

PNG National Forest Inventory

Fourth UN-REDD Regional Lessons Learned Workshop
National Forest Monitoring Systems for REDD+

15th - 17th October 2013
Bangkok, Thailand

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Forest Policy & Planning Directorate
PNG Forest Authority
Papua New Guinea



Outline

1. Background
2. Workshops
3. NFI Approach taken
4. Challenges

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

Background

- **Resource Partners**

- European Commission
- PNG Forest Authority
- PNG University of Technology

- **Support & Implementation**

- **FAO** (Forest Dept) will support **PNG Forest Authority** to implement the project implementation

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) as part of a National Forest Monitoring System 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.

Workshop Results

The 2 workshops provided a basis in which we progress the NFI

- ✓ First Workshop – Oct 2012

Input	Output
1. Subjective sampling based on existing plots and new plan for logging concession 2. Plot design as for timber inventories	1. Probability sampling 2. Stratified approach 3. Optimum allocation 4. Plot cluster 5. Continuous NFI

- Second Workshop – Feb 2013
 - ✓ Concluded with a Work plan

2013 NFI Work Plan

Feb - Mar

- ❖ NFI Workshop (Lae) > work plan
- ❖ NFI master plan –
- ❖ definition methodology NFI phase I – forest definition /classification

Apr-May

- ❖ Procurements and setting up for NFI office – equipments
- ❖ NFI phase I training

Jun-Jul

- ❖ NFI phase I data analysis
- ❖ Training on tree species identification

Aug-Sep

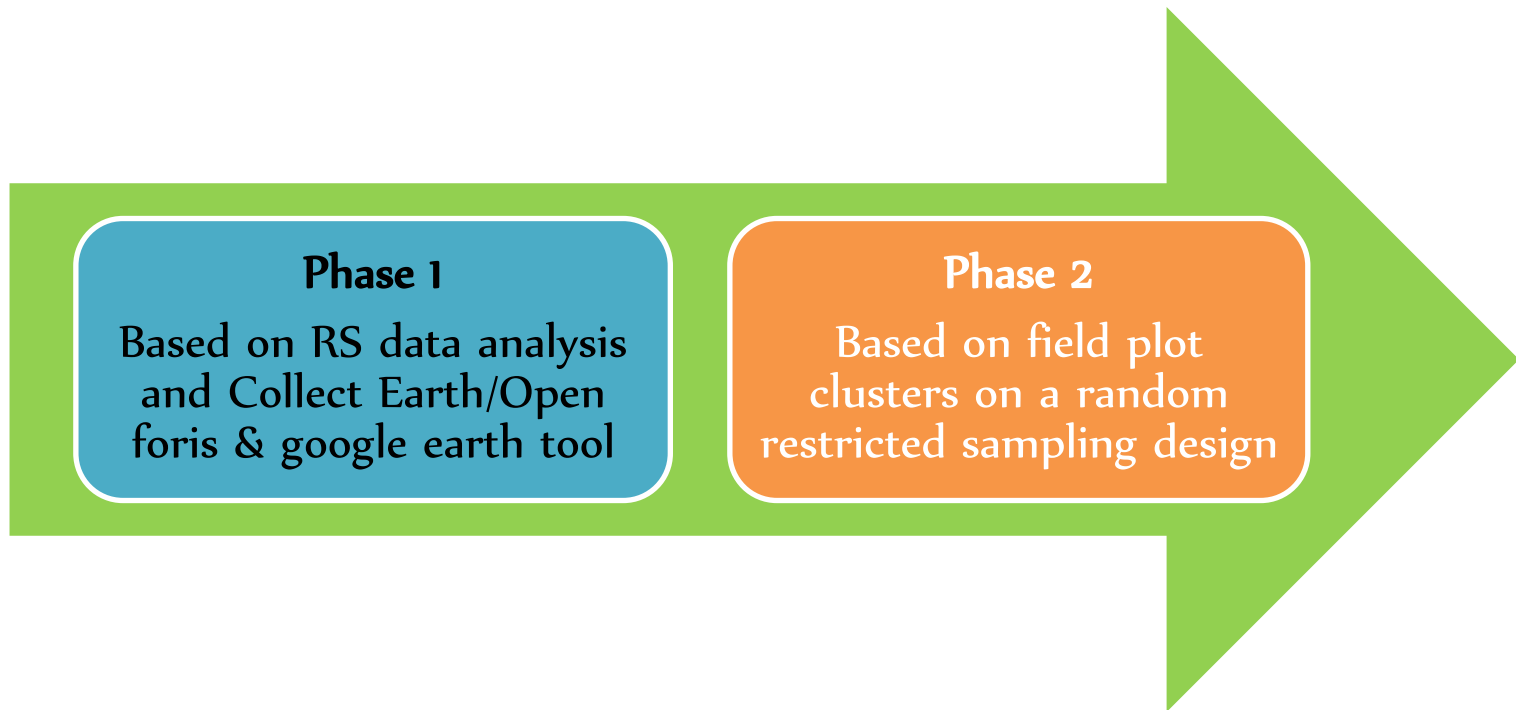
- ❖ Field manuals
- ❖ NFI phase I results and discussions
- ❖ Definition methodology NFI phase II (sampling and plot design)

