The regional "REDD+ MRV and Monitoring" course in Tanzania

FAO/UN-REDD initiative to enhance knowledge, capacity and better decisions about forest resources

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In cooperation with
the Norwegian Forestry Group
the Sokoine University
the Ministry of foreign affairs of Finland and
the FAO/NAFORMA project in Tanzania

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Who am I?

- Tomas Thuresson, Swedish, MSc & Dr of Forestry.
- Here mainly as course coordinator – for UN-REDD, but Working for the Norwegian Forestry Group.
- Earlier positions:
  - International consultant (full time) since 2 years back with REDD+ MRV, plantation projects and different investigations as major issues.
  - CEO for a Swedish Forest company (Häradskog AB - with commercial sustainable forest management to large forest estates)
  - Forest Analyst, Project Manager and Director of Forestry at the Swedish Forest Agency.
  - Researcher and Director of studies at SLU (The Swedish University of Agricultural Sciences)
  - And many project assignments for FAO, World Bank and other organizations for may years.
- And I do think it´s ok with questions or questioning … at any time during my presentations!

Different backgrounds to the course
1. The changing climate

- Increasing global temperatures
- Increasing problem
- The usage of fossile energy (oil, coal and natural gas) is the biggest problem!
- Land use and land use change affects much.
- Deforestation close to 20 % ... of the emmissions
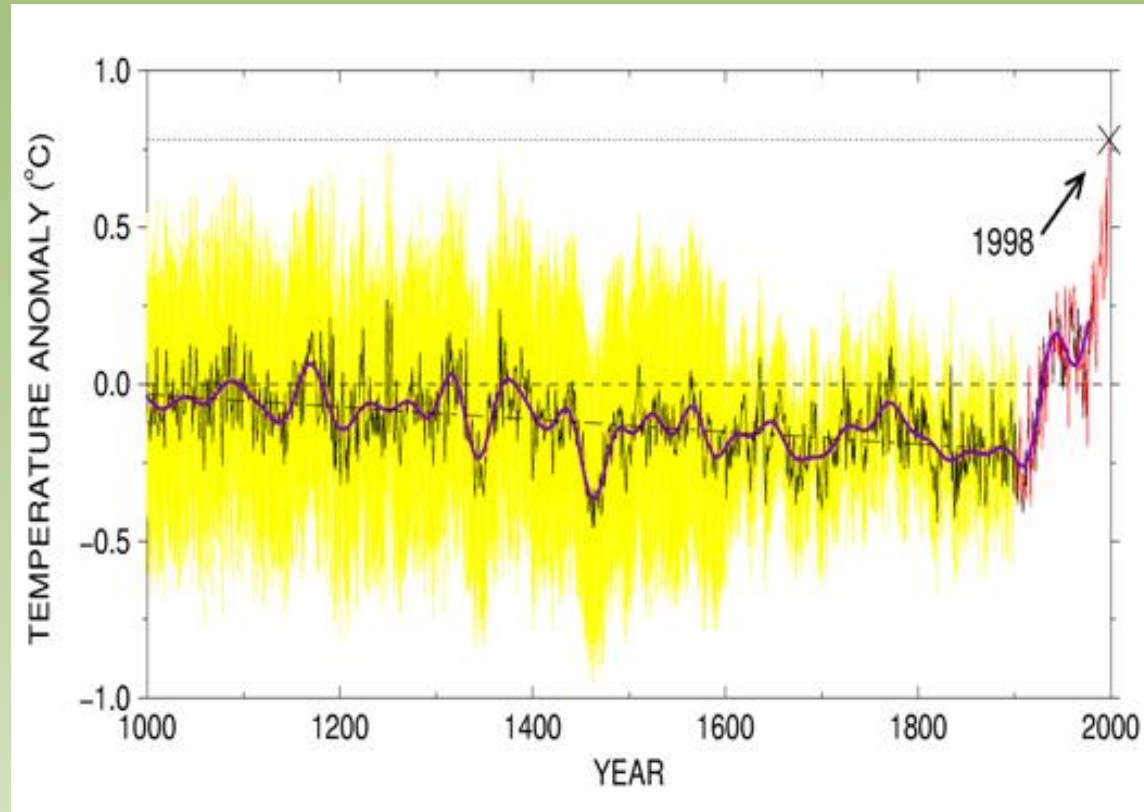
2. The forests of the world holds keys to the solution!

