Technical Capacity: Advances in National Forest Monitoring Systems

Partner Event
What has REDD+ done for us?

No Regrets Benefits of REDD+ Readiness for the Forest Sector
Asia Pacific Forest Commission (APFC) meeting
3 – 8 November 2013, Rotorua New Zealand

Gewa Gamoga
PNG Forest Authority
ggamoga@pngfa.gov.pg

Presentation Outline

1. On-going REDD+ Readiness Activities (in the context of Forest Monitoring) in PNG

2. What have we achieve from the readiness activities

On-going REDD+ Readiness efforts (in the context of Forest Monitoring) in PNG

- Number of initiatives are currently being done for REDD+ readiness at the national scale.

Initiatives	Development Partner
➢ Forest Base map Development ➢ Capacity Development on Forest Monitoring for Addressing Climate Change in PNG ➢ The monitoring system of forest resource including carbon stock	JICA Technical Cooperation Project & Grand Aid Forest Preservation Program
➢ Multi-purpose National Forest Inventory	European Union & UNREDD
➢ Measurement Reporting Verification	UNREDD

ONGOING ACTIVITIES:

- **NEW 2011 Forest Map**: coordinated by PNG Forest Authority with technical support from JICA. This map will be use as baseline to assess past and future forest changes;

- **1st National Forest Inventory**: coordinated by PNG Forest Authority with technical support from UN-REDD. The NFI it will be the key element to assess forest related emission/removal factors

- **1st Information, Monitoring & MRV Action Plan**: coordinated by OCCD participation of all relevant country institutions and relevant stakeholders;

- **Prototype for a Satellite Land Monitoring System**: coordinated by OCCD with technical support from UN-REDD and INPE. A team of PNG experts has attended a course in Brazil, the beta version of the prototype with its web-portal have been presented in Durban in COP17

JICA Technical Cooperation Project

- Govt of Japan Support to PNG
  - Capacity development on forest resource monitoring to address climate change in PMG

- Executing agent
  - PNG Forest Authority

Government of Japan (GOJ) Support to PNG

| (1) GOJ Grant Aid Program:	(2) JICA Technical Cooperation Project
Provided:	Objective:
1. Remote Sensing GIS facility	To enhance the <u>capacity</u> of relevant institutions in PNG for <u>monitoring of nation-wide forest resource</u> including carbon stock to address climate change
2. Satellite Images	
3. Airborne data	
4. Field survey equipment	Expected Output:
5. Soft component (additional Technical Assistance)	1. Nationwide forest base map
	2. National level forest resource database
	3. Monitoring system of forest resource – including carbon stock