Oct-Nov

- ❖ Field teams training
- ❖ Setting up of all the logistics for field measurements
- ❖ Development of a NFI web information and data portal

Inventory Approach

- PNG has taken a double sampling approach



Phase 1

1. Sampling Design

- Systematic grid 4x4 km
- 29,059 tracts covering PNG

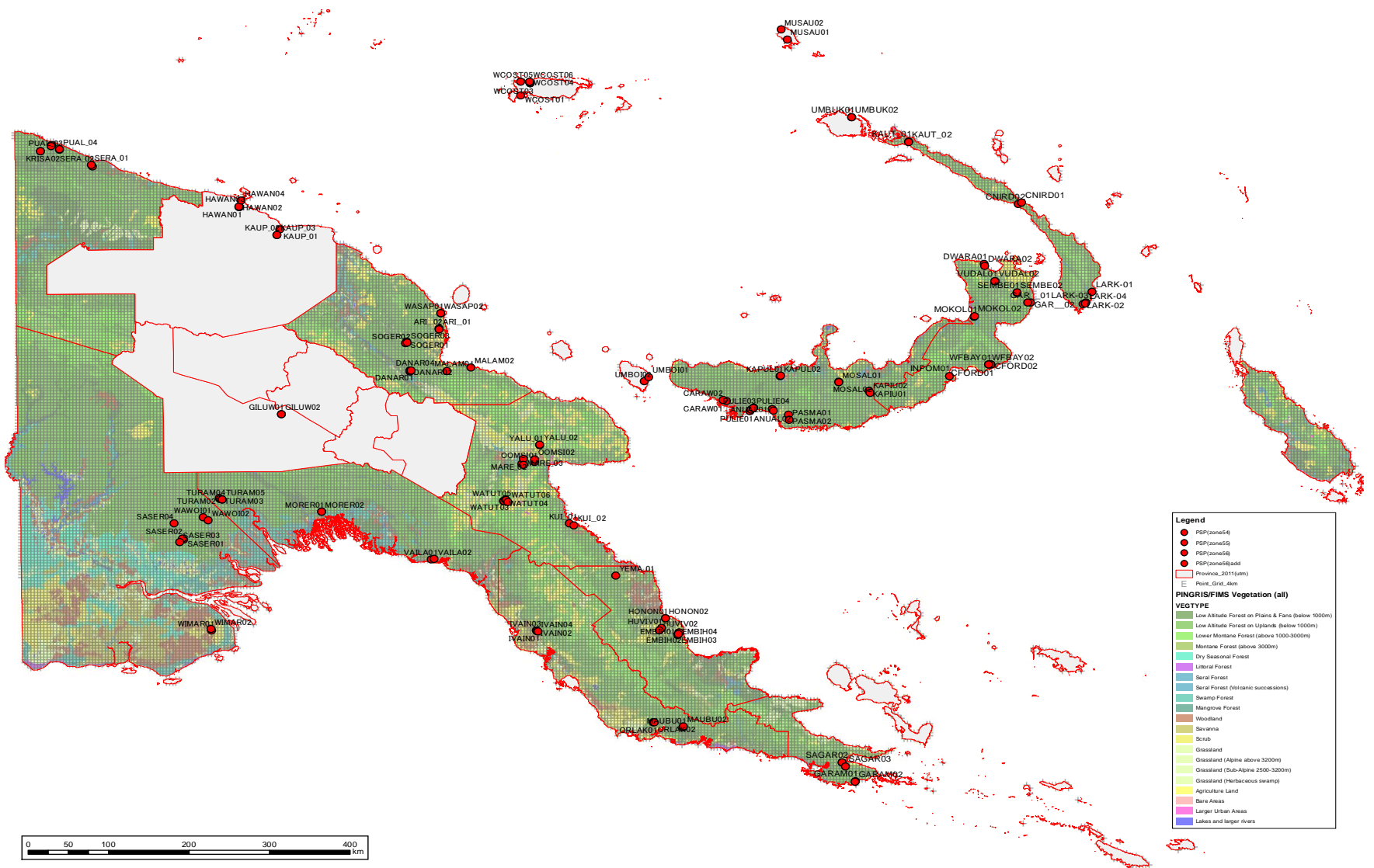
2. Sampling Unit

- 1 hectare (100m x 100m) & 25 check points

3. Classification:

- IPCC land use categories and sub-categories + PNG Forest type and Vegetation classifications as sub-divisions

Sampling design for PNG (systematic grid 4x4 km)



