Project Key Achievement

Output 2

- **Facility assessment of VNP** with a detailed technical report covering over 200 existing facilities
- **Facility renovation & maintenance of VNP**
- Installation of **a total of 79 distance piles** along 4 tracks
- Installation of **signboards with VNP map** and background information
- Installation of additional signboards
- Construction of **new Information Center**
- **Monitoring & Management**
- Installation of **20 camera traps**
- continued camera trapping (fauna and visitors)
- Conducting **surveys**
  - **Biodiversity** (fauna & flora)
  - **Socio-economic** (household & social mapping)
  - **Soil & topographic**
- Establishment of **MoU for Bird Watching Project** in partnership with PNG Tourism Promotion Authority, Pacific Adventist University (PAU) & Koiari LLG
- **Sustainable livelihood development** in VNP & Koiari LLG with **community workshops**
- Development of at least **2 tour packages**
- Consultation of at least **2 tour operators**
- **Development Planning**
- Review of Koiari LLG 5 Year Development Plan and Central Province 5 Year Development Plan

Output 1

- Support for establishing **National Conservation Council (NCC)** and NCC operation
- **Protected Area Bill review notes** to incorporate into the new Bill

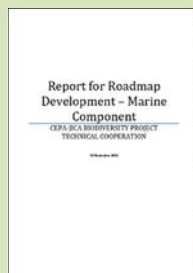Camera-trap Monitoring in Varirata National Park

Output 3

- Development of "**Road Map for new Marine Protected Area (MPA) Establishment at Bootless Bay & Motupore**"
- **Stakeholder consultation** for proposed MPA establishment and protection of Bootless Bay & surrounding marine ecosystems
- Establishment of **MoU for the Bootless Bay protection** and **mangrove protection project** with University of PNG (UPNG), Central Province Conference (CPC) and CEPA
- Purchase of **a boat (23 ft) and engine (40hp)** for implementing marine work
- Conducting **Rapid Marine Biodiversity Survey**
- Establishment of a network "**Bootless Bay Marine Conservation Initiative**"
- Conducting **Coastal cleanup event**

Report for Roadmap Development – Marine Component
CEPA-JICA BIODIVERSITY PROJECT
TECHNICAL COOPERATION

Output 4

- Purchase of **WorldView-2 imagery** (Terrestrial areas: 494km2, Marine / coastal areas: 223km2)
- Development of **GIS database** and preparation of **GIS data and maps** for each output: **a detailed land cover map** of proposed terrestrial areas, **mangroves map** of Bootless Bay, dogura Inlet and Tuna Bay, etc.
- Development of **Public relations strategy** for the Project
- **Public Relation** by creating a variety of project PR tools: Project webpage, facebook page, brochures, newsletters, factsheets, banner, sign boards, posters, polo shirt, logo for VNP, etc.

Technical Cooperation
CEPA - JICA Biodiversity Project
2015-2020

The Project for Biodiversity Conservation through Implementation of the PNG Policy on Protected Areas

CEPA - JICA
Biodiversity Project

Project Period: Five (5) years commencing from June 2015
Targets: Provincial administration(s), district administration(s) and LLG government(s) surrounding the target Protected Areas
Implementing Agency: Conservation and Environment Protection Authority (CEPA), Japan International Cooperation Agency (JICA)
Target Protected Areas: Terrestrial – Varirata National Park, Marine/Coastal – to be defined

Land Use Map of Project Target Areas

Background

PNG is one of the richest biodiversity countries in the world, while among the total population of 7.3 million in PNG, over 80% of them are in rural areas and still directly dependent on the natural environment with the rich biodiversity for their subsistence and livelihoods.

To address biodiversity conservation, the government of Papua New Guinea and Japan jointly launched a technical cooperation called the Project for Biodiversity Conservation through Implementation of the PNG Policy on Protected Areas. The project commenced in June 2015 and will run for a five (5) year period. The implementing agencies are Conservation and Environment Protection Authority (CEPA) and Japan International Cooperation Agency (JICA).

Project Framework

Project Purpose

Institutional capacity of CEPA for protected area (PA) management is strengthened through enhancing national-level PA governance and sustainable use of natural resources with local communities in the model PA(s) as per the provision of the Policy on Protected Areas (PPA).

