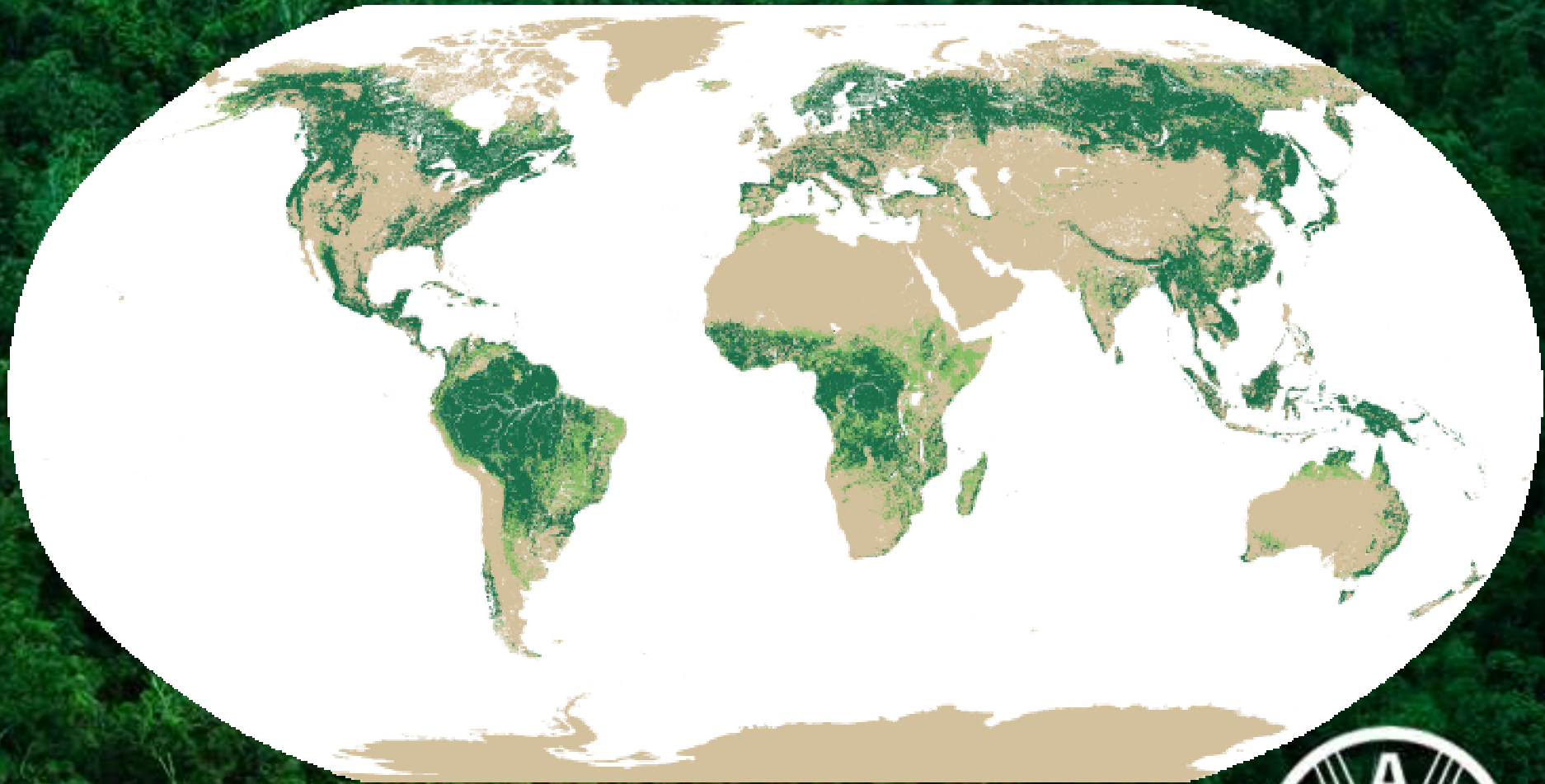


NATIONAL FOREST INVENTORIES

- STATUS, GAPS, AND WHAT WE DON'T KNOW



Adam Gerrand, FAO



Outline

1. Some excellent country examples will follow
-here focus on the gaps that countries cant report
2. Why are we doing this? and What should we measure?
3. Can we do it all with remote sensing?
4. Gaps in past forest data collection methods
5. Conclusions