Coverage in the past (Single Satellite)
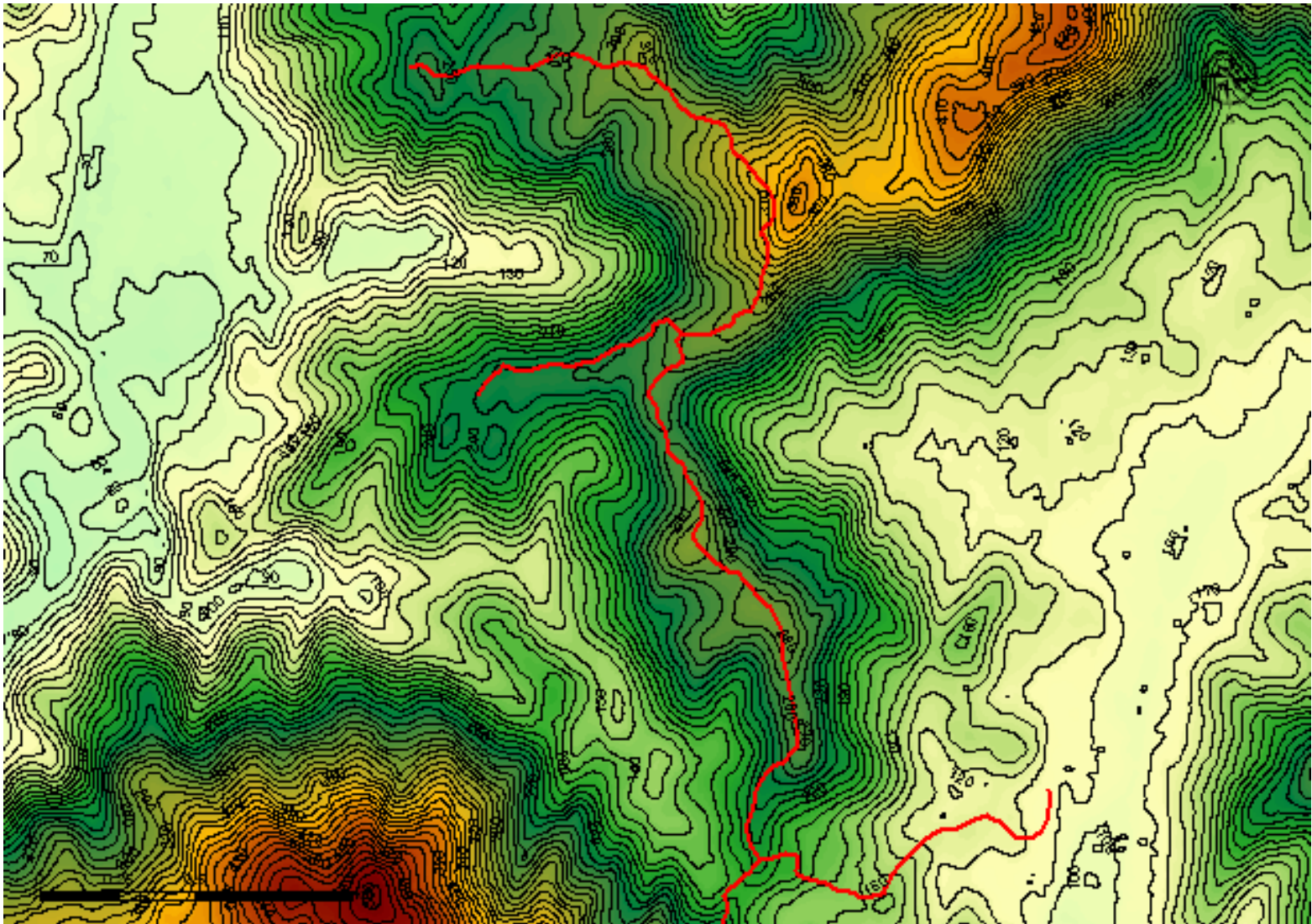
LANDSAT 2000 (30m)