The plants in the forest has a huge potential to store atmospheric carbon!

- Where a small seedling can grow up to a large tree within 10-40 years time...

- ... where the sun had been the main growth "engine" ...

- ...collecting carbon from the atmosphere – for free – when growing.

Better governance, land use policies and many other means totally changes the Swedish forest perspective during the last 100 years!

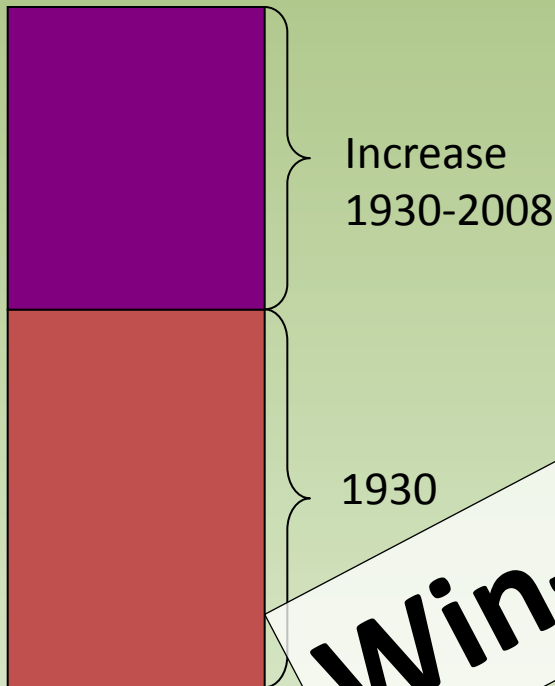**Standing volume**

Mill m³sk

+1%/ year
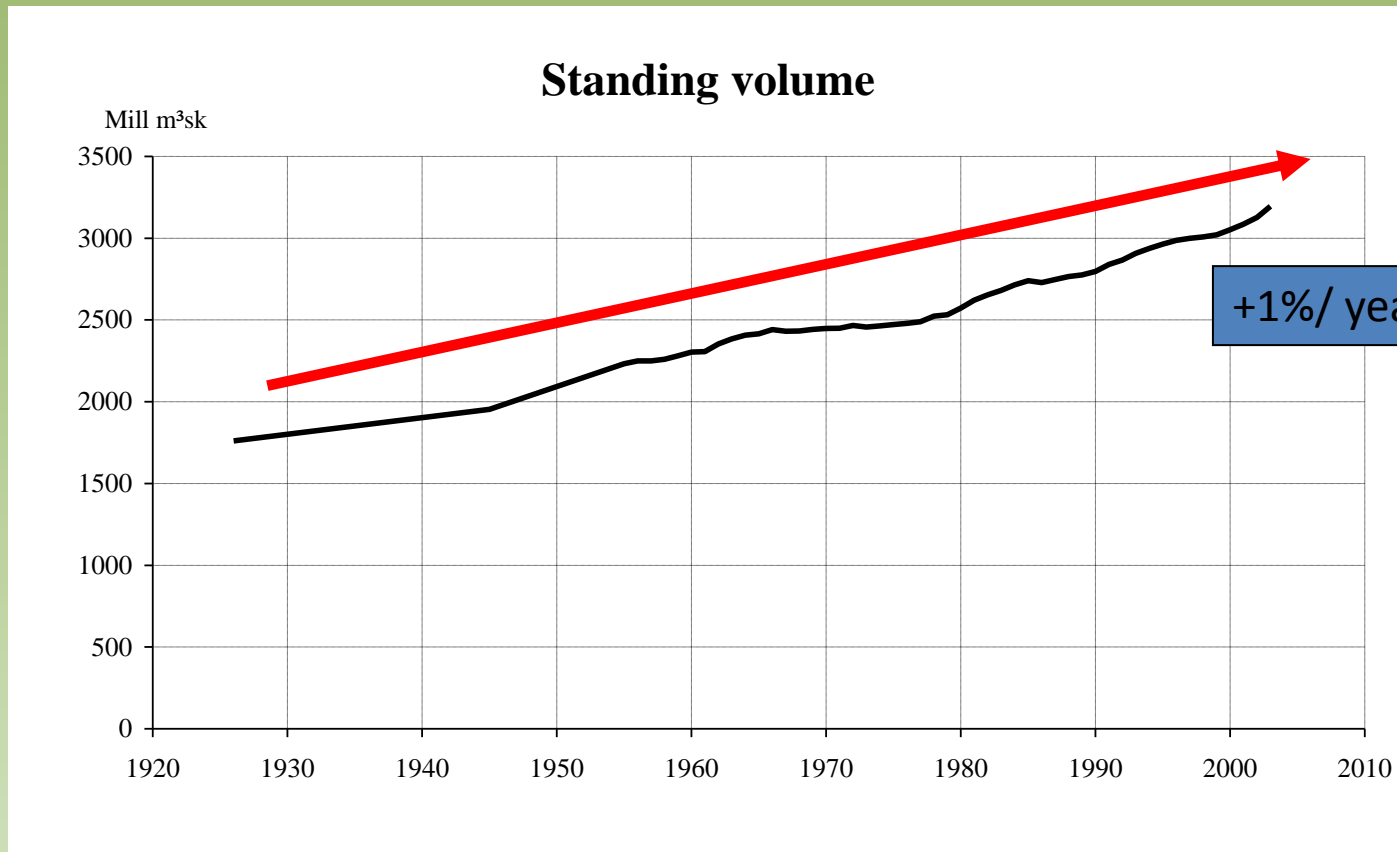
The Swedish National Forest Inventory 1926-2003. All land use classes. Average for the period 1923-1929 and 1938-1952, respectively. 1954 and towards five years moving average

