



**UN-REDD**  
PROGRAMME

# National Forest Monitoring Systems: M & MRV in the context of REDD+ Activities

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# The purpose

This document builds on the brief paper presented at the PB7 (UNREDD/PB7/2011/13)

The purpose of the document is to describe:

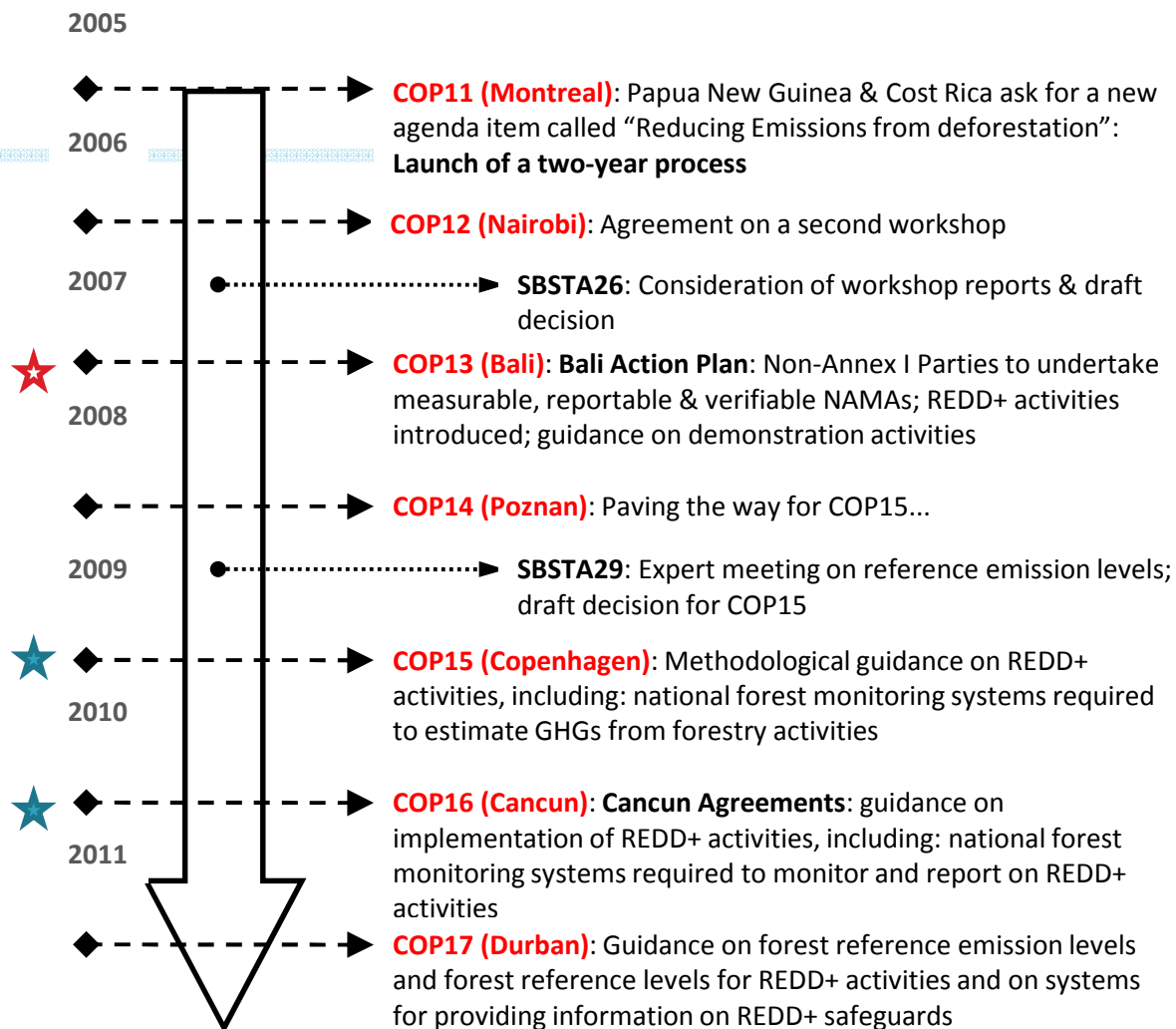
- The elements in NFMSs as they relate to REDD+ under the UNFCCC,
- The Programme approach to address M & MRV country needs, taken into account UNFCCC requirements and IPCC methodological guidance.