Overall Goal

Protected Area Network is effectively managed by applying PA management (and establishment) model(s), which were developed by the Project.
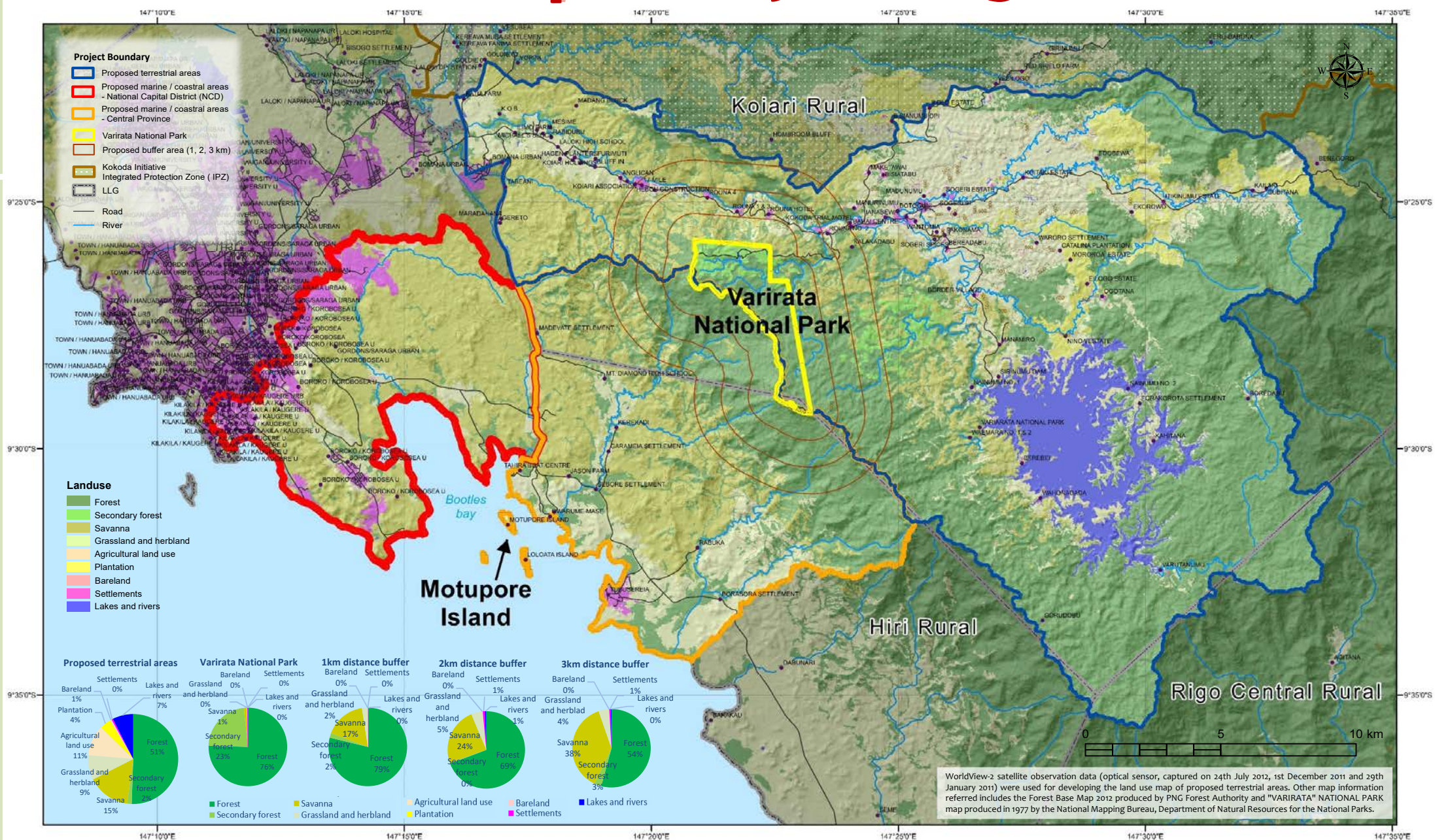
Outputs

1. National-level governance and management arrangement for Protected Area Network (i.e., PPA Action Plan, National Conservation Council (NCC)) is strengthened.
2. The Varirata National Park (VNP) is enhanced as a terrestrial PA management model in accordance with PPA.
3. A model of establishing a new marine PA is developed as per the provision of PPA and concerned laws.
4. Public relations/awareness for biodiversity conservation is improved by disseminating project related information.
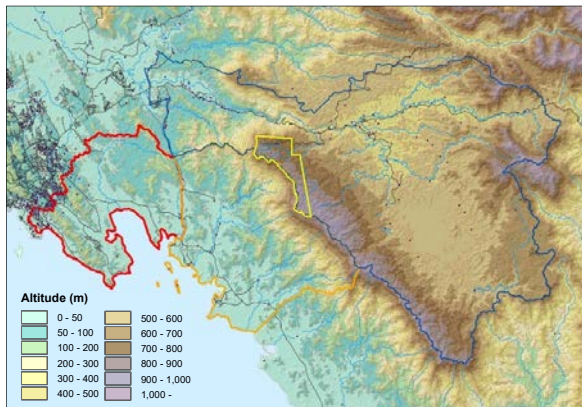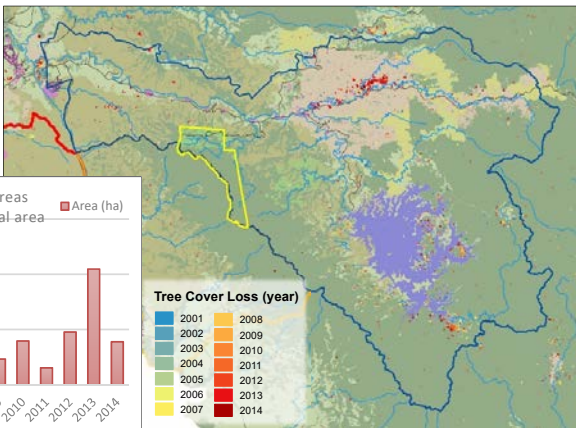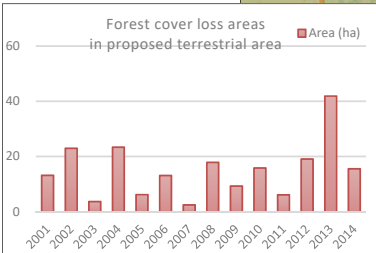
The project design can be interpreted to have three distinctive tasks; 1) enhancement of administrative function of national government for PA network (Output 1), 2) enhancement of PA management and establishment functions of both national and local governments (Output 2 & 3) and 3) enhancement of information dissemination and public relation function of national government (Output 4). While Output 2 & 3 are core components to the project purpose, Output 1 & 4 are supporting components of the Output 2 & 3.