During the same period

- Swedens actual cuttings has increased from
  - 50 million cubicmeter/year to
  - 90 million cubicmeter/year
  - Giving huge substitution effects when used by the different users and in the Swedish energy industri
- And the sink in the forest sector has since 1920 been some two billion tons of CO_2

Carbon stock and wood production
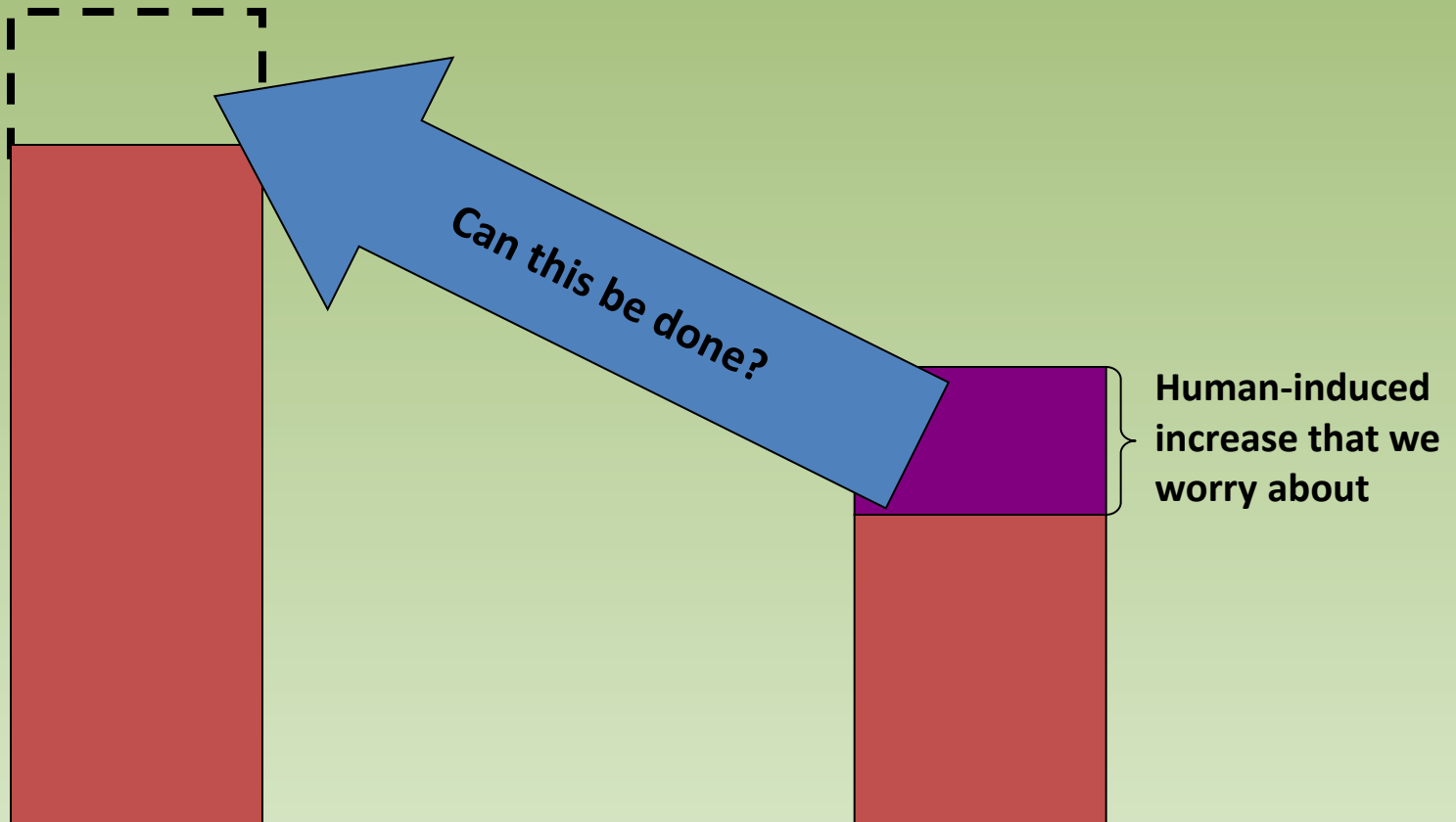
Sweden,
C stock