Demand for forest information is increasing

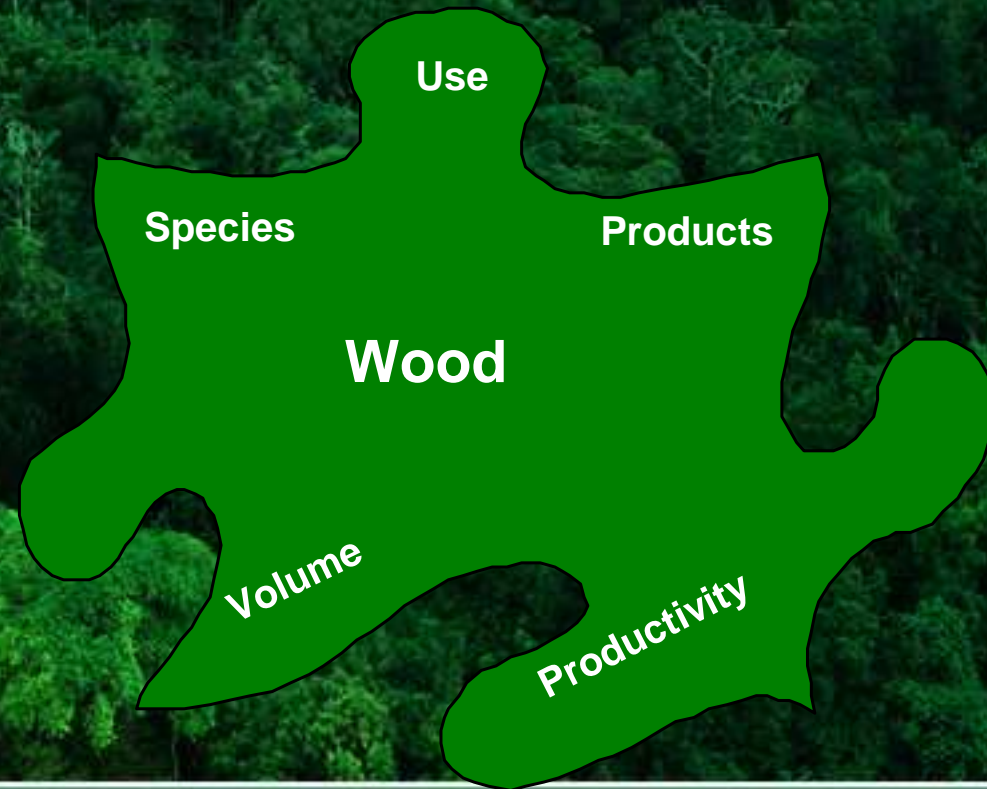
- Increasing environmental interest & public debate
 - (eg climate change, REDD, biodiversity)
- Inform policy development
- Support industry and economic development
- Evaluate management options, actions & impacts
- Meet national & international reporting obligations
- National and international responsibilities to monitor and manage our forests



What should we measure?