The approach aims to allow the end-user to consider the implications of, and steps involved in, the development of a NFMS.



# REDD+ under the Convención

The UNFCCC  
guidance.....





# REDD+ Activities

*“Encourages developing country Parties to contribute to mitigation actions in the forest sector by undertaking the following activities, as deemed appropriate by each Party and in accordance with their respective capabilities and national circumstances:*

- *Reducing emissions from deforestation;*
- *Reducing emissions from forest degradation;*
- *Conservation of forest carbon stocks;*
- *Sustainable management of forests;*
- *Enhancement of forest carbon stocks.”*



# REDD+ under the UNFCCC: The Cancun Agreements (Decision 1/CP.16)

## Elements requested to be developed

*“....requested developing country Parties aiming to undertake the REDD+ activities, in the context of the provision of adequate and predictable support, including financial resources and technical and technological support, in accordance with national circumstances and respective capabilities, to develop:*

- A national strategy or action plan*
- Forest reference emission level and/or forest reference level*

MRV

***A robust and transparent national forest monitoring system for the monitoring and reporting REDD+ activities***

SIS

*A system for providing information on how the safeguards are being addressed and respected”*





# NFMS in the context of MRV (Decision 4/CP.15)

*“...establish, according to national circumstances and capabilities, robust and transparent national forest monitoring systems and, if appropriate, sub-national systems as part of **national forest monitoring systems** that:*

- Use a combination of remote sensing and ground-based forest carbon inventory approaches for estimating, as appropriate, anthropogenic forest-related greenhouse gas emissions by sources and removals by sinks, forest carbon stocks and forest area changes;*
- Provide estimates that are transparent, consistent, as far as possible accurate, and that reduce uncertainties, taking into account national capabilities and capacities;*
- Are transparent and their results are available and suitable for review as agreed by the Conference of the Parties;”*

*“Taking note of, if appropriate, the guidance on consistent representation of land in the Intergovernmental Panel on Climate Change Good Practice Guidance for Land Use, Land-Use Change and Forestry.”*



## Approach for a NFMS

- The paper outlines how to implement a NFMS in ways that will allow countries to comply with the REDD+ requirements through a sustainable stepwise approach, and for incremental efforts to improve performance in recognition of countries' varied capabilities and national circumstances.
- Recognize that a NFMS can serve simultaneous functions: a 'monitoring' function and a 'Measurement, Reporting and Verification (MRV)'.



