

WHAT CAN NATIONAL FOREST MONITORING SYSTEMS DO?

– Development of NFMS and MRV Systems For REDD+ –

Dr. Hwan-Ok Ma (ITTO)
● Mr. Kei Suzuki (JAFTA/JICA)

Wednesday, 28th November,
20:15 - 21:45
Room 7



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Keywords

- National Forest Monitoring System
- MRV
- REL/RL
- National/Sub-national/Local/Community
- Capacity building
- Discussions based on the results and experiences from countries

Program

Time	Title	Presenter
20:15 - 20:30	What can National Forest Monitoring Systems (NFMS) do? - Development of NFMS and MRV systems for REDD+ -	Dr. Mitsuo Matsumoto (<i>Director, REDD R&D Center, FFPRI</i>)
20:30 - 20:40	Potential of integrating Community Based Forest Monitoring into NFMS	Dr. Makino Yamanoshita (<i>IGES</i>)
20:40 - 20:55	Challenges of Vast Land and Inaccessibility: Development of PNG Forest Resource Information and Monitoring System – Combined approach of Ground-based Survey and Remote Sensing	Mr. Gewa Gamoga and Mr. Constin Otto Bigol (<i>JICA/PNGFA Project</i>)
20:55 - 21:05	National Monitoring System for the Effective Conservation and Sustainable Management of Forest Resources in Thailand	Dr. Hwan-Ok Ma (<i>ITTO</i>)
21:05 - 21:20	Development of NFMS in Vietnam -Cooperation between Central and Region in MRV system-	Mr. Kei Suzuki (<i>JAFTA/JICA</i>)
21:20 - 21:45	Q&A / Discussion What can National Forest Monitoring Systems (NFMS) do?	<i>Facilitator:</i> Dr. Mitsuo Matsumoto (<i>FFPRI</i>)

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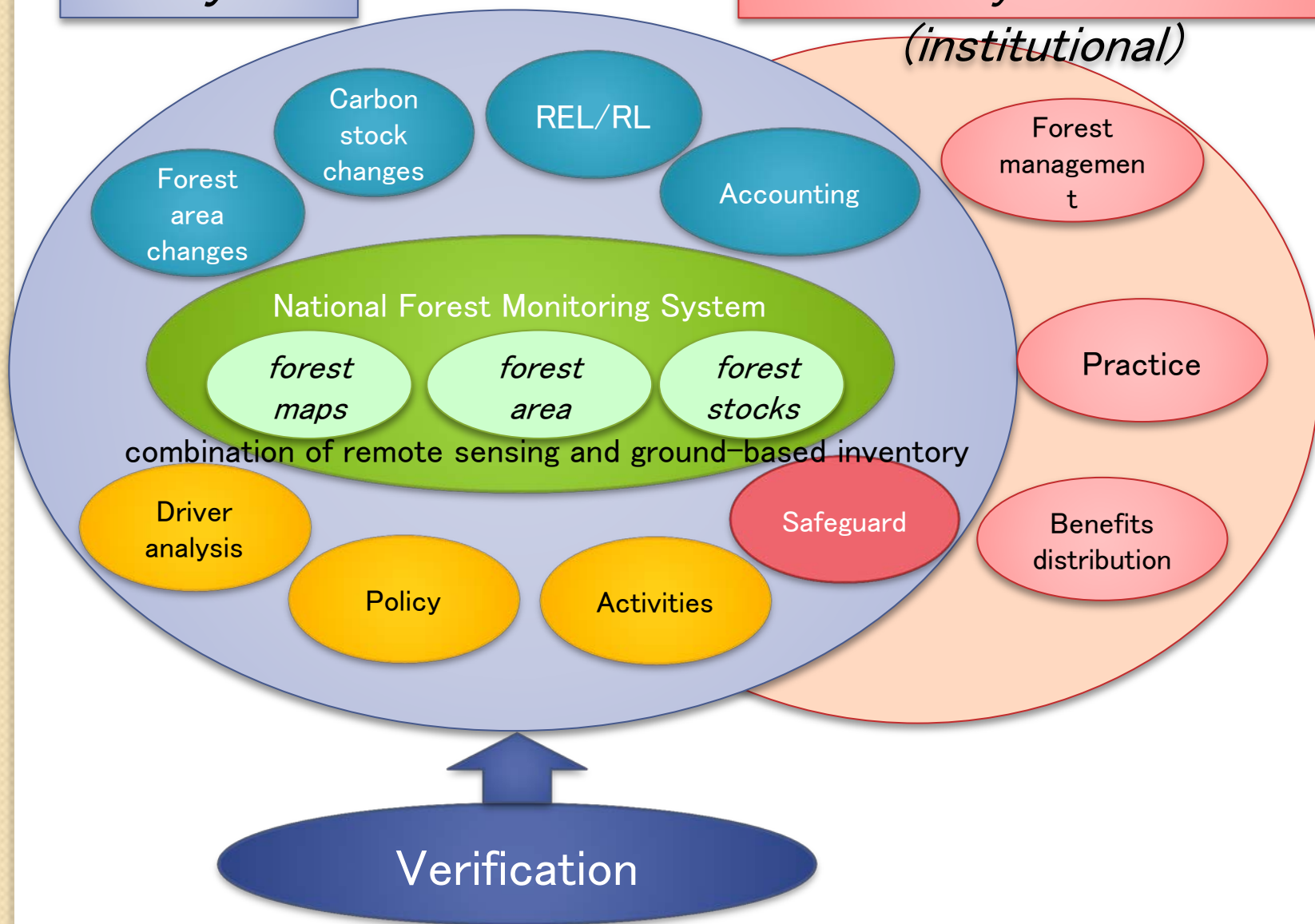
NFMS and MRV system