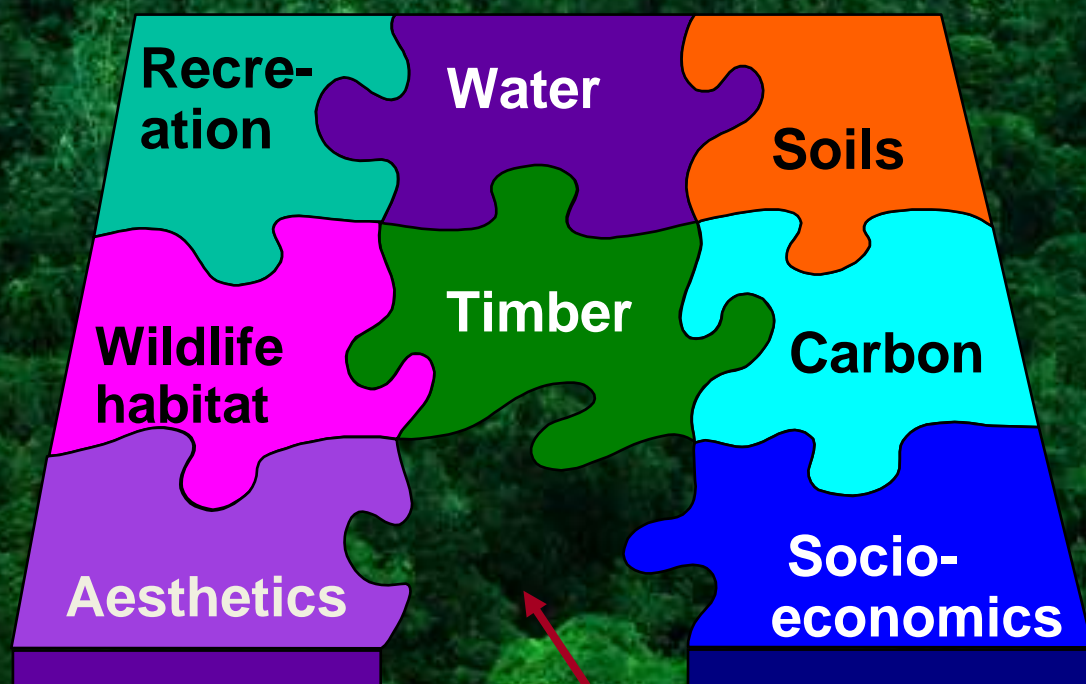
- The old paradigm was fairly simple:

**Manage and monitor
wood production forests**



Changing society values =>

**forest and land management becomes
more complex**



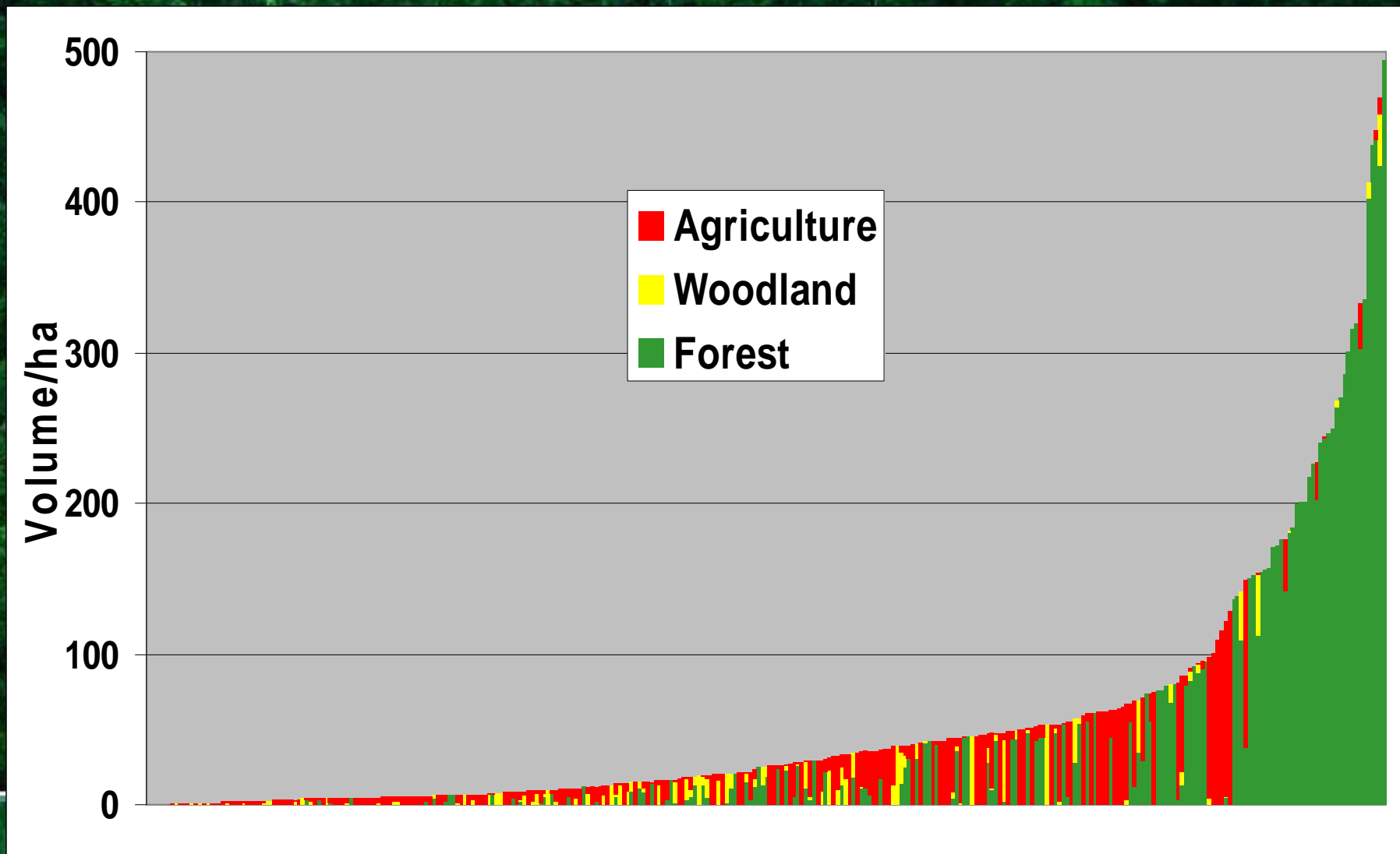
***Manage
and monitor
forest and
landscape
ecosystems
for a range
of values***