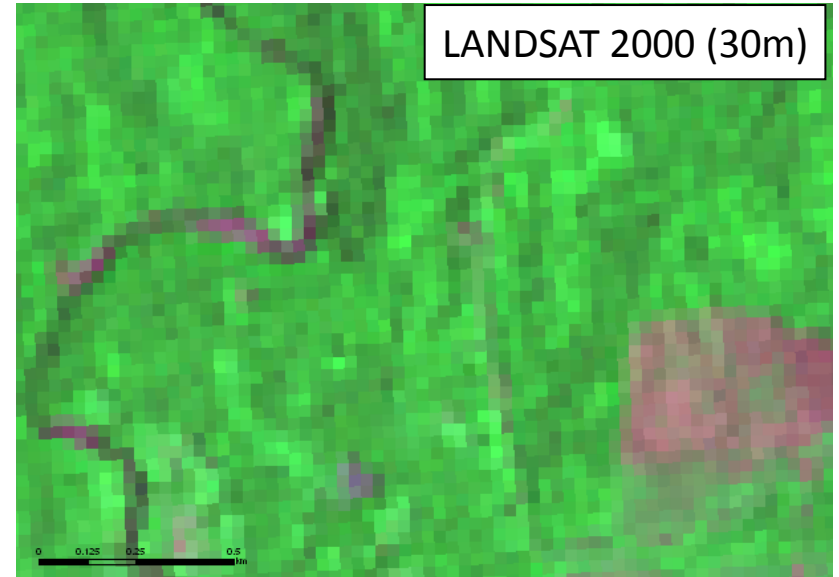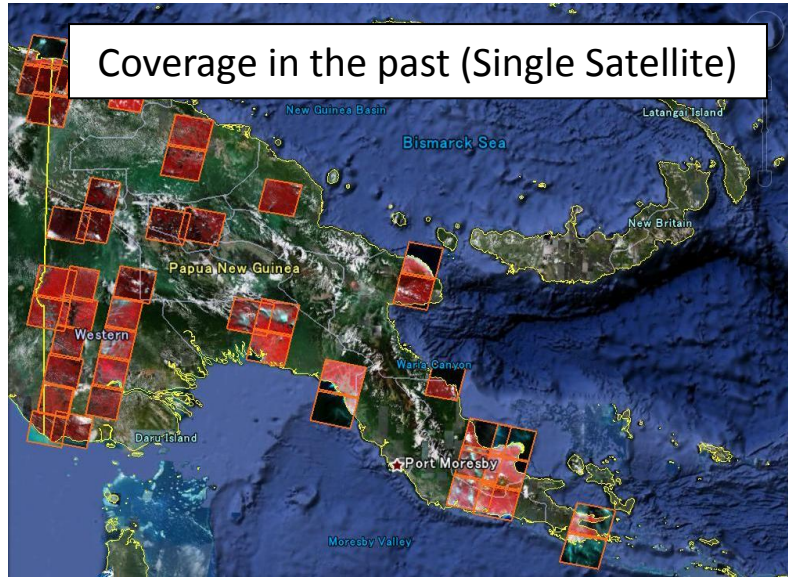
Present: Coverage 2010 (Constellation Satellites)