- National Forest Monitoring System
 - Monitoring forests
- MRV system
 - Measurement, Reporting and Verification
- Are they same or different?

MR system

*Forest Management
System*

(institutional)



Activities in each phase

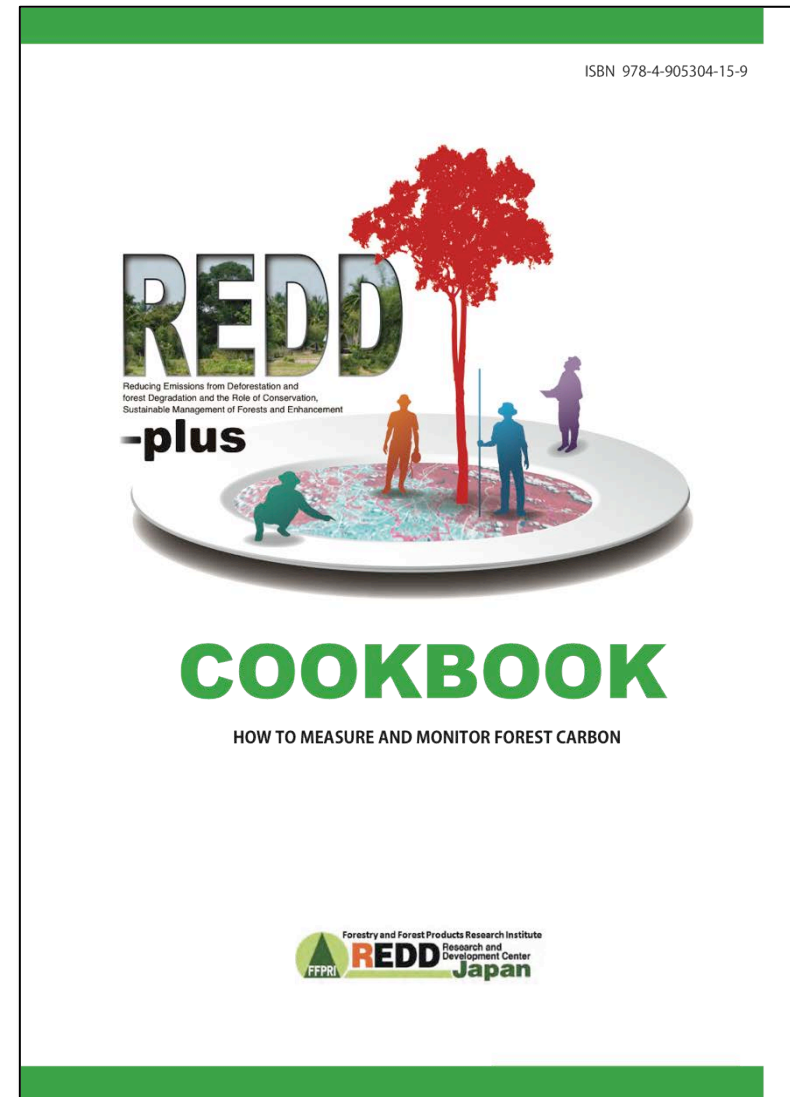
- 1st Phase : Readiness
 - NFMS
- 2nd Phase : Implementation
 - NFMS, MR, FMS
- 3rd Phase : Full implementation
 - NFMS, MRV, FMS