***New or future values
(e.g. climate change impacts)***



Where should we measure?

- Measure just the forested areas? Or all types of land covers / land uses?



Where should we measure?

- Drivers for forest change are often outside the sector
 - Understanding socio-economics and agricultural land use is vital to inform decisions on reversing forest loss
- Monitor the whole landscape is best if achievable
 - few countries but growing number
 - can sample and get good statistics, not necessary to do wall-to-wall mapping in most cases



Need to collaborate, link data and share knowledge better

- We need to build partnerships & networks, not empires
- Nationally link data and share knowledge with other agencies & disciplines
 - for efficiency of cost and effort, reduce duplication
 - for consistency of results (less time debating data, more on decisions)
 - for improved capacity and sharing techniques



Need to collaborate, link data and share knowledge better

- Globally
 - global conventions
 - Climate change (UNFCCC), Biological diversity (CBD),
 - FAO global Forest Resource Assessment www.fao.org
 - Global research / scientific community (LTER, & GEO)
 - NGO's such as WWF, Greenpeace
 - Even communities and individuals www.confluence.org
 - internet is not just downloading from top, but Web2 is providing increasing opportunities for bottom-up data input and aggregation at higher levels



Remote sensing or field data?

- Both have advantages and disadvantages, strengths and weaknesses

Strengths:

well understood,
reliable statistics
only way to get
some data e.g.
socio-economic

Weaknesses:

long, slow,
expensive, wet,
dirty, muddy etc

Strengths:

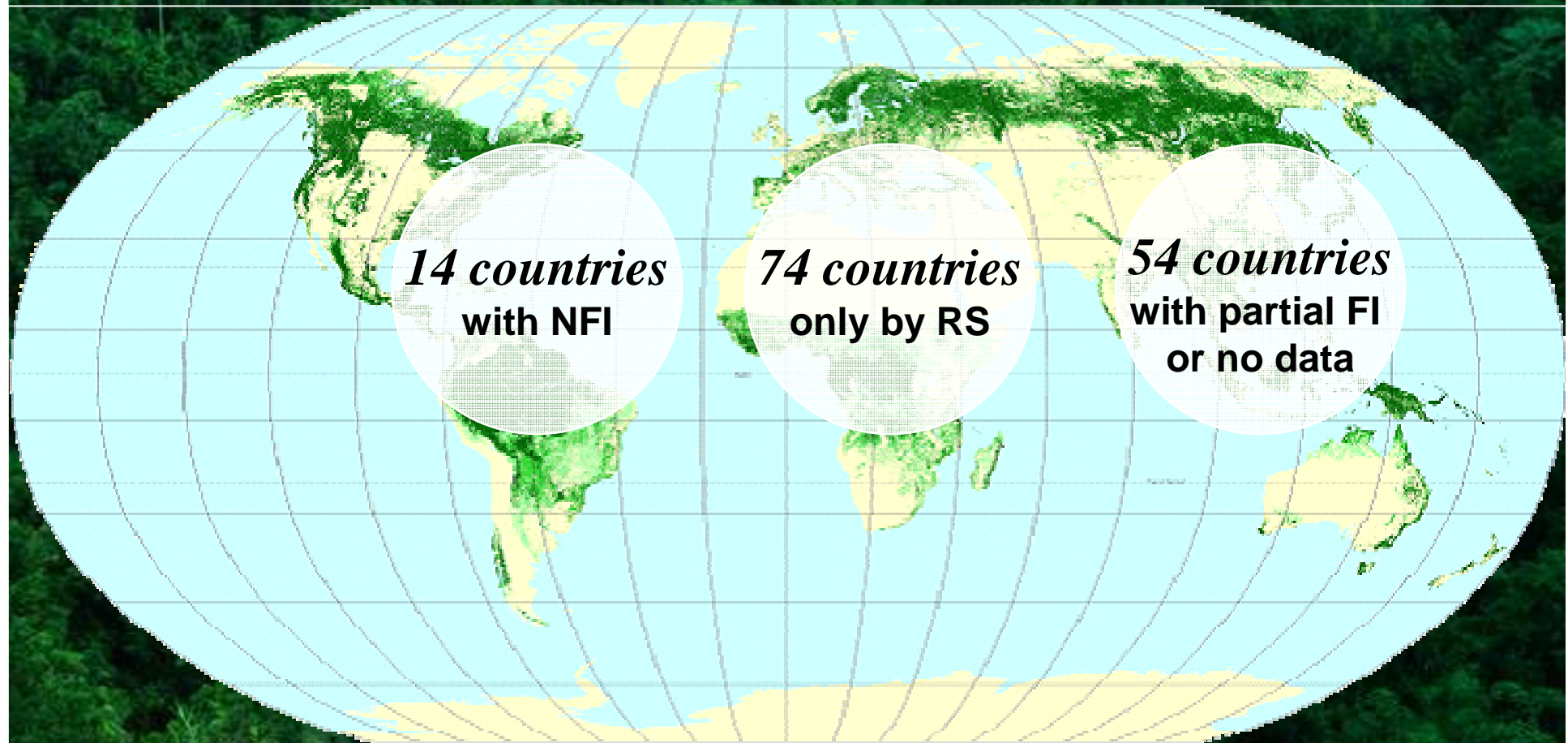
repeatable, cover
large areas fast,
can be very cost
effective

Weaknesses:

hard or expensive
to access data,
complex to
process.....etc

- Need a framework that combines both RS & field

Source data on forests in developing countries (FRA 2005)



Source: FAO (2006) Global Forest Resources Assessment 2005.