RapidEye 2010 (5m)

7
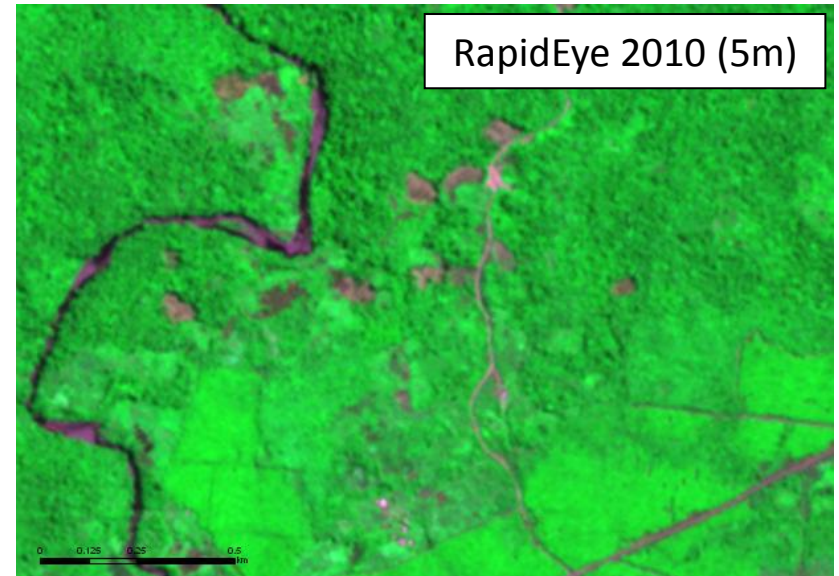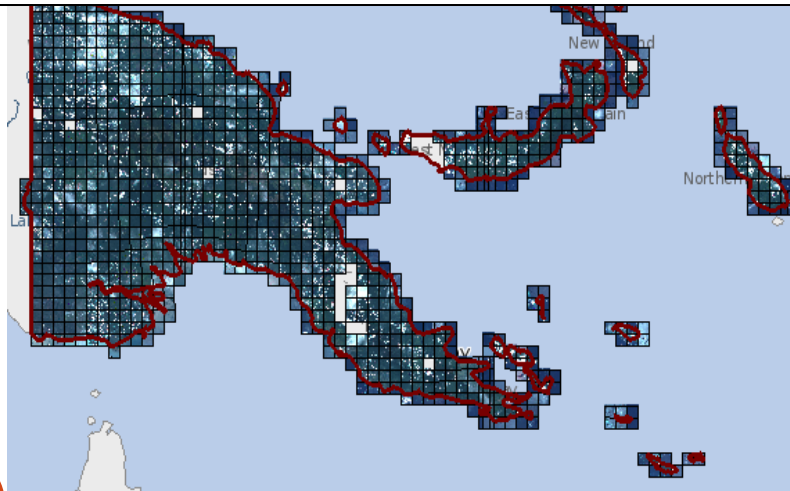
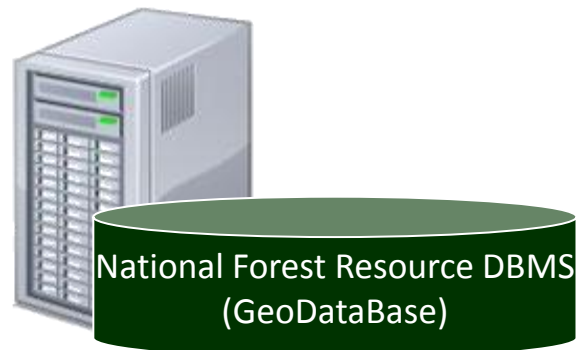JICA Project Output: DEM derived contours (10m interval) & logging road