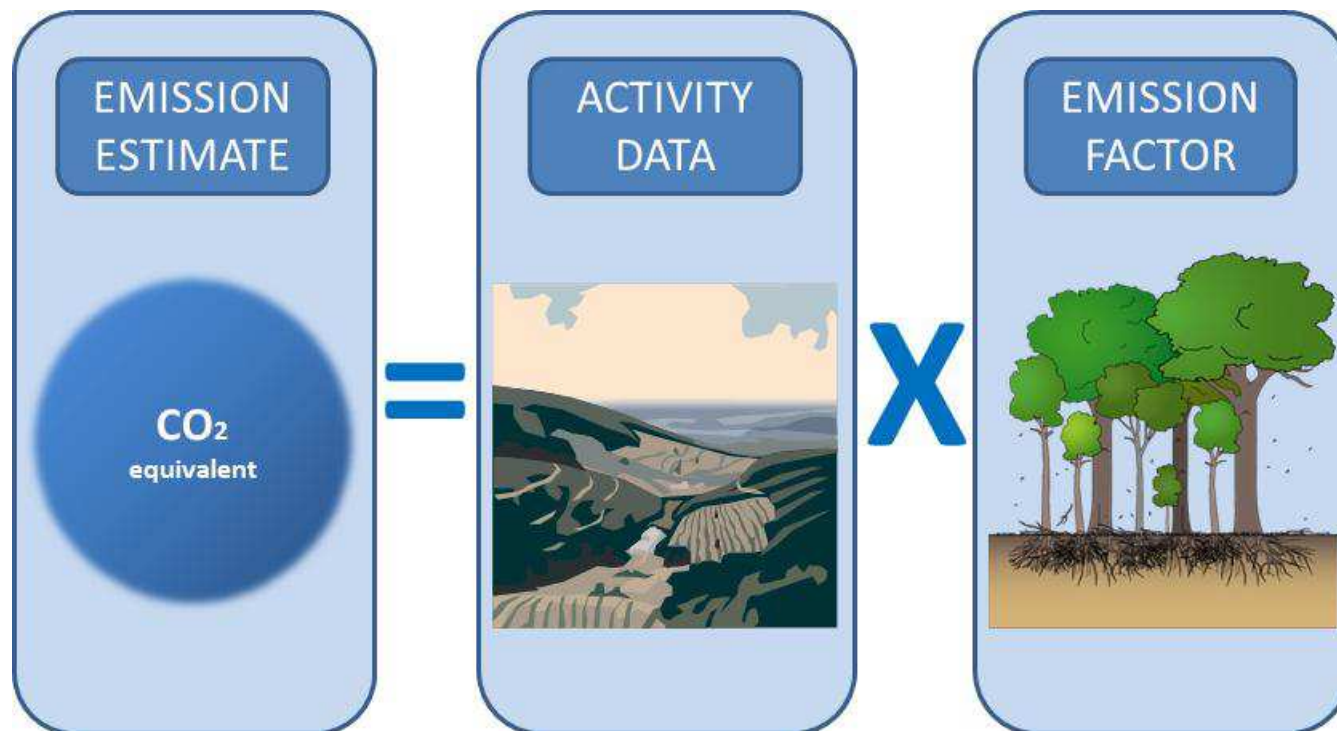
## NFMS functions

- The “monitoring” function of the NFMS is primarily a domestic tool to allow countries to assess a broad range of forest information, including in the context of REDD+.
- The “MRV” function for REDD+ refers to the estimation and international reporting of forest emission and removals.





Methodological approach of the IPCC to calculate human-induced GHG emissions by sources and removals by sinks in forest land





# The pillars

The monitoring function can be defined broadly, depending on national circumstances

The MRV function will imply three main components/pillars:

- to collect AD, the satellite land monitoring system (SLMS)
- to gather information for obtain emission factors, the national forest inventory (NFI)
- to provide emissions and removals estimates, the national GHG inventory.



# Functions of the NFMS

## NATIONAL FOREST MONITORING SYSTEM (NFMS)

### MONITORING FUNCTION

Remote Sensing

WEB Interface

Community Monitoring

Other monitoring systems  
related to forest

### MRV FUNCTION

Satellite Land  
Monitoring System

National Forest  
Inventory

GHGs Inventory

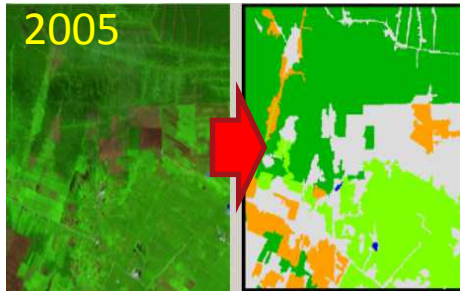
System to  
provide  
information on  
Safeguards  
(SIS)



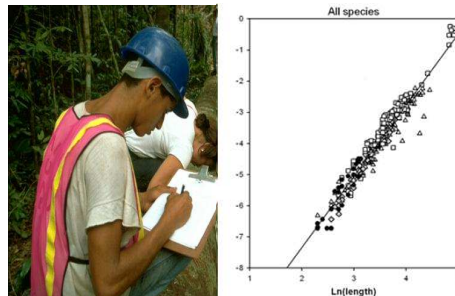
# MRV vs. the Pillars

M

ACTIVITY DATA  
(SLMS)

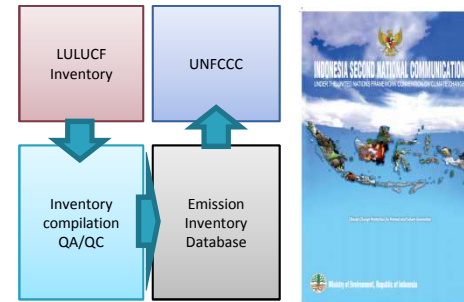


EMISSION FACTORS  
(National Forest  
Inventories)