Sweden,
sustainable harvest

Increase
1930-2008

1930

2008

1930
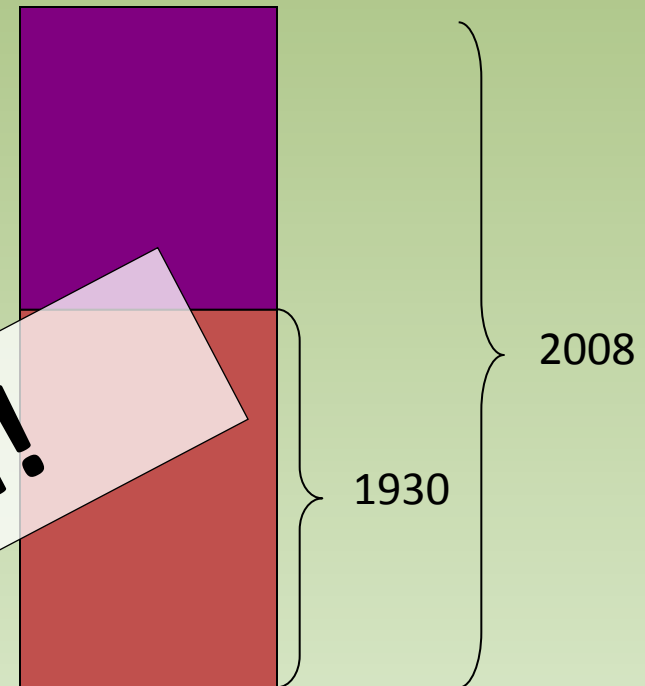
Win-Win!

Carbon stocks - Global

Forests

Atmosphere

Can this be done?

Human-induced increase that we worry about

3. But at the same time – land use change is a major problem - huge amounts of carbon can be released very fast!

- If and when the forest is deforested or degraded by human activities.
- Or from natural happenings such as fires, hurricanes, etc.

2005. 04. 06

The heavy deforestation…

- Deforestation lead to approximately 1,5 Gton carbon emissions to the atmosphere during the 1990s – BIG!
- Much of this are conversion of so called rain forests
- Many reasons to not cut down these forests
  - Biodiversity, water quality, etc., etc.
  - The climate…
- The coming 20-30 years are critical for the climate change and
- a rain forest that is cut can never substitute its carbon emmissions during this short (20-30 year period). The emissions will always be larger than the substitution effects during this period.
- But why shouldn´t developing countries be able to use their own resources (as the already rich countries have done before) ?
- Therefore – to save the climate – without hurting the developing countries - economic transfers are important – from the rich countries to the developing countries.
- REDD+ …

This has been understood and included in the global climate change negotiations.

