National Forest Monitoring and National Forest Inventory at FAO

FAO Forestry

www.fao.org/forestry

National Forest Monitoring (NFM)

- Forest Monitoring has a **long history** at FAO

  - Global Forest Resource Assessment (FRA)
  - National Support

- Forest Monitoring has **evolved** through time:

  - Timber inventory
  - Biodiversity and socio-economic information
  - Most recently:
    - REDD+ National Forest Monitoring Systems (NFMS)
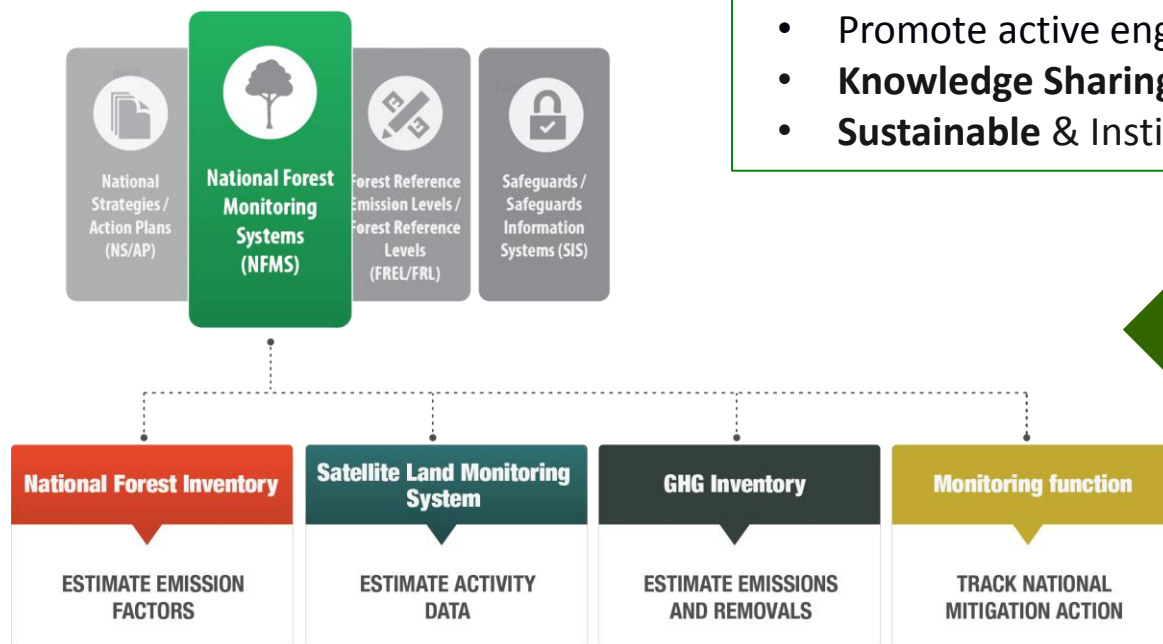   - Measurement Reporting and Verification (MRV) of REDD+ actions

- Over-riding **objective**: Strengthen national capacities for long term forest monitoring

- Over-riding **motivation**: Better information leads to better decisions, which leads to better actions in the forest sector and beyond

NFM country support

Key principles

- **National** ownership
- Alignment with **UNFCCC**
- **Step-wise** approach -> improvement over time
- Build upon **existing capacities**, data and systems
- Use of **open-source**, freely available data and tools
- **Strengthening** of national capacities
- Enhance **cross-sectorial** approach
- Promote active engagement of all **stakeholders**
- **Knowledge Sharing** (e.g. south-south collaboration)
- **Sustainable** & Institutionalized

National Strategies / Action Plans (NS/AP)

National Forest Monitoring Systems (NFMS)

Forest Reference Emission Levels / Forest Reference Levels (FREL/FRL)

Safeguards / Safeguards Information Systems (SIS)

National Forest Inventory — ESTIMATE EMISSION FACTORS

Satellite Land Monitoring System — ESTIMATE ACTIVITY DATA

GHG Inventory — ESTIMATE EMISSIONS AND REMOVALS

Monitoring function — TRACK NATIONAL MITIGATION ACTION

Support to *REDD+ countries on NFMS*

But also:

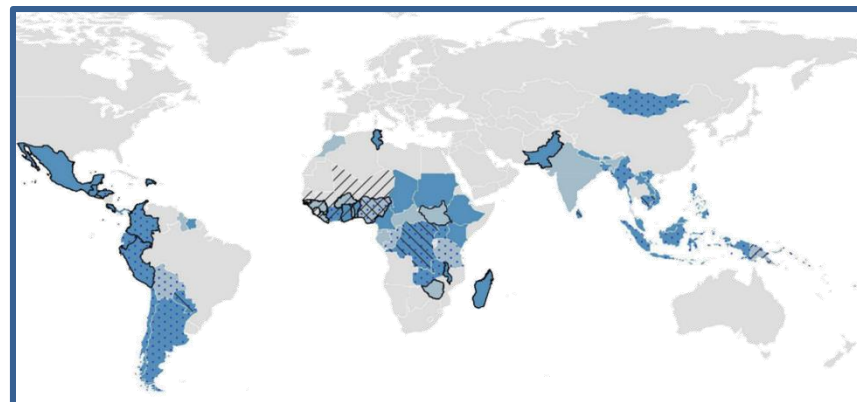Broad technical support on NFM to *FAO member countries*

NFM country support

NFM team provides expert support and capacity building to over 70 countries:

Global, regional and national programmes

- National Forest Inventory
  - *Active support to 36 countries*

- Satellite Land Monitoring Systems
  - *Active support to 40 countries*

- Forest Reference (Emission) Levels and GHGi
  - *Active support to 20 countries*

Norad

Supported by:

Federal Ministry for the
Environment, Nature Conservation,
Building and Nuclear Safety

based on a decision of the German Bundestag

UN-REDD PROGRAMME

WORLD BANK GROUP

USAID
FROM THE AMERICAN PEOPLE

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NFM tools

Open Foris - Free and Open Source Tools and Methods for Data Collection, Analysis and Reporting

Collect   Collect Mobile   Collect Earth   Calc   Geospatial Toolkit

http://www.openforis.org/

SEPAL Cloud-based Processing

Food and Agriculture Organization of the United Nations

SEPAL
SYSTEM FOR EARTH OBSERVATION DATA ACCESS, PROCESSING & ANALYSIS FOR LAND MONITORING

https://sepal.io/
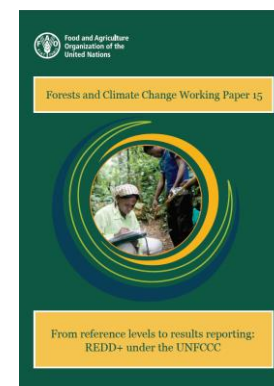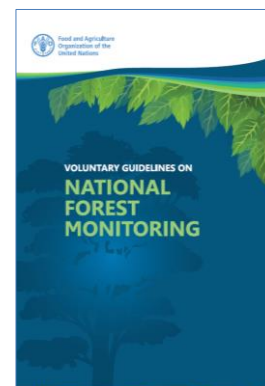
NFM publications

Recent publications

- *From reference levels to results reporting: REDD+ under the UNFCCC*

- *The work of FAO to enhance national capacities to report on climate change*

- *Voluntary Guidelines for National Forest Monitoring*

- *Knowledge Reference for National Forest Assessments*

Forthcoming publications

- *National Forest Monitoring Systems for REDD+*
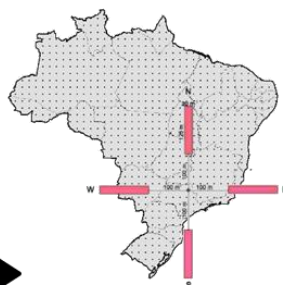
- *Scientific papers & proceedings*

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Phases of FAO NFI support

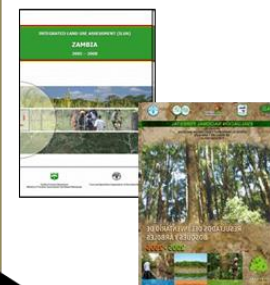**Information Needs** → **Methodology** → **Implementation** → **Data mgmt. &analysis** → **Reporting**

- Logistics
- Information System *openforis*
- Data collection

FAO is currently supporting 16 countries in forest field data collection through National Forest Inventory

Through this process improved Emission Factors are generated for UNFCCC reporting

Methodologies and technology for NFMS

Countries require easy and inexpensive access to technology and tools to generate their own AD

Experience	Lessons learned
➢ Access to technology is quite limited, particularly for remote-sensing technologies and data	➢ Not promote specific tools/data sets but provide overview of available options
➢ The basics are often missing (e.g. steady electricity, high-speed internet, performing computers, software packages)	➢ Help governments make informed decisions
➢ Certain technologies are costly (e.g. HR images, Lidar, commercial software packages), limiting large-scale deployment and sustainability	➢ Support country decisions and tailor best available approaches while maintaining consistency and comparability of results
➢ Ownership of data is crucial	➢ Heavy reliance on complex & costly technology may not be in all developing countries' best interest
	➢ Open source, free software and global or nation data sets that meet REDD+ requirements are available. If not, new tools can be developed

Thank You!

Financial support provided by