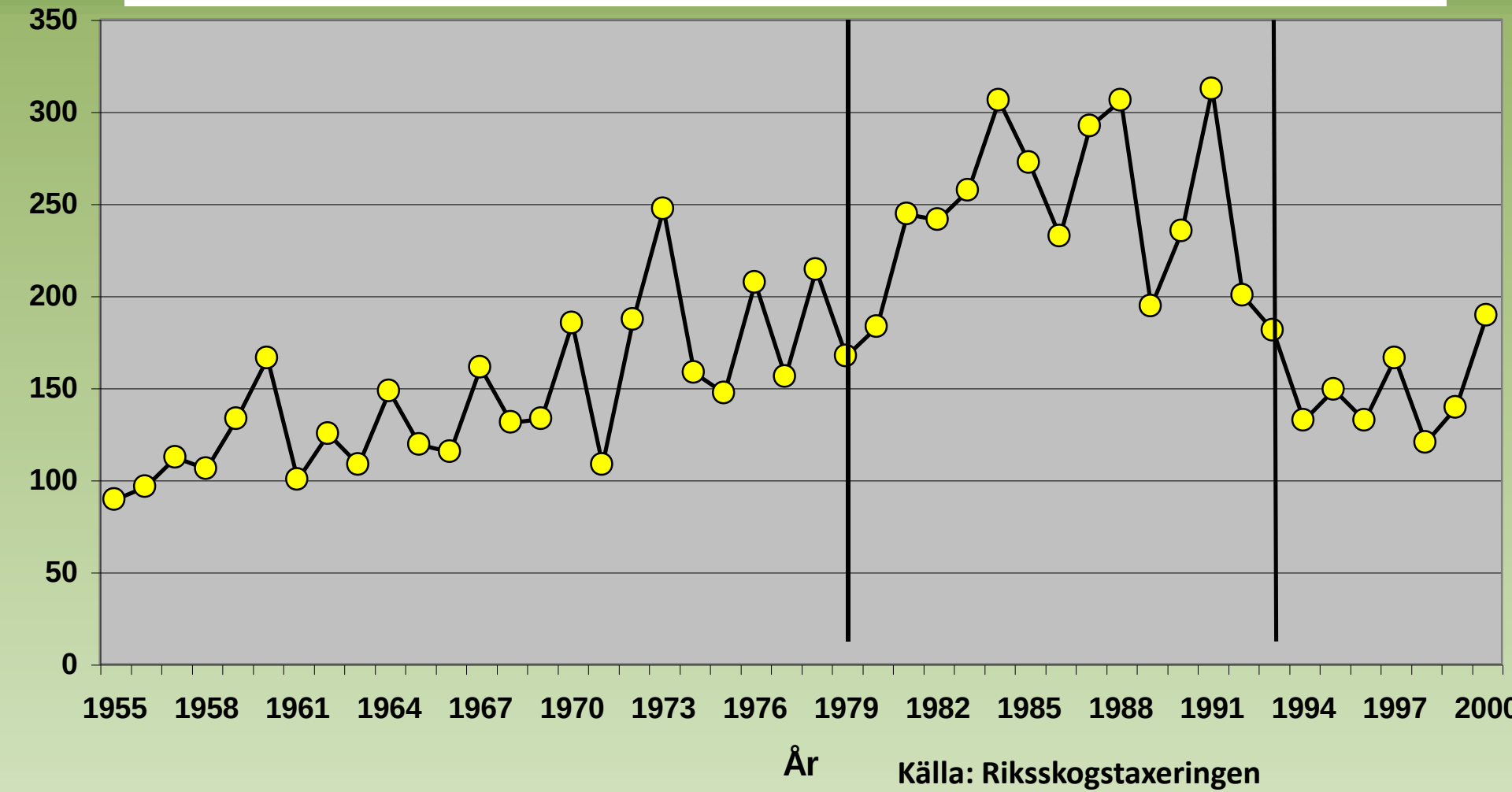
REDD+ MONITORING FRAMEWORK

Thinned dead trees (volume %) ofdead trees before thinning

The forest sector production value 1950-1998 (Mill. SEK in the value of year 2000)



Area of pre-commecial thinning acording to the Swedish NFI (1000 ha/year)



Källa: Riksskogstaxeringen

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

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