Landscape detail of Rapid Eye image coverage with sample plots distribution



Next Steps

October-November

- ❖ Point Interpretation
- ❖ QA/QC & Statistical Assessment
- ❖ Presentation of PNG land use assessment and NFI Phase 1 data

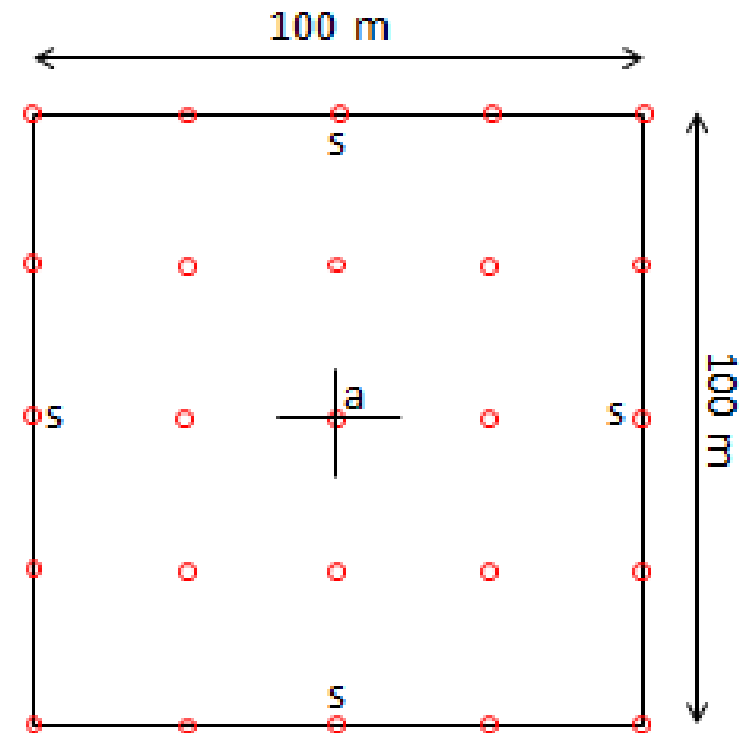


December

- ❖ Sampling design for NFI Phase 2

Point Sampling

- Land use and forest assessment will be realized over 1 ha square.
- Red dots will be used to assess land use and land cover fractions and also to assess tree crown cover.
- The altitude will be detected in the centre of the sampling unit, point a
- slope and exposition will be assessed from measurements in points s.



