



Republic of Mozambique
Ministry of Agriculture
Nacional Directorate of Land and Forestry

Plan of Technical Cooperation with JICA under the REDD+ toward Formulation of REDD+ implementation Framework in Mozambique



REDD+ Research and Development Center, FFPRI
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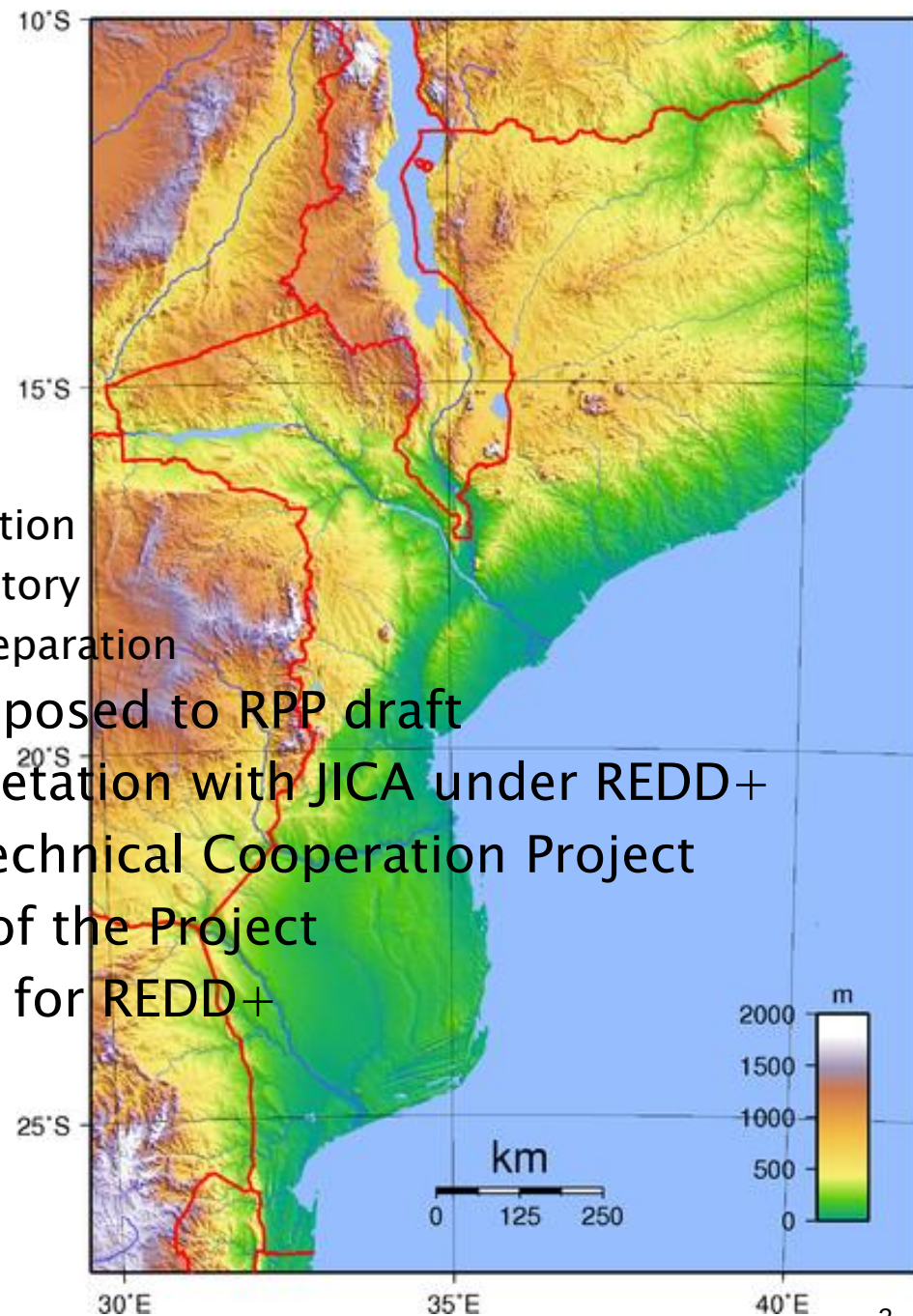
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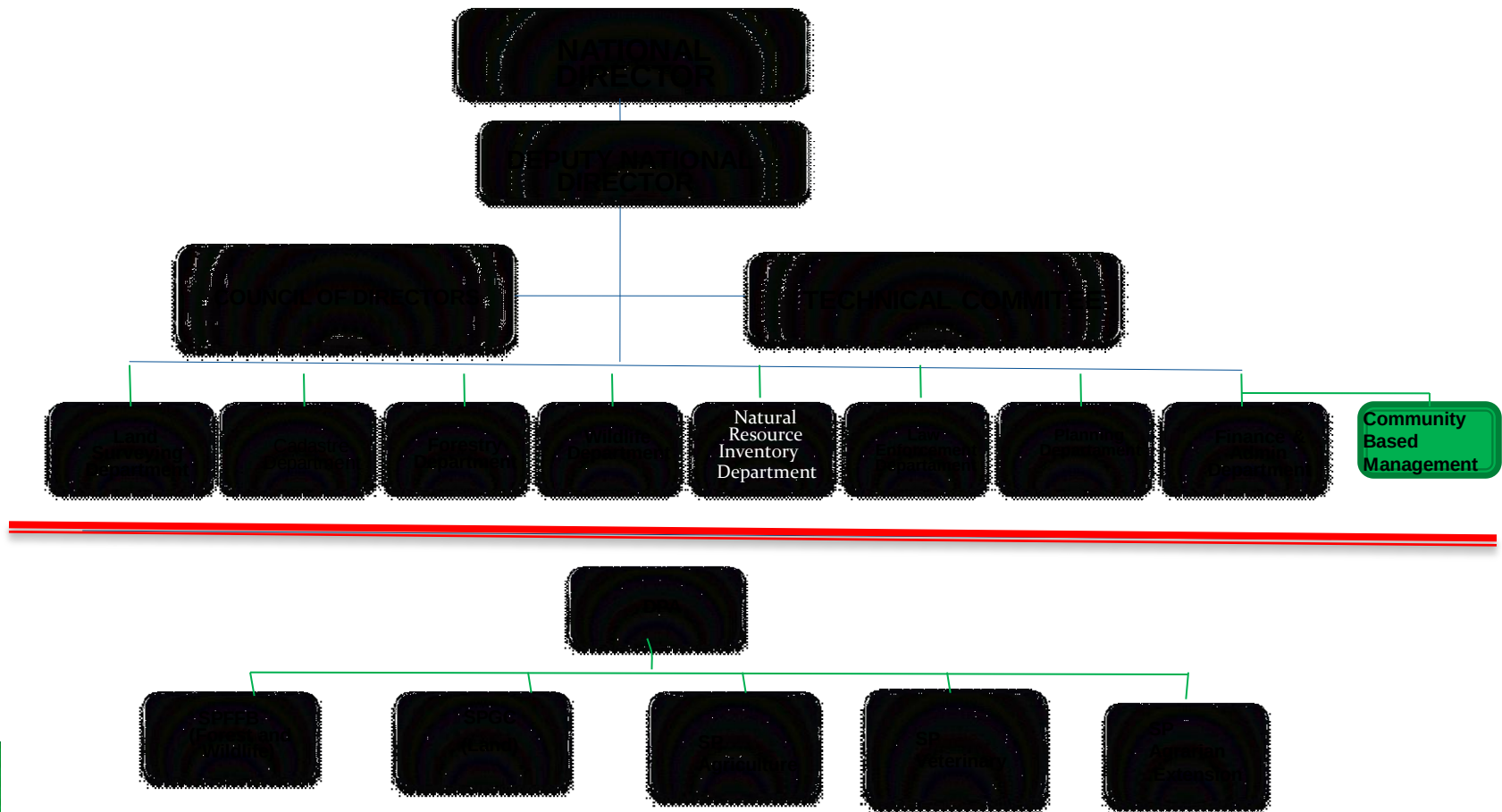