JICA Project Output: PNGFA New Database: System/Hardware Composition

[Data Server]

■ArcGISServer10.0
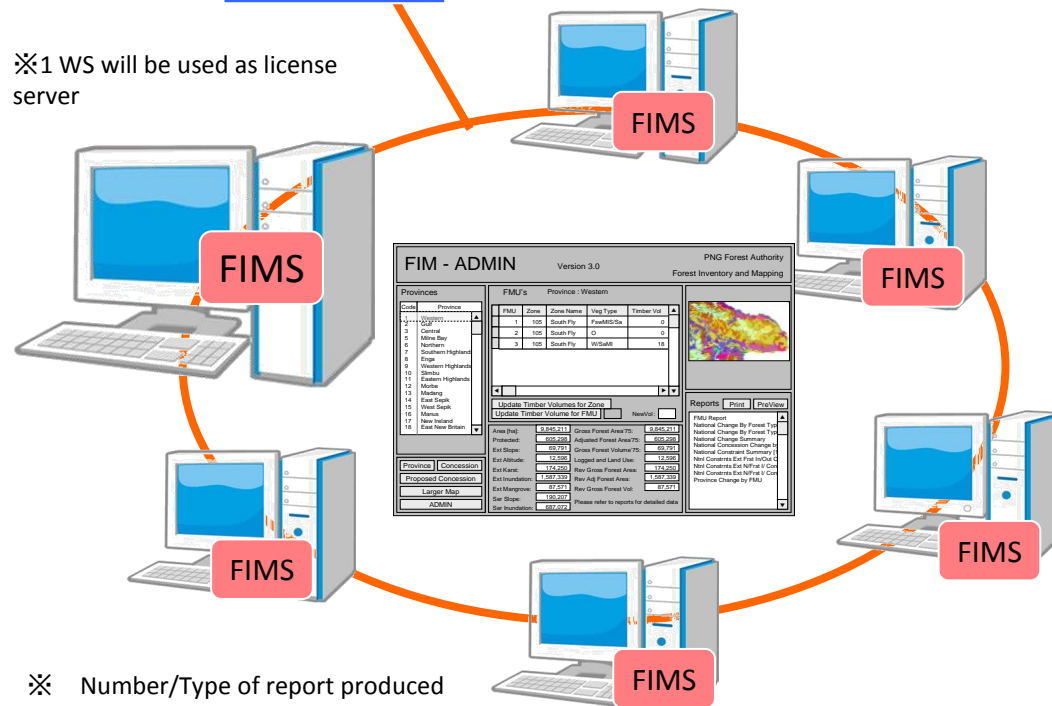Standard/Enterprise

■SQL Server 2008
Standard Edition(English)

