UNFCCC WORKSHOP ON REDUCING EMISSIONS FROM DEFORESTATION IN DEVELOPING COUNTRIES

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Data needs to support UNFCCC's efforts to reduce emissions from deforestation: FAO's experience

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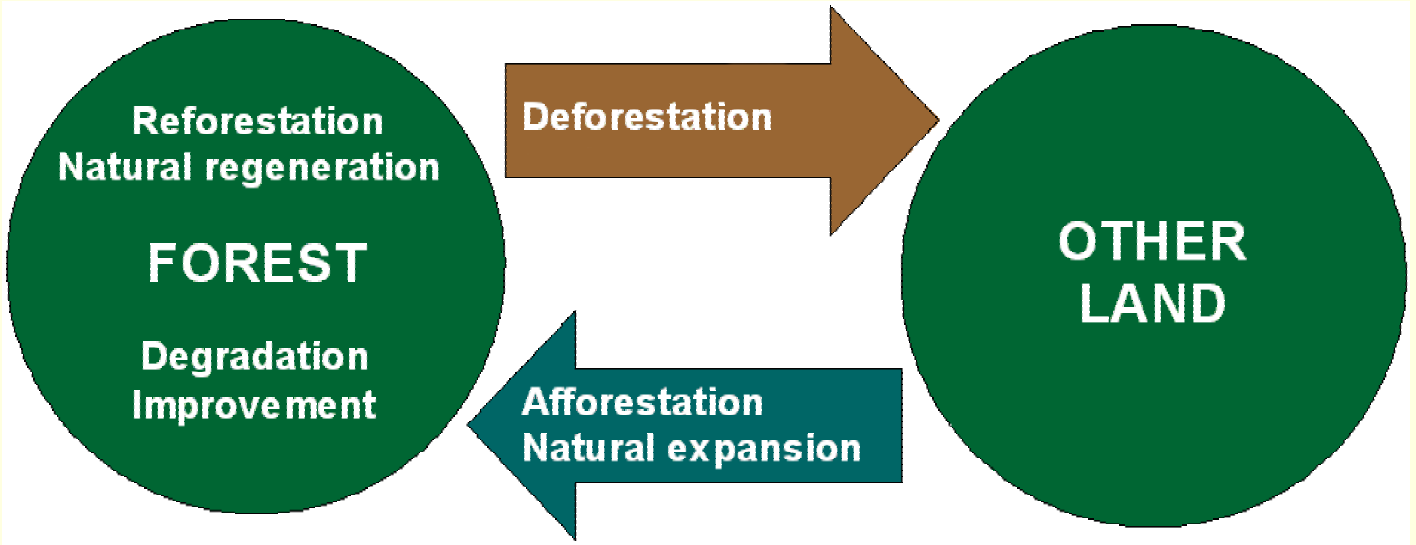
- FAO's global Forest Resources Assessment process and data
- Availability and quality of data related to forest carbon
- FAO's efforts to improve forest resource data
- Conclusions
- Proposal

Basic concepts

Forest change dynamics



Global forest resources assessments

- Global forest resources assessments (FRA) periodically carried out by FAO since 1946
- Forest area change estimated since FRA 1980
- FRA is based on information supplied by countries
- FRA 1990 and 2000 supplemented by independent remote sensing surveys of pan-tropical areas
- FRA 2005 is the most comprehensive global dataset on forest resources to date