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- Mozambique: Administrative Regions, Cities, Rivers and Socio Ecological Regions**
- LEGEND**
- Lakes
 - Cities
 - Rivers
 - Socio-Ecological Regions
 - SER A
 - SER B
 - SER C

DNTF framework

National Directorate of Land and Forest is the institution of the state responsible for implementation of policies related to land and forest resources.

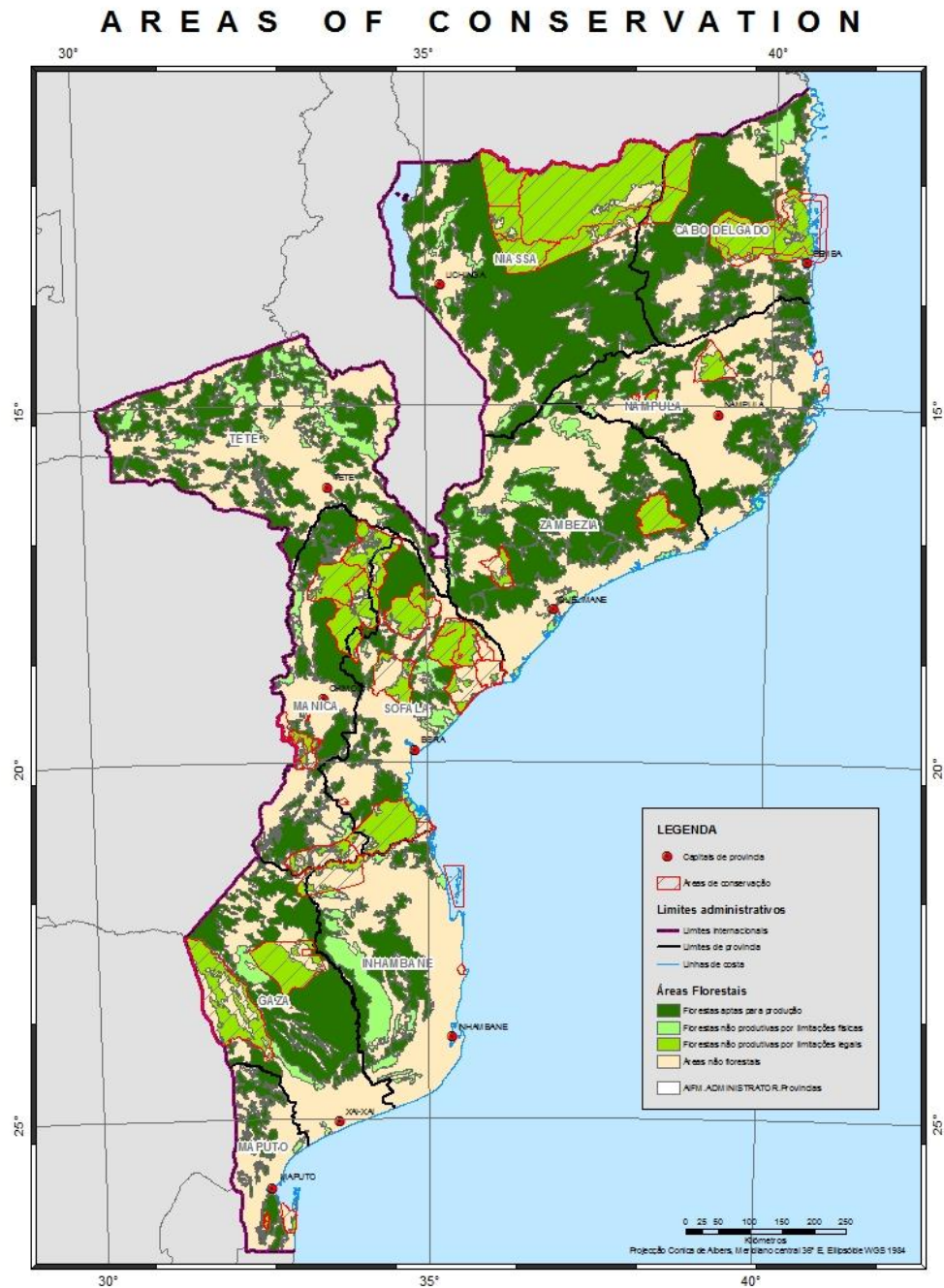
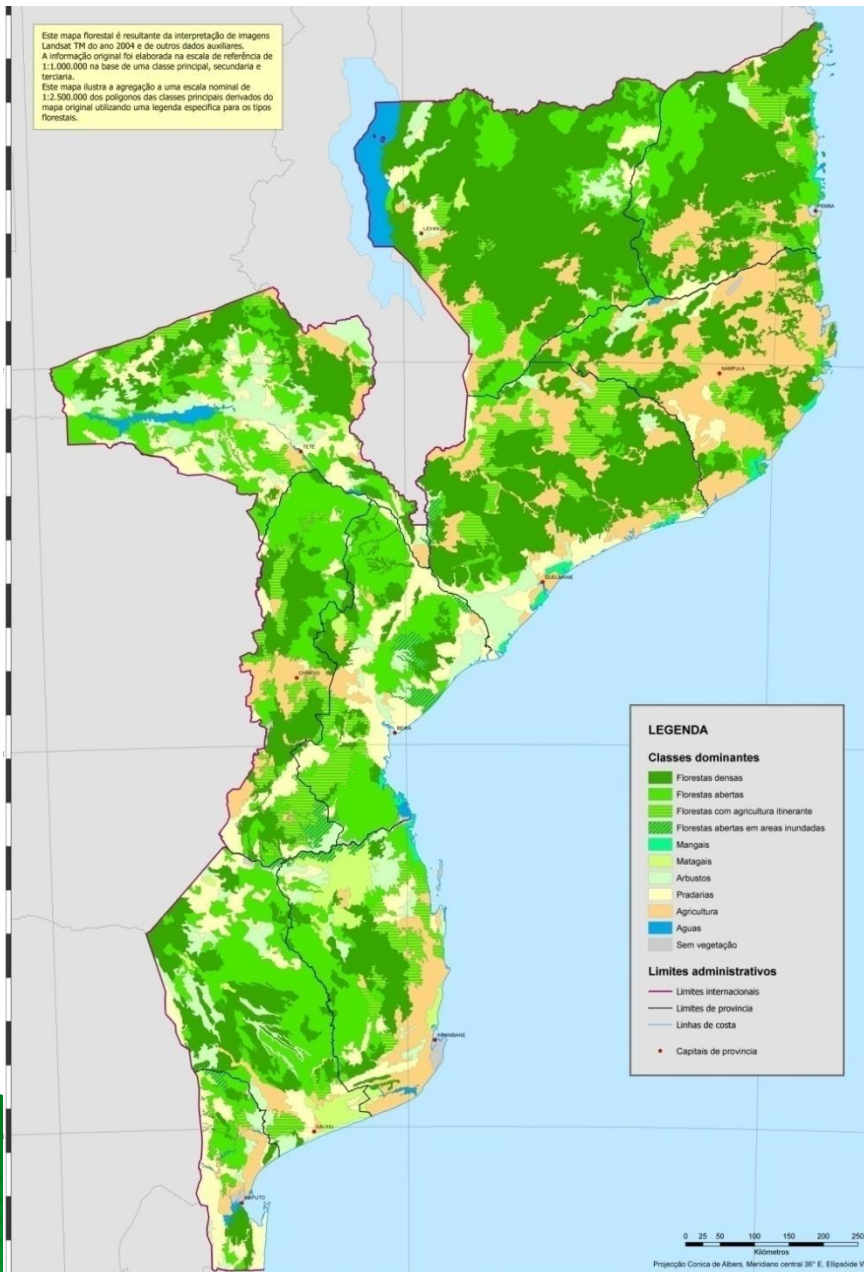