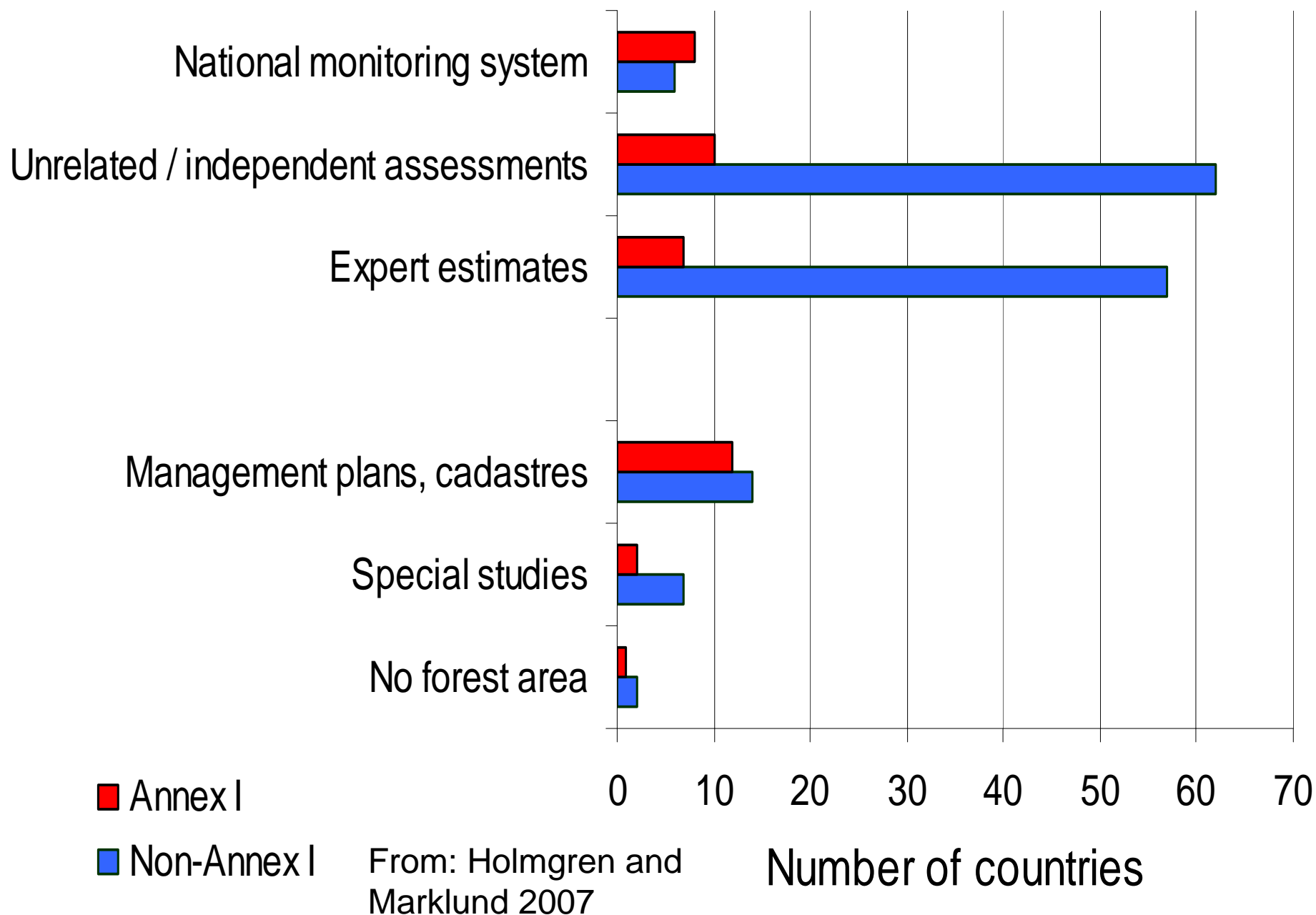


PROBLEM: POOR DATA AVAILABILITY AND QUALITY

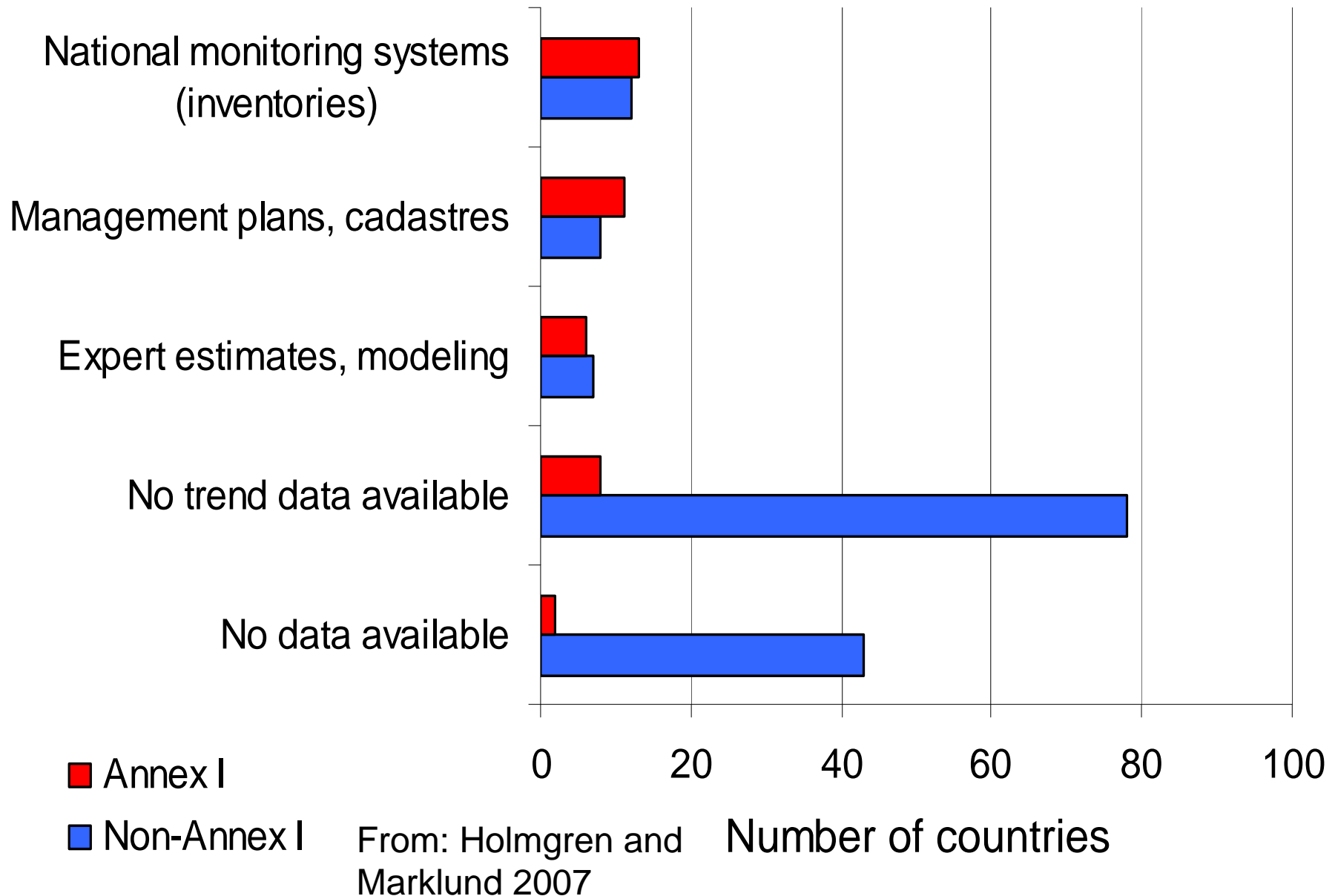
- FRA 2005 – the best global set so far
- Relatively good information on forest area – less so on net changes
- Poor data on past and present deforestation rates
- Some information on carbon stocks
- Poor data on carbon stock changes
- No reliable information on carbon emissions from deforestation



DATA QUALITY - FOREST AREA CHANGE



DATA QUALITY – CARBON STOCK CHANGES



Some conclusions

- Not many countries have good NFI data
- even fewer have data suited to monitoring the wide range of desired variables over long time
- Need a framework that combines both RS & field data
- Monitor the whole landscape is best if achievable – only few cases exist but growing
- hopefully some good models to draw on in the next few presentations....



Key elements for recommendations

1. Harmonised global forest monitoring framework to meet multiple needs
2. Support to national forest monitoring, assessment and reporting (on-ground)
3. Capacity building on remote sensing for forest monitoring



A photograph of a forest after a fire. The background is filled with numerous black, charred tree trunks standing vertically. The ground is covered in a layer of brown, fallen leaves and some charred branches. In the foreground, a single tree trunk is charred and stands upright. From the top of this trunk, a vibrant green fern with several fronds is growing, contrasting sharply with the dark, ashy environment. The overall scene conveys a message of resilience and new life emerging from destruction.

**Be positive – things are not as
black as they first appear**

Thank you