Global Forest Resources Assessment 2005

Progress towards sustainable forest management

FAO FORESTRY PAPER

147

40

VARIABLES

229

COUNTRIES AND TERRITORIES

1990

2000

2005

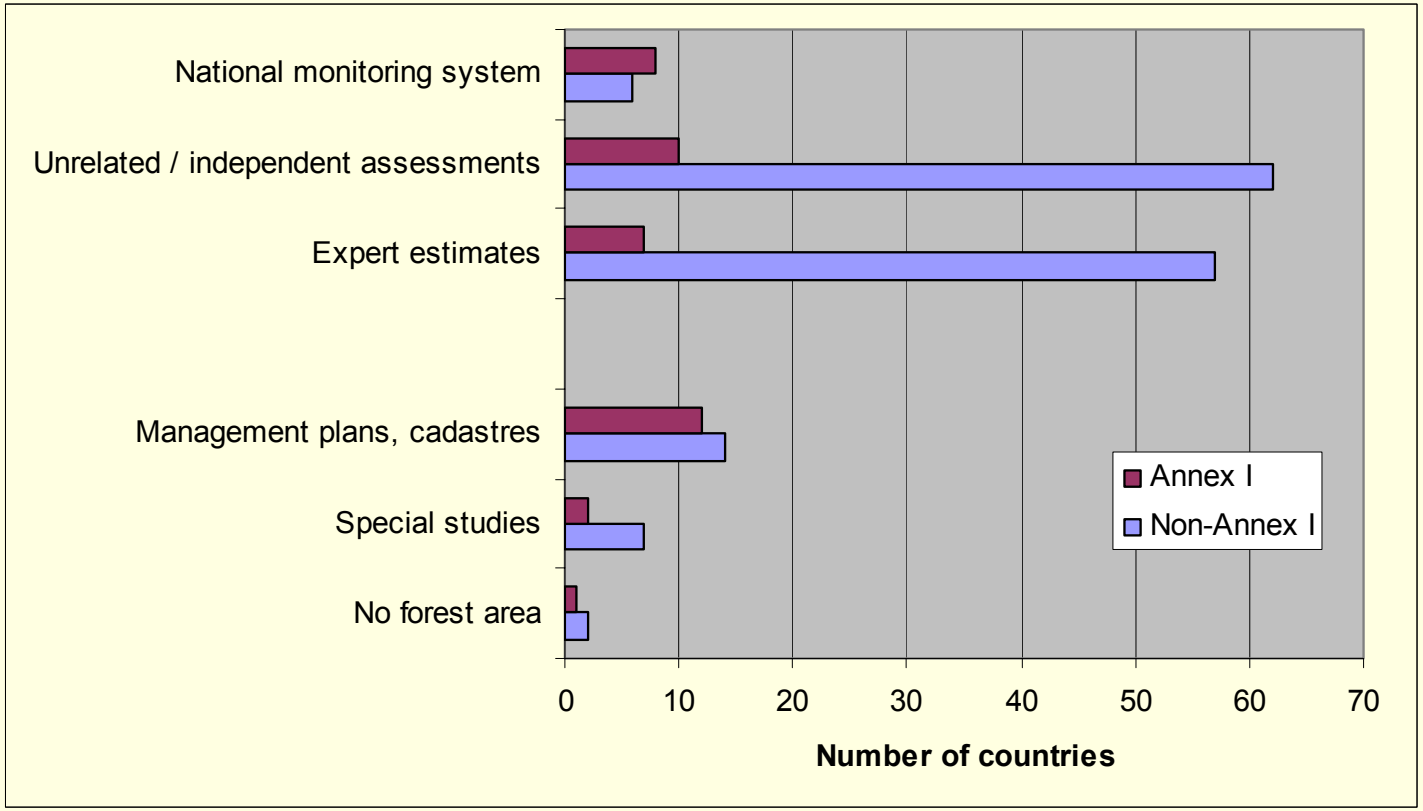
Data availability and quality

Sources of national data on forest resources

- National monitoring systems
- Series of independent / unrelated assessments
- Expert estimates
- Other (management plans, cadastres, etc.)