Capacity building

- NFMS and MRV systems
- Institutions / Facilities / Equipment
- Human resources
- Training
- Needs of Text books for managers and experts
- REDD-plus Cookbook

REDD-plus Cookbook

- Technical guidance on REDD-plus for policy makers, organizations and experts
- English & Japanese
- 151 pages
- 36 Recipes
- Reference guide
- Written by 28 experts



Target of the “Cookbook”

- **“Introduction”** is designed for the policy makers and their partner organizations working for the introduction of REDD-plus at national/sub-national level.
- **“Planning”** is intended for the REDD-plus implementing organizations/countries working on REDD-plus at national/sub-national level.
- **“Technical”** for the experts who work on the REDD-plus activities at national/sub-national level.
- **“References”** aims to provide users with useful information by proposing or showing examples.

Contents of the “Cookbook”

Introduction

Chapter 1 - About REDD-plus

Chapter 2 - Designing a forest monitoring system

Planning

Chapter 3 - Basic knowledge needed for REDD+ implementation

Chapter 4 - Measurement, reporting and verification (MRV) of forest carbon

Chapter 5 - Monitoring by the stock change method

Technical

Chapter 6 - Preparation of REDD+ implementation

Chapter 7 - Estimation of forest area using remote sensing

Chapter 8 - Permanent sample plot method

Chapter 9 - Estimation models for forest carbon stocks

References

Unit and structure of the “Cookbook”

- In the sections “**Introduction**”, “**Planning**”, and “**Technical**”, knowledge and the sufficient skills required to address REDD-plus are compiled in units called “**recipe**”.
- Users can easily go through the items in each recipe to in-depth recipe or references in accordance **with the flow chart**.



Flow of the “Cookbook”