Collect Earth layout for forest land:



Collect Earth OPENFORIS

Sampling Unit ID: 104543
Elevation: 30
Aspect: FLAT

Forest Grassland Cropland Wetland Settlement Other **No Data**

Forest

Development

FL > FL Other > FL

Type

Low altitude on plainsand Low altitude on uplands Lower montane
Montane Coniferous Dry seasonal Littoral Seral
Swamo Savanna Woodland Scrub Mangrove

Interpretation Uncertainty

YES NO

Crown Cover

Cover

Burnt Logging Other 10-30% 30-50% 50-70% 70-100%

Cover Type

Random Sparse Grouped Linear Unknown

Topography

Accessibility

D<1km 1km< D <5km 5km< D <10km 10km Unaccessible

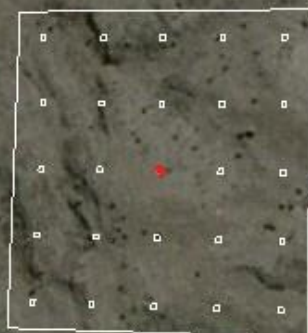
Elements

Road

SUBMIT & VALIDATE



Collect Earth PNG layout for grassland:



Collect Earth OPENFORIS

Sampling Unit ID: 76610
Elevation: 3477
Aspect: WEST

Forest **Grassland** **Cropland** **Wetland** **Settlement** **Other** **No Data**

Grassland Type

Development

GL > GL **Other > GL**

Type

Grassland and herbland **Alpine grassland** **Subalpine grassland**

Interpretation Uncertainty

YES **NO**

Topography

Accessibility

D < 1km **1km < D < 5km** **5km < D < 10km** **10km** **Unaccessible**

Elements

Road: Not Applicable

River: Not Applicable

House: Not Applicable

Trees: Not Applicable

Other: Not Applicable

SUBMIT & VALIDATE



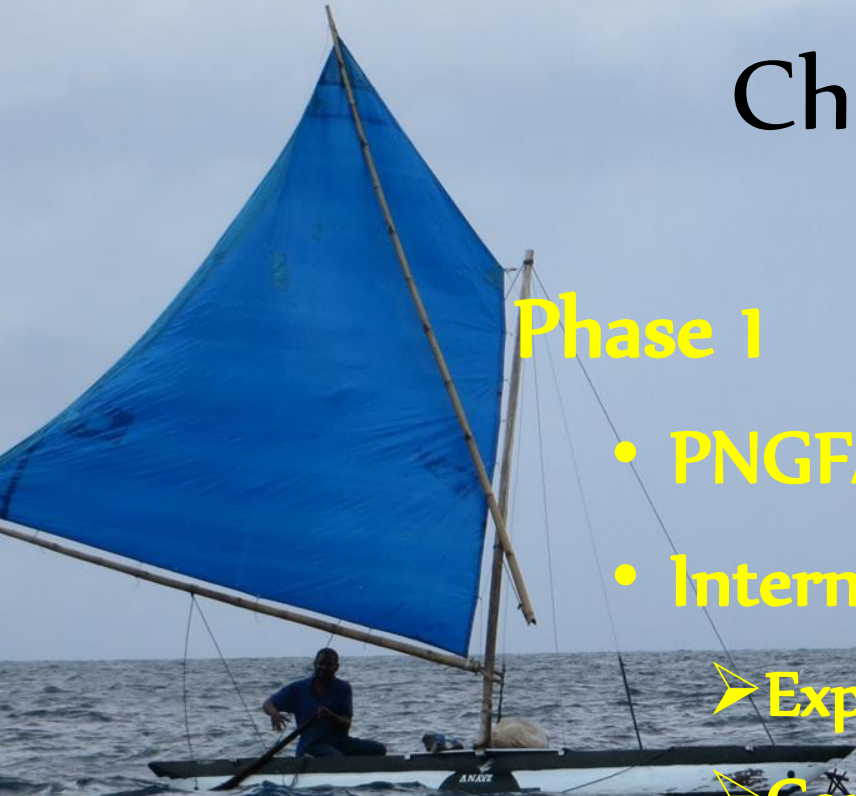
Challenges

Phase 1

- PNGFA Policy on ICT
- Internet
 - Expensive
 - Connectivity is also an issue

Phase 2

- Land tenure



A scenic landscape view of a bay, likely Milne Bay in PNG, featuring lush green hills and blue water. The word "End" is overlaid in yellow text in the center of the image.

End