[Desktop PC]

■ArcGIS Desktop10.0
ArcInfo 2
ArcEditor 2
ArcView 2

■Microsoft Office 2010
Professional(English)

National Forest Resource DBMS
(GeoDataBase)

Domain Setting

※1 WS will be used as license server

FIMS

FIMS

FIMS

FIMS

FIMS

FIMS

※ Number/Type of report produced from FIMS will be about 30

JICA Project Out put New FIMS (ArcGIS version): Screen Image

❖ **GUI and the functions of the existing FIMS have been incorporated**
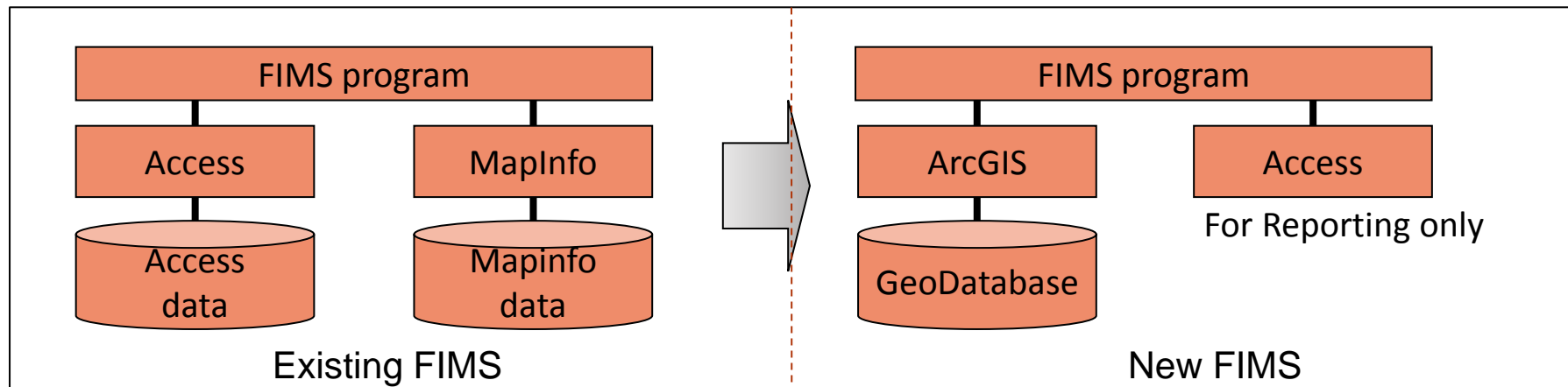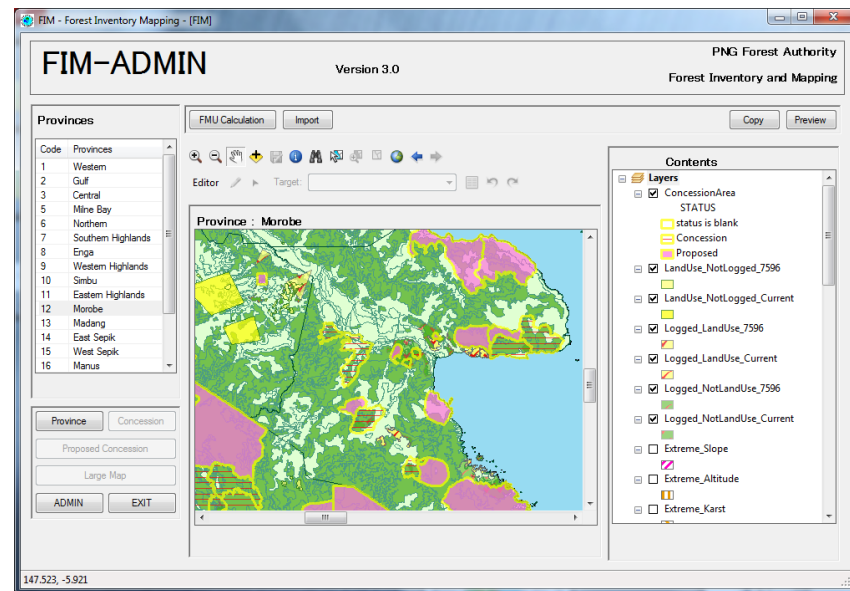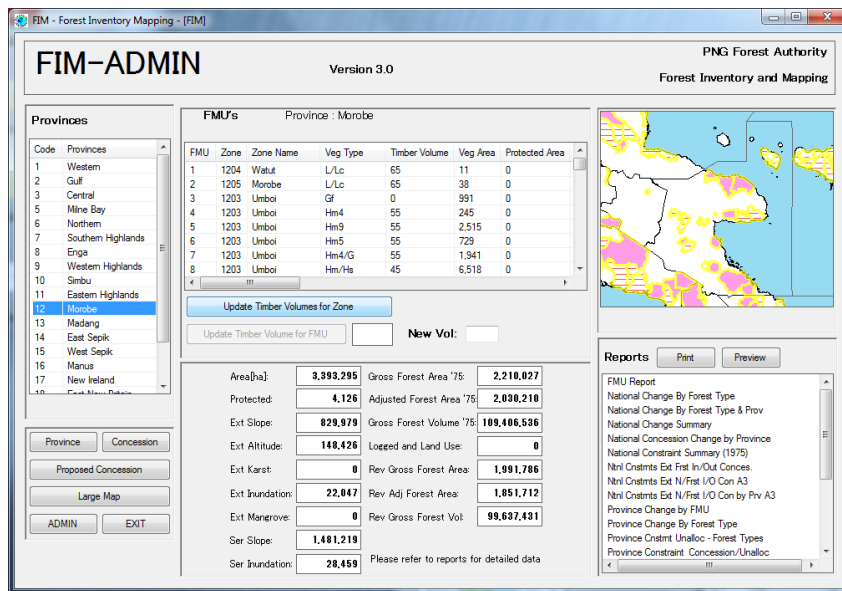
National Forest Inventory (NFI)