I01 History of and current status

I02 Key concepts

I03 MRV of forest monitoring

I04 Designing monitoring
system

P01 Definitions

P02 Phased
approach

P03 Safeguards

P04 Measurement

P05 Reporting

P06 Verification

P07 Stock Change method

P08 Area estimation using RS

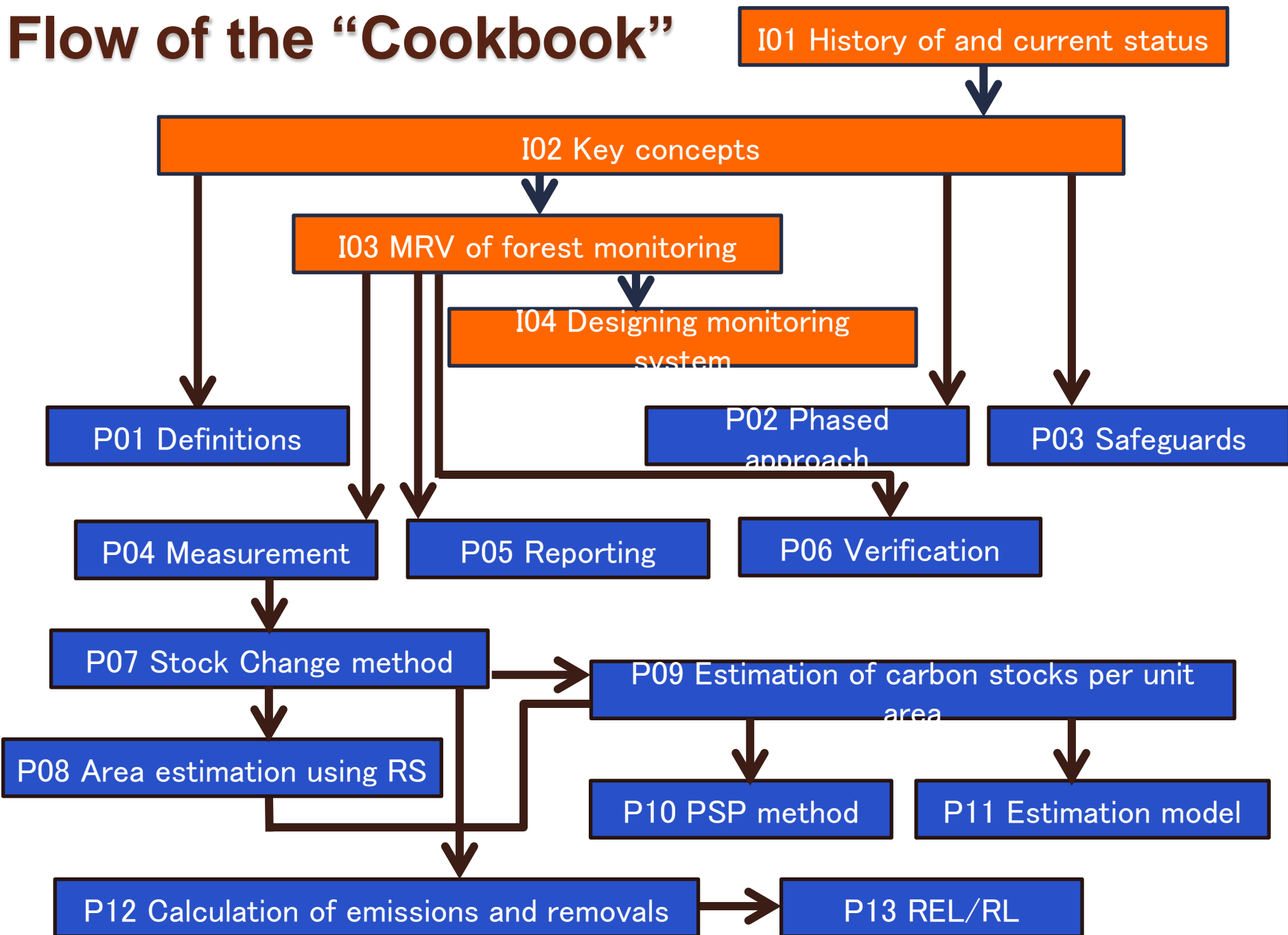
P09 Estimation of carbon stocks per unit
area

P10 PSP method

P11 Estimation model

P12 Calculation of emissions and removals

P13 REL/RL



Design of “Recipe”

Measurement, reporting and verification (MRV) of forest monitoring

The preceding Recipe is
Recipe I02 Key REDD-plus concepts

Measurement, Reporting, and Verification (MRV) is a system to enable objective evaluation of the implementation status of REDD-plus policies and emissions and removals for the credit mechanism. How to implement MRV at national and sub-national levels for REDD-plus is still under discussion, but for voluntary credit verification systems used by the private sector (e.g., Verified Carbon Standard (VCS); see T04), the framework for MRV implementation at the project level, the Clean Development Mechanism (CDM), takes into account institutional design. In this chapter, what is meant by “measurement”, “reporting”, and “verification” is outlined and the MRV requirements of forest monitoring for REDD-plus are explained.