- The forest of the world has become highly prioritized in the UNFCCC negotiations (as just described by Professor Zahabu)

- How much carbon that is collected by the forests (the sink or the +) and the amount of net carbon losses (Deforestation and Degradation) from the forests is – all of a sudden – very important.

- Therefore very important to be able to measure these sinks and losses – that is to measure the carbon store and changes if the forests!

This course is designed for decision makers – those ones who will handle this the coming 10-30 years - you!

- The REDD+, MRV and Monitoring systems to be implemented will require skills at all levels and for many stakeholders.

- Several motives for the course, where the ultimate goal is to achieve better information about land resources.

- The need for better decision support on land resources will develop and there is a need for educational initiatives on building capacity.

Also in short …

- The lack of adequate forest monitoring systems in many REDD+ countries - means considerable efforts to meet requirements of a future REDD+ mechanism.

- The REDD+ countries will probably in the end need to:

  - Monitor and report change in Carbon store with a statistical known error,

  - Monitor and analyse many other variables than deforestation and degradation.

- a major competence build-up is needed!

So there is a need to enhance not only carbon pools but also

- Peoples capacity – especially in REDD+ countries and

- Competence on many levels - within areas such as
  - forest inventories (including remote sensing)
  - mathematical statistics,
  - management options analysis

The objectives of this course and the UN-REDD course program

- To help prepare countries in their efforts of understanding the "REDD+ MRV and Monitoring"
  - Needs and Methods needed.
- The main target groups are
  - Executives in leading positions in REDD+ countries and in international organizations and
  - Managers (those who will make the MRV and Monitoring happen) in REDD+ countries
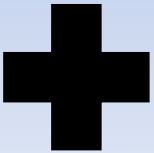- You will be a core of the future experts!

Well – what is "REDD+ MRV and Monitoring"

Different organizations include different subjects in this but strictly…. The text is and have been:

" … **re**ducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries."

REDD+

    (a) **Re**ducing emissions from **d**eforestation;
    (b) **Re**ducing emissions from forest **d**egradation;
    (c) Conservation of forest carbon stocks;
    (d) Sustainable management of forest;
    (e) Enhancement of forest carbon stocks;

+

Decisions made in Cancun

- 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 of course this will have to be Measured Reported Verified etc …

Why MRV and Monitoring (incl. safeguards)

- One cornerstone of a future REDD+ mechanism is the MRV and Monitoring systems to be established.
  - Crucial to monitor progress – that is what the investors are paying for !!!!
  - assess carbon emission reductions (and enhancement of carbon stock) as well as
  - ensuring good governance, avoiding corrupt practices and
  - ensuring the biological diversity and other environmental services!
- MRV and Monitoring for REDD+ will have to include monitoring of implementation of REDD+ mitigation activities and safeguards, as well as other development goals.

2009.09.09

Additionally

- there is a need to generate information both at
  - national reporting and policy analyses (strategic level), as well as for
  - within-country implementation (operational level).
- Following the implementation of REDD+ and MRV and Monitoring in countries, there will be an accelerating need for educating decision makers and managers.

Honestly ….