- It will be the first NFI for the country

Background

- **Funding**
  - EU and UNREDD Program
- **Project title**
  - Technical support to the PNG Forest Authority to implement a multi-purpose **National Forest Inventory**
- **Period**
  - October 2013 – September 2016
- **Support & Implementation**
  - **FAO** (Forest Dept) is supporting **PNG Forest Authority** to implement the project

Background

- **The project overall objective**

  - is to contribute to the implementation of PNG's policies and measures for climate change mitigation.

- **The purpose**

  - is to support the PNG Forest Authority to implement a continuous and multi-purpose National Forest Inventory (NFI) <u>as part of a National Forest Monitoring System</u> that will fulfil the UNFCCC Cancun and Copenhagen decision requests
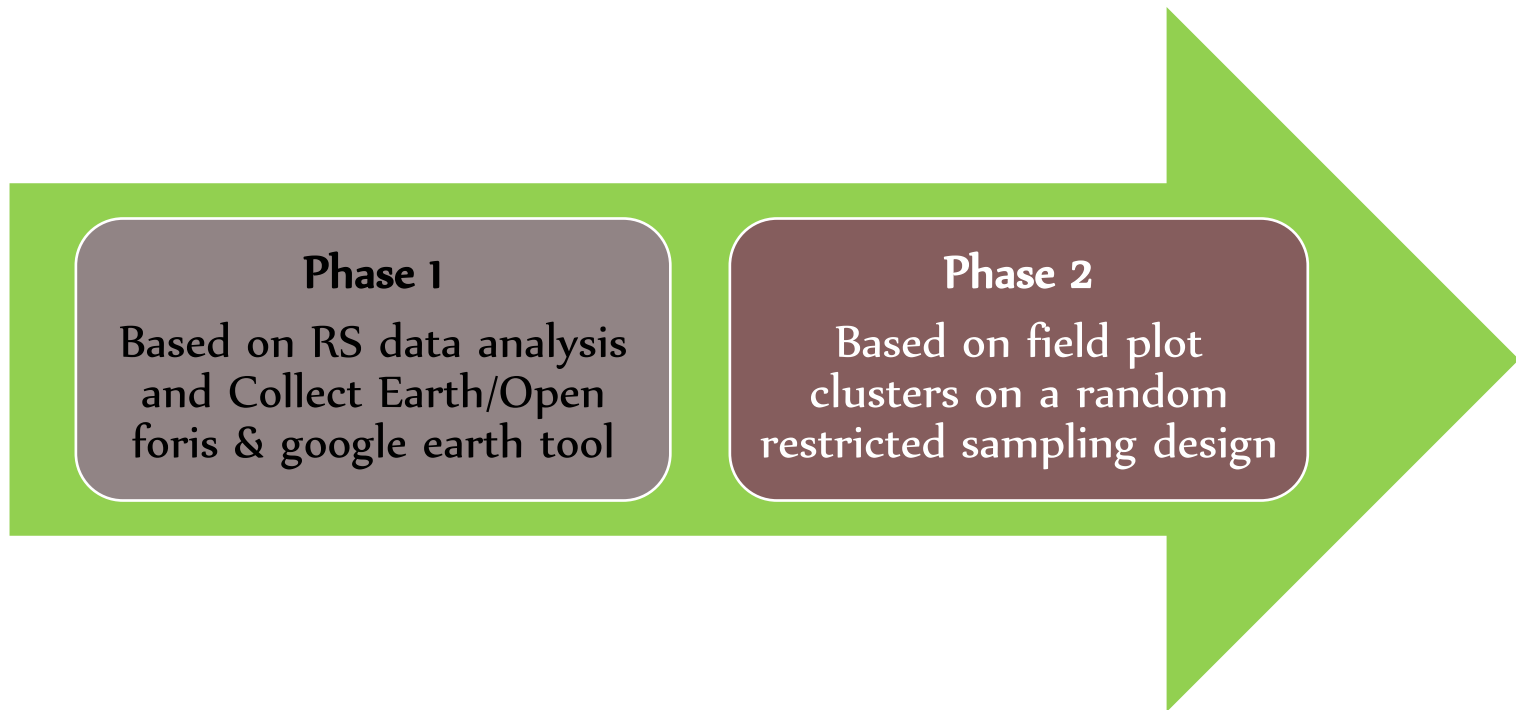
Background

- **Key features of this project**
  - Capacity building to improve the capabilities of the PNG Forest Authority and the University of Technology-Department of Forestry on continuous and multi-purpose forest monitoring systems.
  - Capacity development to establish the first multi-purpose National Forest Inventory of PNG
  - NFI Information and Data Sharing System Development
  - Support to research and education activities on PNG forests.
  - Promote policy dialogue on forestry.

Inventory Approach

- PNG has taken a double sampling approach

Phase 1

Based on RS data analysis and Collect Earth/Open foris & google earth tool

Phase 2

Based on field plot clusters on a random restricted sampling design

NFI – Progress to date

- Refresher training on plant species identification

- Collect Earth software customized to suit PNG situation

- Collect Earth software training

- Assessing land use and forest cover

UNREDD Program

The UN-REDD National Programme is just one contribution to PNG's readiness efforts