INFO

1) The MRV concept was introduced in the Bali Action Plan, which was adopted by UNFCCC COP 13, held in Bali, Indonesia, in 2007, to realize domestic and international actions for the mitigation of climate change and to guarantee the quality of the actions. MRV stands for Measurement, Reporting, and Verification. For example, use in the form of the measurement and the report in the National Communications (NCs) in the Copenhagen agreement, and the International Assessment and Review (IAR) which verify them.

INFO

2) UNFCCC (2009) Decision 4/CP.15, FCCC/CP/2009/11/Add.1, 11-12, UNFCCC

INFO

3) IPCC (2003) Good practice guidance for land use, land-use change and forestry, IGES <http://www.ipcc-nggip.iges.or.jp/public/gpglucf/gpglucf.htm>

MRV

The concept of MRV was introduced in the Bali Action Plan agreed at COP 13 in 2009¹⁾. According to this plan, GHG mitigation actions and commitments must be measurable, reportable, and verifiable. However, international discussions on the specific purpose and target of MRV and on who is responsible for implementing it are still in progress. As of 2012, MRV modalities of forest monitoring for REDD-plus were also under consideration by SBSTA. Data on GHG emissions and removals obtained by using appropriately designed MRV will be an important basis for evaluating the effectiveness of REDD-plus activities.

Measurement (see P04)

REDD-plus activities are evaluated according to the emissions reductions and removals that result. Thus, these amounts must be measured. In forest monitoring, “measurement” means the continuous measurement and collection of data on anthropogenic forest-related GHG emissions by sources and removals by sinks, forest carbon stocks and forest area changes²⁾.

More specifically, REDD-plus participating countries must measure forest cover changes and emissions and removals per unit of land area³⁾ (Figure I03-1) where the activities are carried out. In accordance with guidance provided by the UNFCCC, and calculate total forest GHG emissions and removals from the acquired data. The measurement system must be transparent, consistent, and accurate, and uncertainty should be minimized, but it must also be feasible for the participating country. In the future, “measurement” for safeguards and other forest-related functions will also be required.