Basic information on Forest

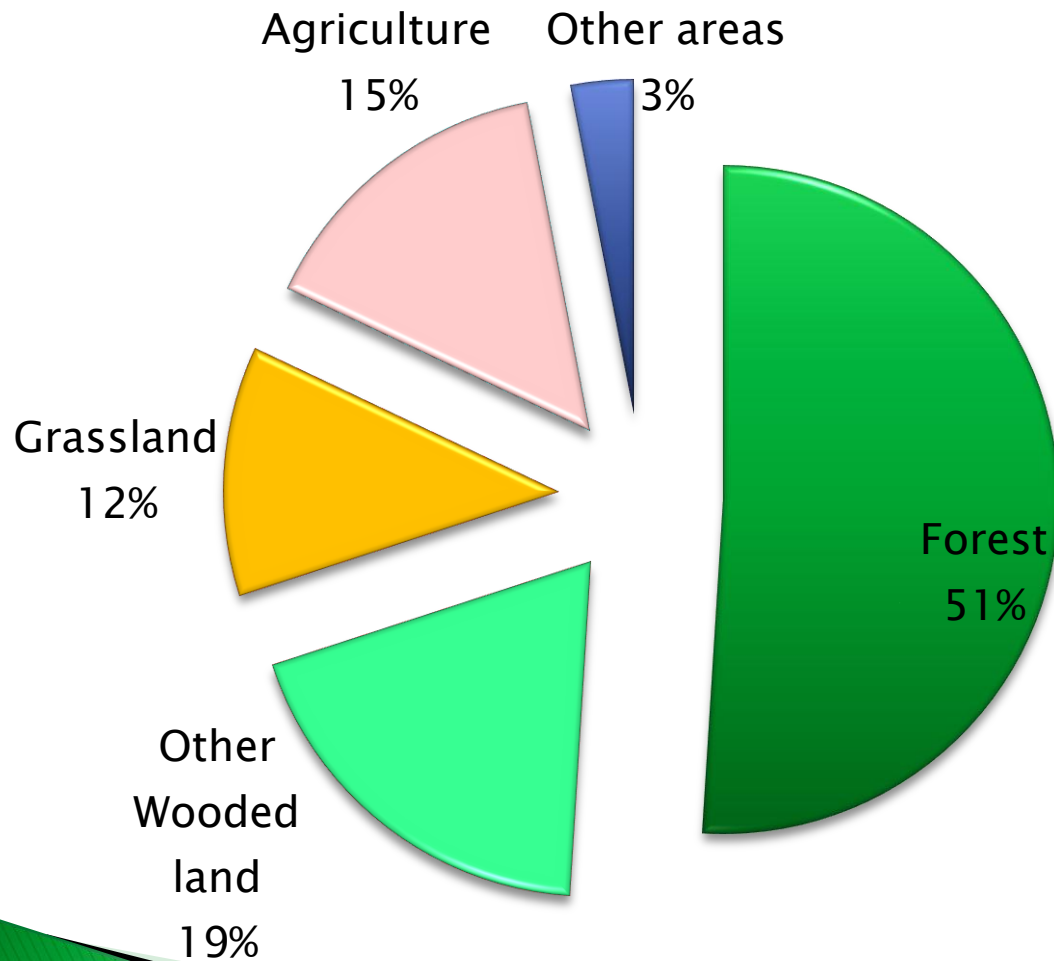


- ▶ Mozambique is located in a tropical region characterised by miombo forest with (semi)deciduous and evergreen forest, 51% of the country is covered by forest currently it is 40 million hectar;
 - Vegetation forest types (5 classes: Dense Forest, Opened, Mangrove, Moist open, Thicket);
 - Ecological zones (9 classes: Moist Miombo Forest, Sub-litoral moist Forest, Mosaic of costal forest, mopane forest, etc.);
- ▶ **Climate:** with two seasons, a wet and hot season from October to March and a dry and cold season from April to September;
- ▶ **Forest is defined** as area with a conopy cover >15% of coverage, tree hight > 3m and surface ≥ 0.5 ha. National definition of “forest” shall be agreed among stakeholders and be reported to UNFCCC (to be published at CDM site)
- ▶ **Forest area trend** is decreasing in 0.58% per year, which 220 000 ha/annum (1990–2004). **Increasing in Pantation area;**
 - Estimated total volume and other wooded vegetation land 1.74 billion m³ or 36.6 m³/ha;
- ▶ **Land** belongs to the government;

Land cover maps



Land cover percentage distribution



History of National Forest Inventory

- ▶ 1980 1st National Inventory was conducted (financial support by FAO);
- ▶ 1994 2nd National Inventory was conducted (financial support by FAO);
- ▶ 2007 3rd National Inventory was conducted (financial support by Italy/Mozambique);
- ▶ 1983, 1998, 1999, 2004, 2007 Provincial forest inventory at Niassa, Sofala, Cabo Delgado, Zambézia, Inhambane, Manica and Maputo has been conducted (financial support by FAO, Finland, Italy/Mozambique).
- ▶ 2012 provincial forest inventory to be carried out at Cabo Delgado, Nampula, Gaza, Inhambane, Sofala, Niassa, Tete, Zambezia (financial support Gov. Mozambique, Italy),
- ▶ Main purpose of those inventories was/is for timber production and biomass assessment;
- ▶ Scale 1: 1 000 000 at national level, 1: 250 000 at provincial level

History of REDD+ Readiness Preparation in Mozambique (1 / 3)

- ▶ **March 2009** R-PIN(Readiness Project Idea Note) for REDD was submitted to the World Bank. Norway funded for consultancy work;
- ▶ **June 2009** National REDD+ Strategy was started drafting with a fund from Norway as a part of the South-South cooperation support between Brazil and Mozambique. With this fund, IIED work with FAS (Brazil), Indufor (Finland), University Eduardo Mondlane (UEM- Mozambique University), Centro Terra Vida (CTV-Mozambique NGO) to support MICOA and MINAG's responsibility. A working group was established involving stakeholders;