- The competence and the organisational set-up in these different areas are
  - Not always adequate in most countries and
  - in some areas (my thinking) like area sampling, statistics, forest inventories, analyses work, remote sensing very limited.
- This course will not give all necessary skills – it will actually not say much about how to do actually do things…
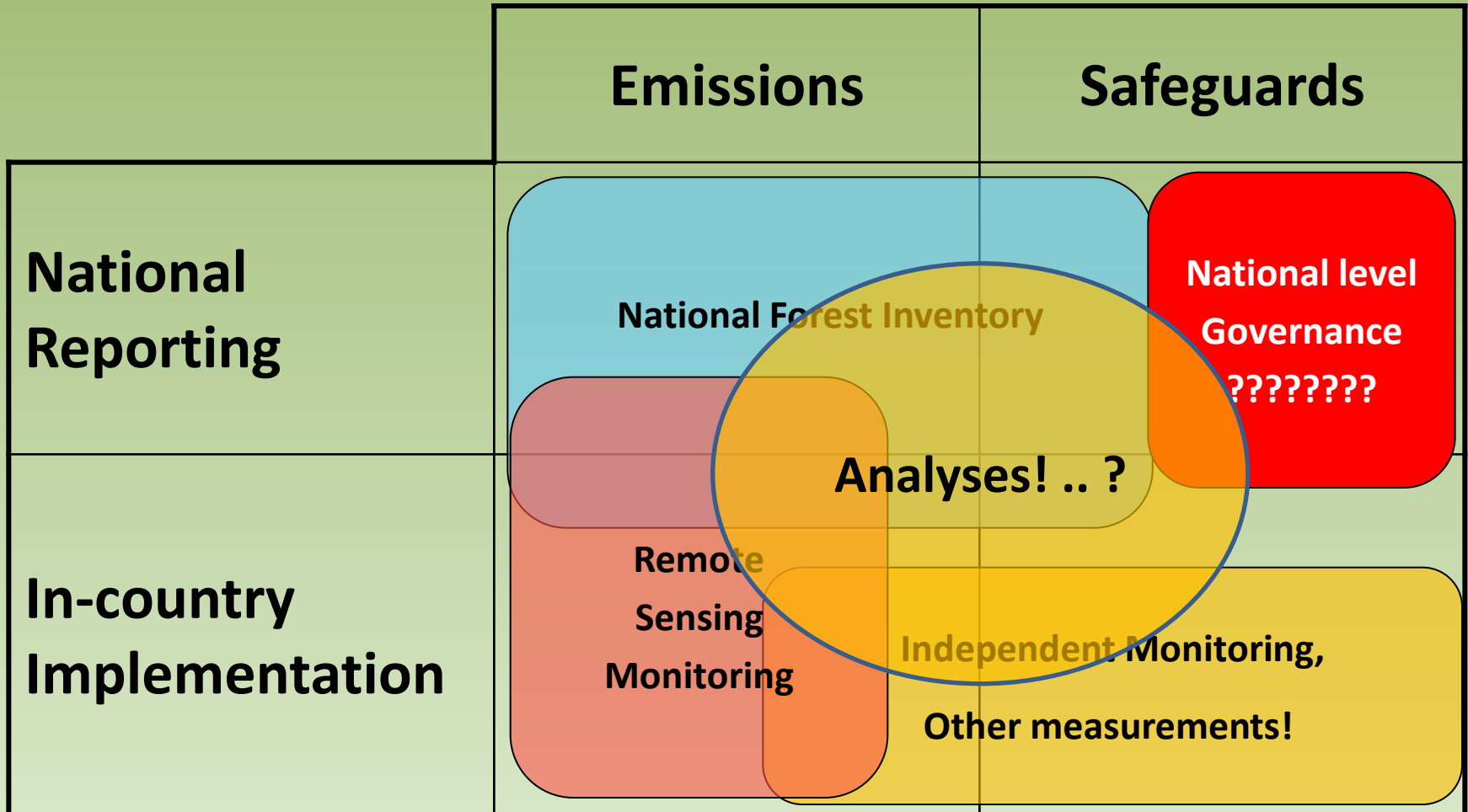- But it will give some understanding of the skills needed in the REDD+ countries.

Monitor – what?

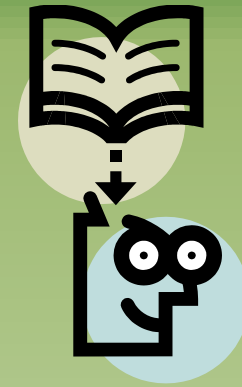|	**Emissions**	**Safeguards**
National Reporting	Deforestation Forest Degradation Conservation	Consistency Transparent & Effective Governance Rights of Communities
In-country Implementation	Sustainable management Enhancement	Stakeholder Participation Conservation and Biodiversity And more …

Monitoring – features

	Emissions	Safeguards
National Reporting	**Must have:** *High Accuracy, known Precision* **Expensive measurements -> *Sampling approaches*** **No need for full cover data**	
In-country Implementation	**Must have: Complete coverage -> Payments/Enforcement** **Must be low cost per measurement -> Remote sensing** **No need for high accuracy -> instead: proxies**	

A monitoring framework – approaches

	Emissions	Safeguards
National Reporting	National Forest Inventory	**National level Governance ????????**
In-country Implementation	Remote Sensing Monitoring	Independent Monitoring, Other measurements!

Analyses! .. ?

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- Will countries be guided by
  - competence/knowledge – or
  - the money flying by ….
- And how much will be achieved with the limited funds available????
- That – is very much up to you!
- You can change the future world!