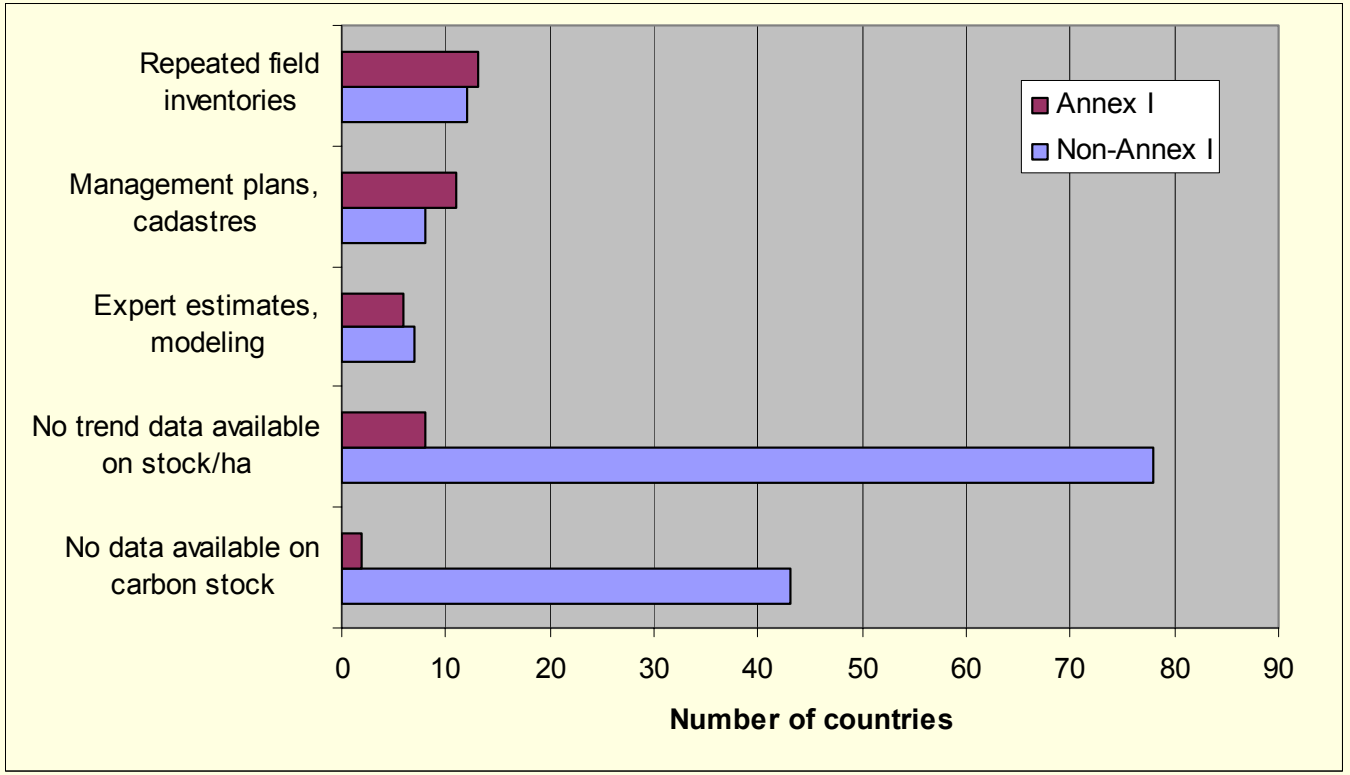
Data availability and quality

National data and methods for estimating forest area change

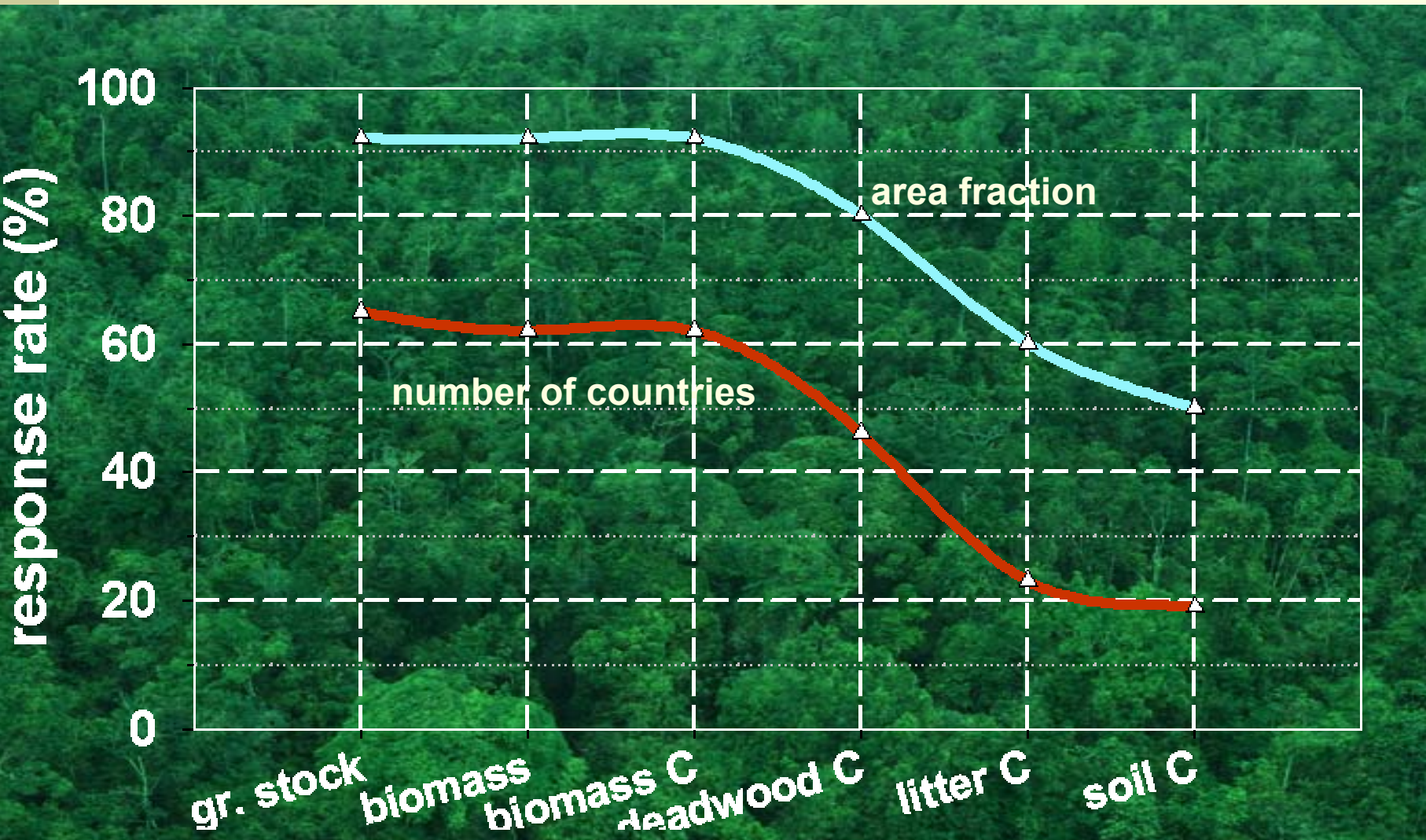


Data availability and quality

National data and methods used for estimating changes in carbon stock per hectare



Forest carbon: country responses



Conclusions on availability and accuracy of data for RED-DC

- Variable quality and reliability of country data
- Majority of countries lack good forest inventory data; rely on use of conversion factors and default values
- Weak trend data on growing stock: most countries do not have inventory data at two or more points in time
- Limited reporting on carbon in soil and litter

- Repeated national forest inventories and field measurements are essential for making good quality trend estimates of carbon stock per hectare