R

GHGs inventories



V



UNFCCC secretariat  
Roster of Experts



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## Phase approach vs NFMS

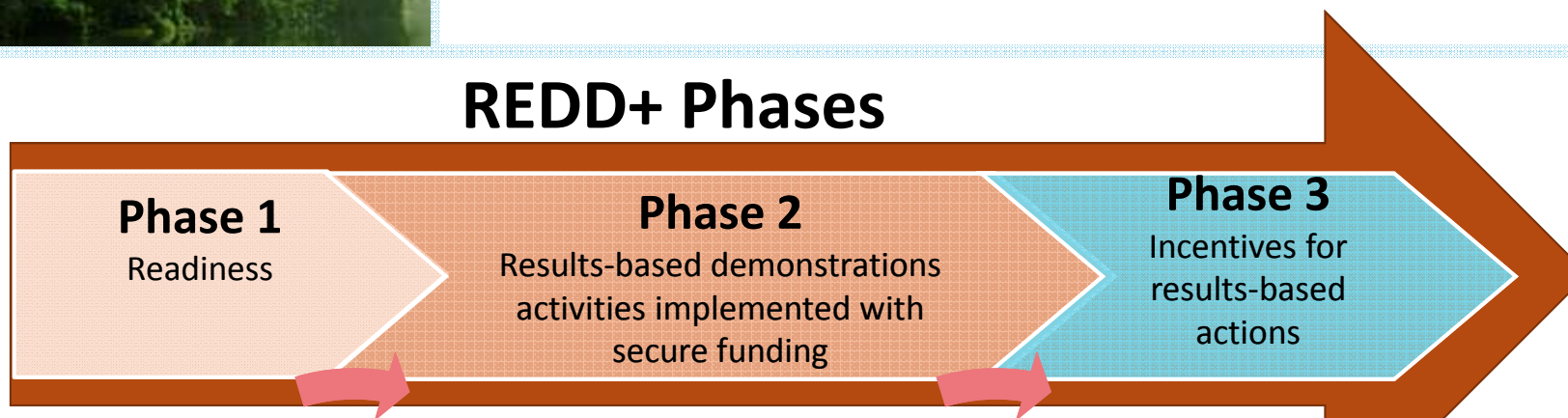
The countries are implementing REDD+ in three phases, in accordance to Decision 1/CP.16, in which the NFMS will have to be developed and progressively deploying its two functions through the operationalization of the three pillars.



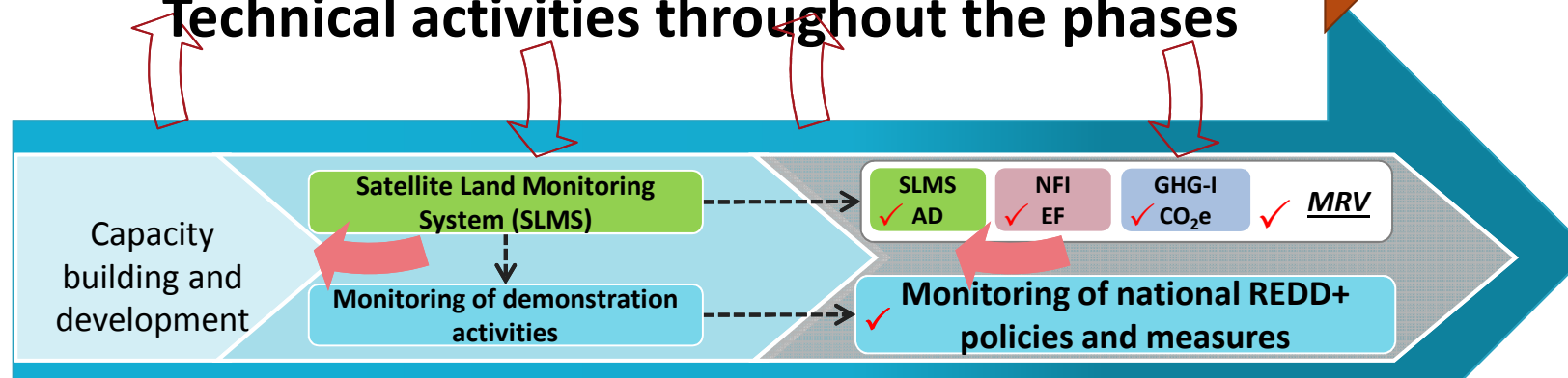


# Phased implementation of the NFMS

## REDD+ Phases



## Technical activities throughout the phases



## Monitoring and MRV Phases





## The Programme approach

- Development, implementation and operationalization of the NFMS
- To promote:
  - » National Ownership
  - » Alignment with the UNFCCC process
  - » Transparency, robustness and suitable to be improved (*stepwise approach*)
- The NFMS built upon existing capacities and systems in place using free tools
- To strength national capacities

Thank you



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