Target Areas

Proposed project target area covers approximately 612 km², which can be divided into two major types; terrestrial areas (396 km²) and marine/coastal areas (216 km²), as indicated below. The target PA for the Output 2 is the Varirata NP to develop a terrestrial PA management model, and Koiari Rural LLG is the target LLG for livelihood related activities. Besides, the Output 3 targets Bootless Bay and its coast for the establishment of a new marine/coastal PA model.

Legend — Project Boundary:
- Proposed terrestrial areas
- Proposed marine / coastal areas - National Capital District (NCD)
- Proposed marine / coastal areas - Central Province
- Varirata National Park
- Proposed buffer area (1, 2, 3 km)
- Kokoda Initiative Integrated Protection Zone (IPZ)
- LLG
- Road
- River

Landuse:
- Forest
- Secondary forest
- Savanna
- Grassland and herbland
- Agricultural land use
- Plantation
- Bareland
- Settlements
- Lakes and rivers

Map labels: Koiari Rural, Varirata National Park, Bootless bay, Motupore Island, Hiri Rural, Rigo Central Rural

Pie charts

Proposed terrestrial areas: Forest 51%, Secondary forest 2%, Savanna 15%, Grassland and herbland 9%, Agricultural land use 11%, Plantation 4%, Bareland 1%, Settlements 0%, Lakes and rivers 7%

Varirata National Park: Forest 76%, Secondary forest 23%, Savanna 1%, Grassland and herbland 0%, Bareland 0%, Settlements 0%, Lakes and rivers 0%

1km distance buffer: Forest 79%, Secondary forest 2%, Savanna 17%, Grassland and herbland 2%, Bareland 0%, Settlements 0%, Lakes and rivers 0%

2km distance buffer: Forest 69%, Secondary forest 0%, Savanna 24%, Grassland and herbland 5%, Bareland 0%, Settlements 1%, Lakes and rivers 1%

3km distance buffer: Forest 54%, Secondary forest 3%, Savanna 38%, Grassland and herbland 4%, Bareland 0%, Settlements 1%, Lakes and rivers 0%

Legend: Forest, Secondary forest, Savanna, Grassland and herbland, Agricultural land use, Plantation, Bareland, Settlements, Lakes and rivers

WorldView-2 satellite observation data (optical sensor, captured on 24th July 2012, 1st December 2011 and 29th January 2011) were used for developing the land use map of proposed terrestrial areas. Other map information referred includes the Forest Base Map 2012 produced by PNG Forest Authority and "VARIRATA" NATIONAL PARK map produced in 1977 by the National Mapping Bureau, Department of Natural Resources for the National Parks.

0   5   10 km

PNG — Menyamya, Bulolo, Huon, Kerema, Guari Rural, Tapini Rural, Woitape Rural, Mekeo Kuni Rural, Kairuku Rural, Koian Rural, Sohe, Ijivitari, Kiriwina-Goodenough, Esa'a, Central, Hiri Rural, Rigo Central Rural, Rigo Inland Rural, Aroma Rural, Cloudy Bay Rural, Amazon Bay Rural, Alotau District

Legend:
- Province boundary
- District boundary
- LLG boundary

0   50   100 km

Tree cover loss published by Professor Hansen, et al. in Maryland University, USA. shows yearly forest reduction between 2001 and 2014 based on an algorithm to extract areas where decrease of vegetation taller than 5m in height was occurring utilizing imagery of LANDSAT 7 and LANDSAT 8.

Forest cover loss areas in proposed terrestrial area — Area (ha)

Tree Cover Loss (year): 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014

Altitude (m): 0 - 50, 50 - 100, 100 - 200, 200 - 300, 300 - 400, 400 - 500, 500 - 600, 600 - 700, 700 - 800, 800 - 900, 900 - 1,000, 1,000 -

ASTER GDEM data were utilized for creating an altitude map.

Slope (degree): 0 : very flat, 0 - 2 : flat, 2 - 5 : gently sloping, 5 - 8 : undulating, 8 - 16 : rolling, 16 - 30 : hilly, 30 < : steep

SRTM DEM data were utilized for analyzing slope.