UN-REDD
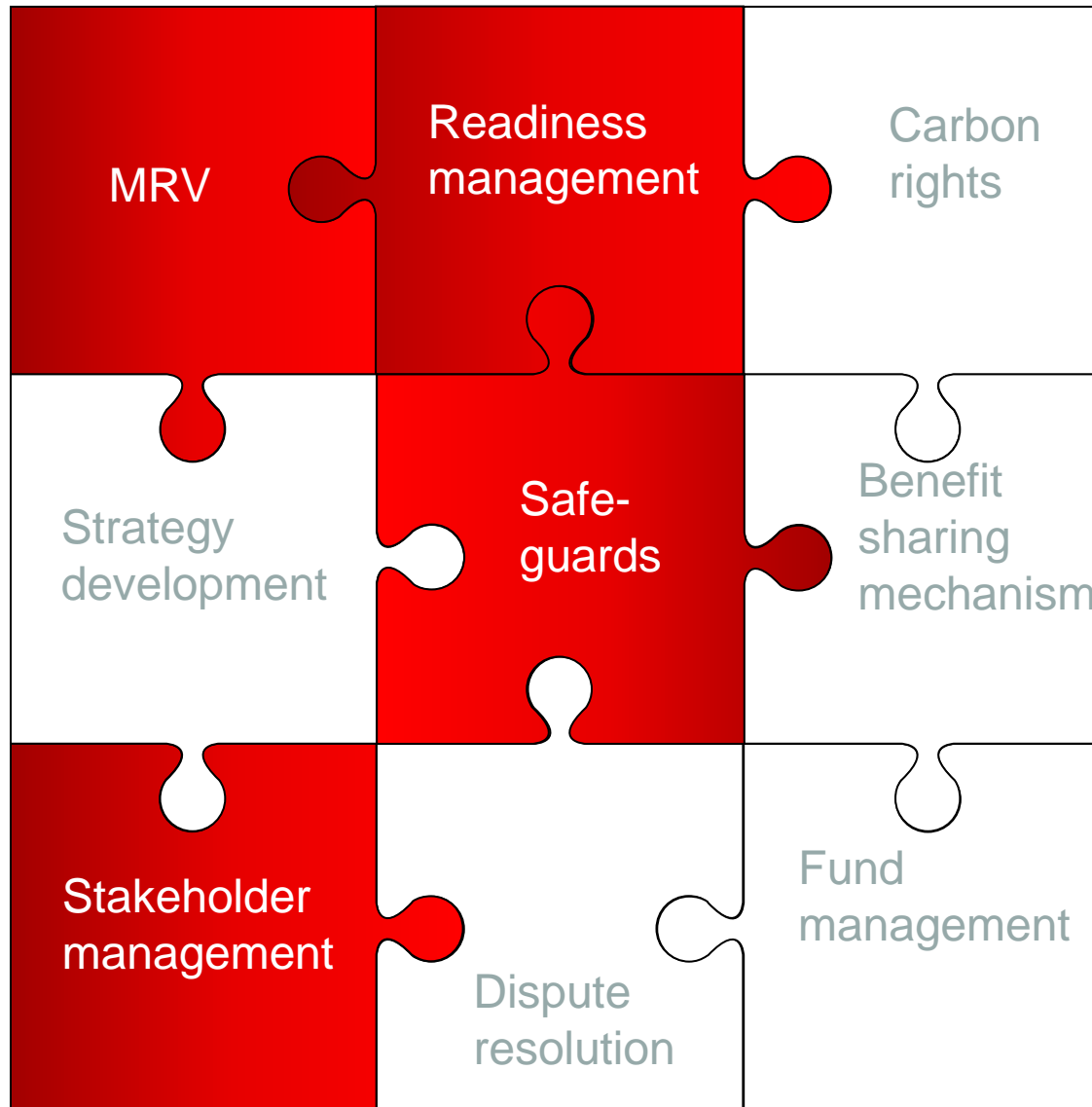
Objectives of PNG's UN-REDD National Program

- Support the Government of PNG to progress its activities towards REDD+ readiness

- Complement existing efforts to establish a REDD-plus framework in PNG, including efforts from GoPNG, civil society, the private sector and development partners

- Focus on the refinement and implementation of a full MRV roadmap for PNG that supports PNG's overall REDD framework and readiness efforts

What have we achieved from the readiness activities

1. On-going technical capacity development on;
   - GIS/Remote sensing applications, tools and information
   - NFI Planning
   - Understanding of REDD+ and climate change issues
   - Forest carbon assessment
2. GIS hardware/software
3. Improve forest database management system
4. Forest Base Map (version 0)
5. DEM derived contours (10m intervals)
   - For planning and management

Regardless of the outcomes of the Climate Change negotiations, the above benefit will be useful in managing our forests in a long term

END