Improving data availability and quality

FAO's efforts to help improve forest data

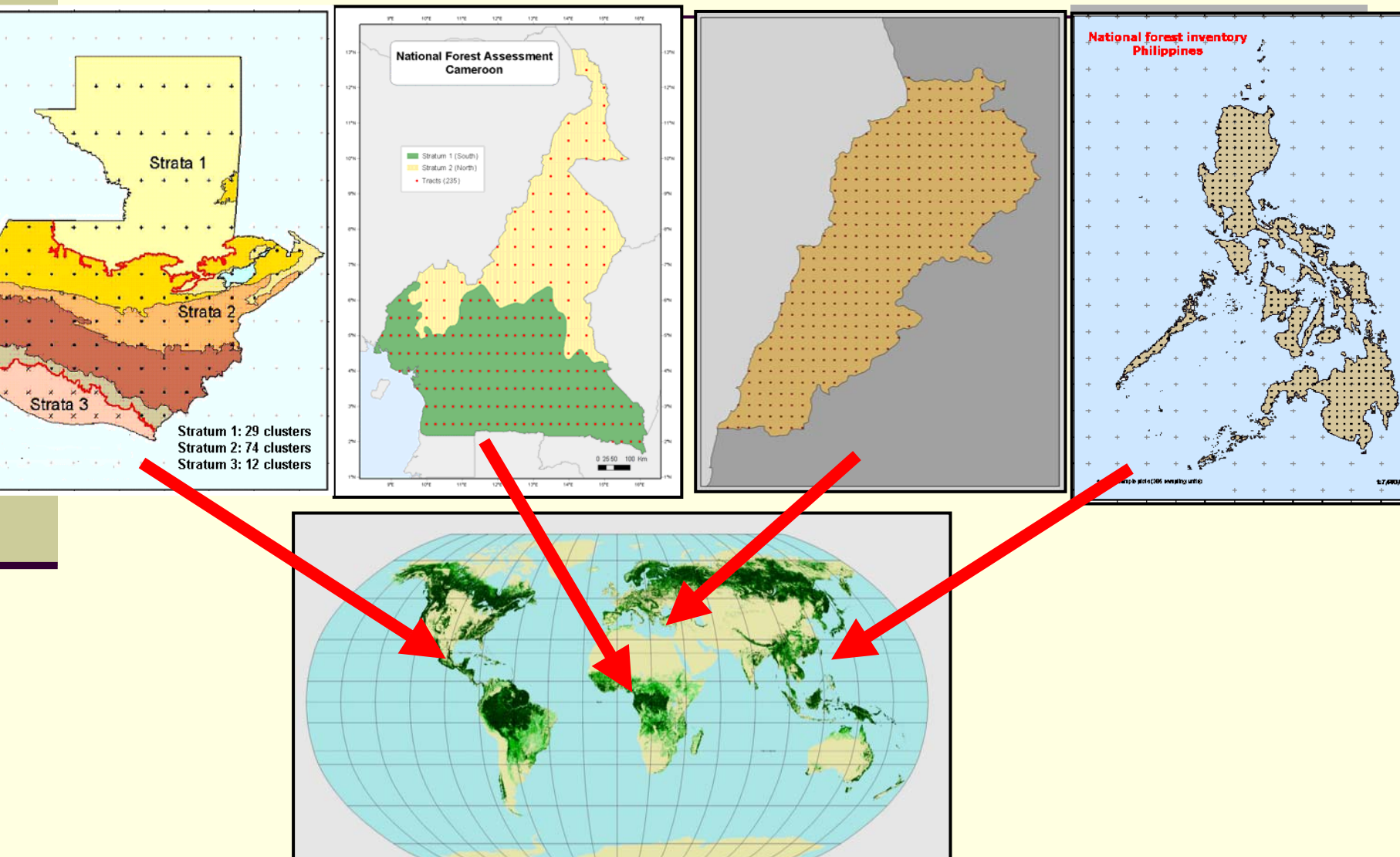
- Set up monitoring systems at national level. This includes national forest inventories; many parameters require field measurements to be monitored
- Set up robust and cost-efficient global / regional monitoring systems that can be used for verification purposes
  - Establish a methodological framework ensuring compatibility / comparability between national & global/regional monitoring systems
  - Improve coordination and collaboration between actors involved in global / regional monitoring and support to countries

Support for national forest assessments

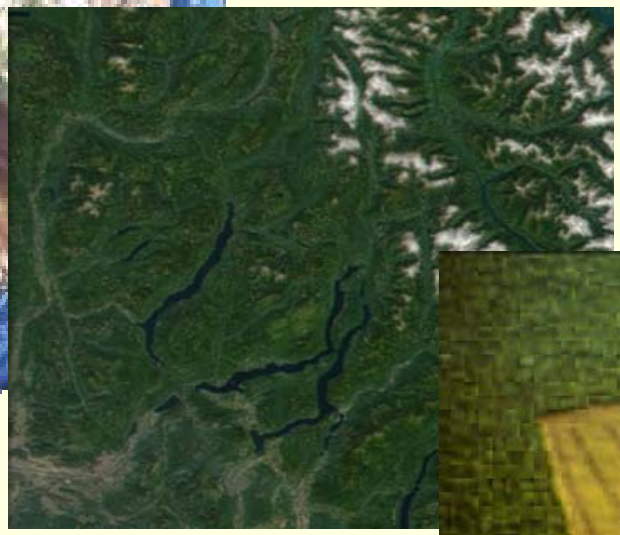
National Forest Assessments

- FAO is providing support to 12 countries for national forest assessments; requests from 20 more
- Capacity strengthening in NFA design and implementation
- NFAs use same sample grid as FRA 2010 remote sensing assessment
- “NFA 500” approach – 500 days, up to 500 variables, $500,000. Quick and cost effective
- Countries will be able to generate statistics on status and trends of national carbon stocks and distribution among different land uses/vegetation types