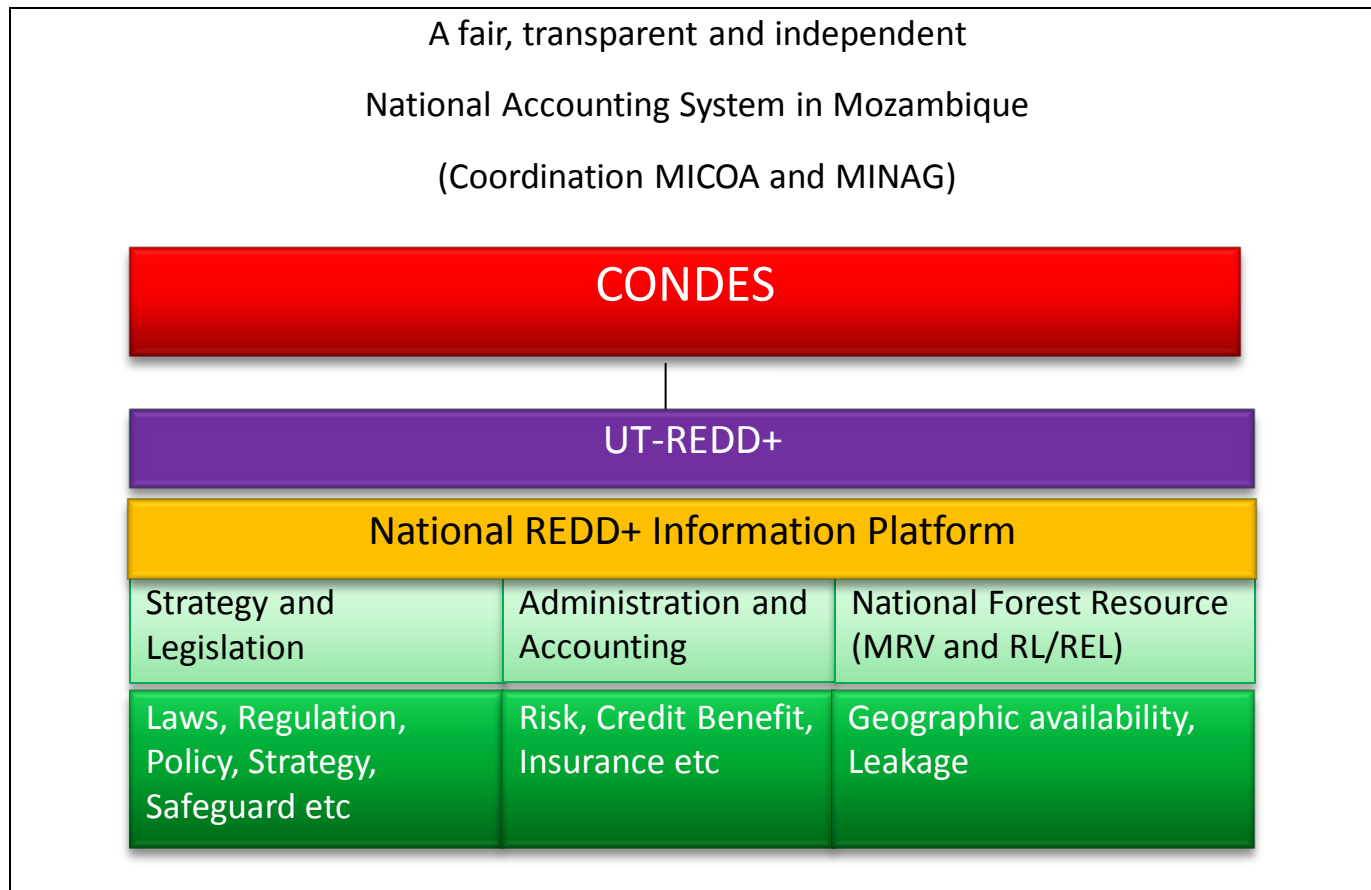
History of REDD+ Readiness Preparation in Mozambique (2/3)

- ▶ **April 2010** Japan Grant Aid on Forest Preservation Programme (Japan Grant Aid) was signed between MINAG and the Government of Japan, which enable Mozambique government to purchase satellite images and equipment to be ready for REDD+ monitoring;
- ▶ **October 2010** Mozambique became a member of REDD+ Partnership. Vice Minister of MICOA gave a speech for the ministerial meeting held in Nagoya CBD-COP10.
- ▶ **June 2011** The government of Mozambique decided to halt temporarily drafting of National REDD+ Strategy and speed up the formulation process of RPP.