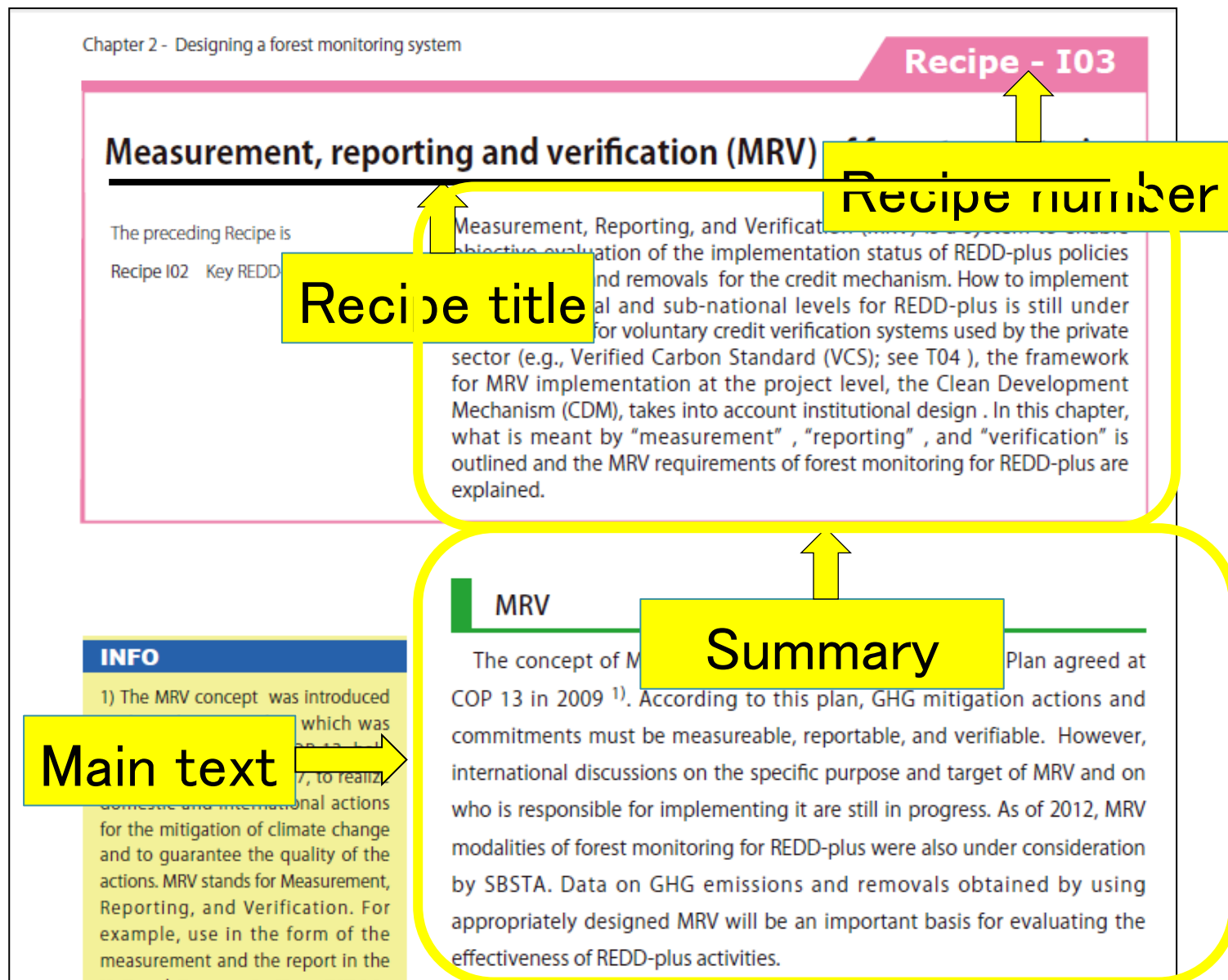


Figure I03-1 Measurement of forest cover changes and emissions and removals per unit of land area

Reporting (see P05)

Reporting means providing information on the estimated GHG emissions and removals, on the methods and procedures used to determine them, and on the status and future outlook for measurements of emission reductions and removals by sinks in accordance with the forms and procedures prescribed by the reporting institutions. The form of the report should be chosen according to the subject being reported and the purpose of the report. For example, reporting at the national level is under UNFCCC guidance and project level reporting should conform to requirements of the CDM or other voluntary verification scheme. In any case, reports should include all information needed for verification so that additional information does not need to be submitted later. The UNFCCC obliges the Parties to report a country's national greenhouse gas inventory (see P05), and the report conform to the following five principles: transparency, consistency, comparability, completeness, and accuracy. All reports of REDD-plus activities must conform to these five principles. Transparency is particularly important for developing countries, because adequate historical data is often lacking and data collection is difficult.

Structure of “Recipe”



Reference guide

Chapter 4: MRV of forest carbon

No. 19	Emissions factors. Converting land use change to CO ₂ estimates. In: Analysing REDD+ Challenges and choices	EN	2012	Verchot et al.	CIFOR
P04	<p>This chapter in <i>Analysing REDD-PLUS Challenges and Choices</i> introduces the measuring of forest carbon in REDD-plus, and describes the current state of non-Annex I countries with regard to capacity and information available for the measurement, and concludes by summarizes future challenges. It gives detailed explanations of the Gain-Loss Method (including an approach for peatland) and the Tier 1 approach, which the Cookbook discusses only briefly. Furthermore, this chapter covers a range of topics, from the currently available emission factors and the possibility of improving them to a potential integration of community carbon monitoring with national carbon monitoring. This chapter is particularly recommended for people who wish a concise presentation of forest carbon measurements not covered by the Cookbook.</p>				
National, Sub-national, Project					
http://www.cifor.org/online-library/browse/view-publication/publication/3805.html					

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