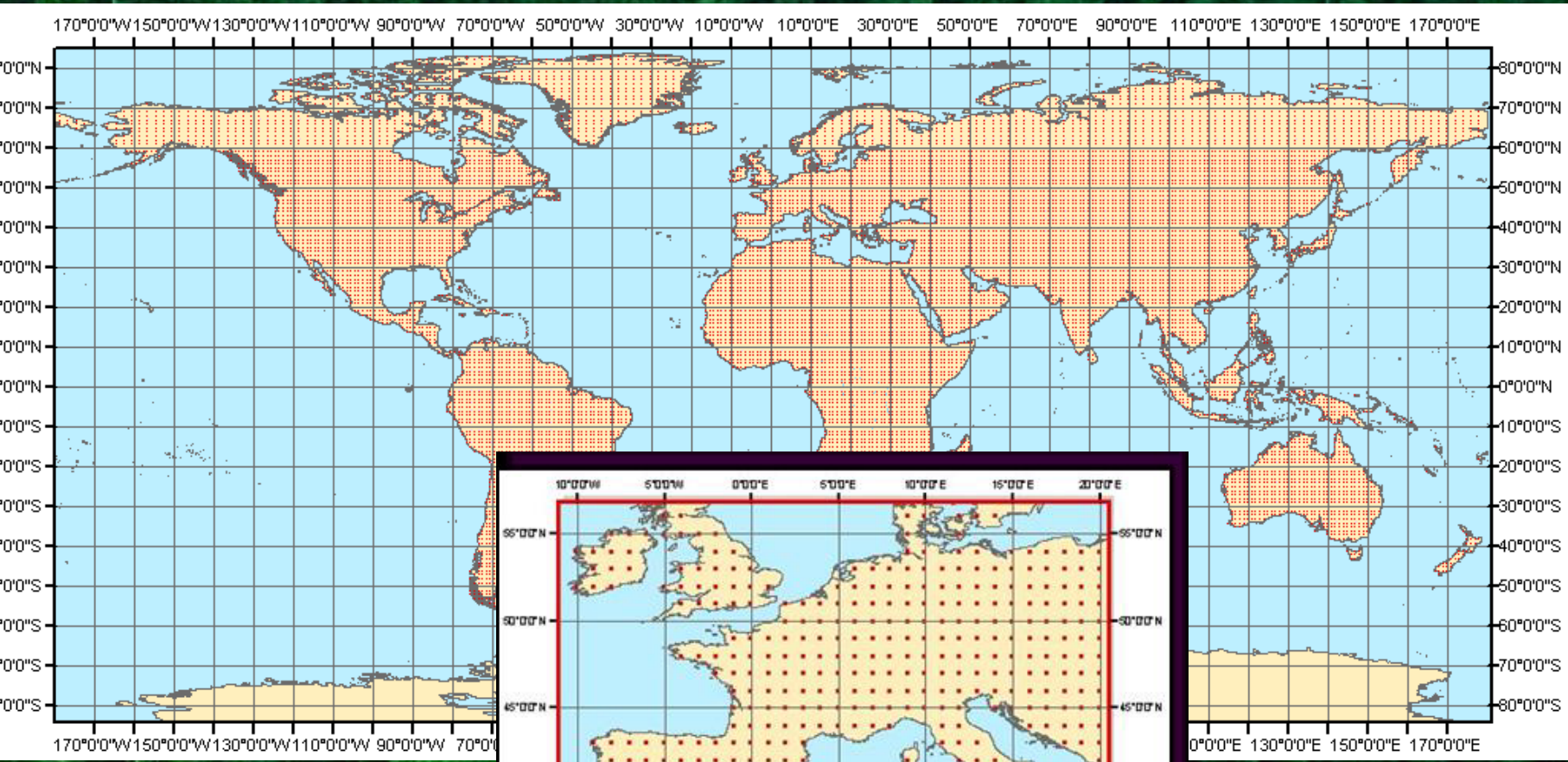
Completed projects

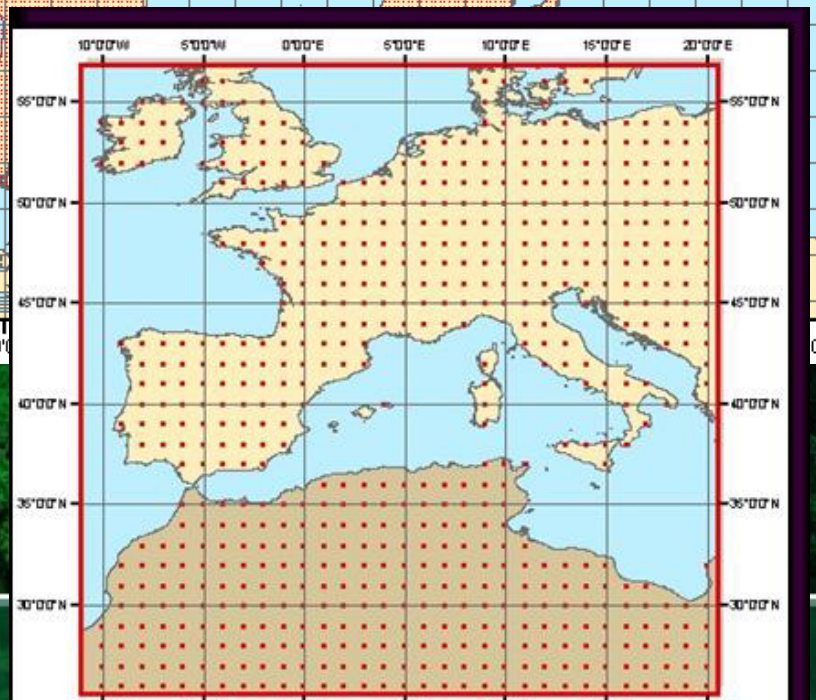


FRA 2010 Remote Sensing Survey



PROPOSED SAMPLING DESIGN





Scope and overall purpose

- 9,000 samples, 4 dates, standard methodology, maps
- Forest cover and land use change information (deforestation and possibly fragmentation and forest degradation)
- Information consistent over time and space
- Provides means of verification at global & regional levels
- Sufficient to provide deforestation estimates for large countries. Smaller countries can add additional sample plots to enable reliable estimates.
- Complements national forest assessments supported by FAO: provides a methodology for enhanced NFAs
- Strengthens country capacity

Partners

- **Countries**: national agencies, regional hubs
- FAO
- UNEP
- NASA
- World Bank
- Heinz Center
- JRC
- Universities (SDSU, UMD, Jena, Boston, Mississippi)
- USGS/EROS data center
- WRI, CI
- GOFC-GOLD
- GEO Secretariat
- Open to others

Conclusions: estimating emissions from deforestation data

- Assessment of deforestation trends is feasible and cost effective: measured by remote sensing combined with field measurements
- Deforestation is only an indicator of emissions: degradation not counted and soil changes underestimated
- FRA 2010 will provide data on deforestation trends at regional, biome and global levels
- FRA 2010 data will be sufficient to assess national forest cover status and trends for large countries
- Smaller countries can supplement the number of sample points on the FRA 2010 grid to get the data

Conclusions: estimating emissions from carbon stock changes

- Change in forest carbon stocks best indicator of emissions, but is not measurable by remote sensing alone; field measurements are needed
- Trend data for baseline setting are weak
- Collection of forest carbon data as part of national forest resource assessments is optimal but requires capacity strengthening and funds.

Proposal: feasibility study

Study of economic and technical feasibility of options for an international arrangement on reducing emissions

- Global and country level analyses of the options: feasibility and potential impact
- Country studies to be carried out by the countries with assistance, as needed
- Results to be provided to upcoming sessions of SBSTA for consideration

Thank you