History of REDD+ Readiness Preparation in Mozambique (3 / 3)

- ▶ **September 2011** A draft of RPP was submitted to FCPF;
- ▶ **December 2011** JICA Detailed Planning Survey Team visited Mozambique and agreed to conduct the Establishment of Sustainable Forest Resource Information Platform for Monitoring REDD+ from 2012 for 5 years.
- ▶ Some voluntary initiatives/programs on carbon stock exist within the country.

Implementation framework proposed to RPP draft



* National Council for Sustainable Development (comprising various ministers and chaired by Prime Minister)

** Technical unit of REDD+

Objective of Technical Cooperation with JICA under REDD+

- ▶ Establishment of Sustainable Forest Resource Information Platform for Monitoring REDD+.

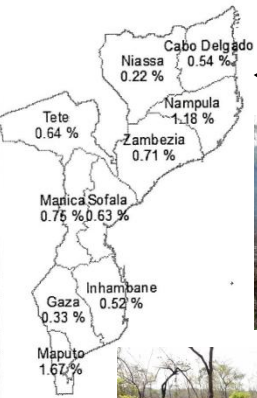
Creating a database GIS facilities at HQ with a nationwide satellite image map and available forest and geographic information, bases for MRV and RELs/RLs for forest resource information platform, in addition to existing forest inventory objectives.

We believe that national RL/REL and MRV should be prepared, administered, managed at national level with government responsibility.



Benefits of REDD+ in Mozambique

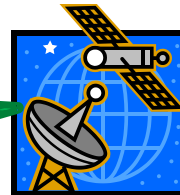
Annual Forest loss



REDD+ Action

Japan Grant Aid
and JICA Project

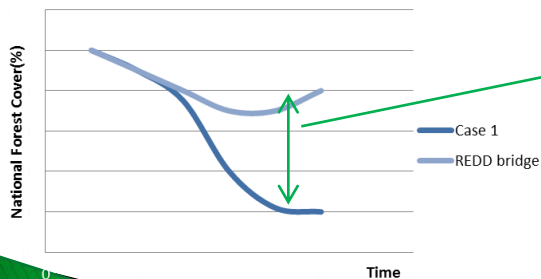
Monitoring System



<Bi-products of REDD+>

- * Protect water sources
- * Maintain air, soil, and water quality
- * Provide habitat of animals
- * Secure ecosystem and biodiversity
- * Thus, improve food security of large population

Forest Transition Curve



Carbon Credit

<Bi-products of REDD+>

- * Prevent erosion
- * Protect people from flood & drought
- * Share the benefit among people
- * Thus, help people get out from poverty



Combination of the Grant Aid and DNTF/MINAG-JICA Project to establish REDD+ Monitoring System

Grant Aid: JPY 0.7billion

By Ministry of Foreign Affairs of Japan

(Fund Management Contract with 'Crown Agents' of Japan)



- Purchase satellite images, equipment, vehicles (including installing & user training & maintenance services)

DNTF & JICA Advisor:
Policy Planning,
Implementation, Facilitation

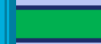
DNTF
National
Director

JICA
Advisor

Chief of Natural
Resource Inventory

Staff, Field Staff

DNTF-JICA
Project will
use the
goods and
facilities set
by Grant Aid



Technical cooperation
project between DNTF
and JICA



- Capacity development to establish a forest resource database and information platform and to conduct monitoring by remote sensing and ground survey, and to produce RL/REL

Proposed Overall Structure of the Project in Mozambique

[Establishment of Sustainable Forest Resource Information Platform for Monitoring REDD+] :

Executing Agency: Mozambique DNTF

1. Database System functioning as the Forest Resource Information Platform is established.

2. Basis of MRV for the Forest Resource Information Platform is developed.
(MRV: Monitoring, Report and Verification)

3. RELs/RLs for the Forest Resource Information Platform are created.

4. Data set of biomass and carbon estimate is prepared.

Japan Grant Aid:

- Satellite Images
- GIS facility
- Survey equipment

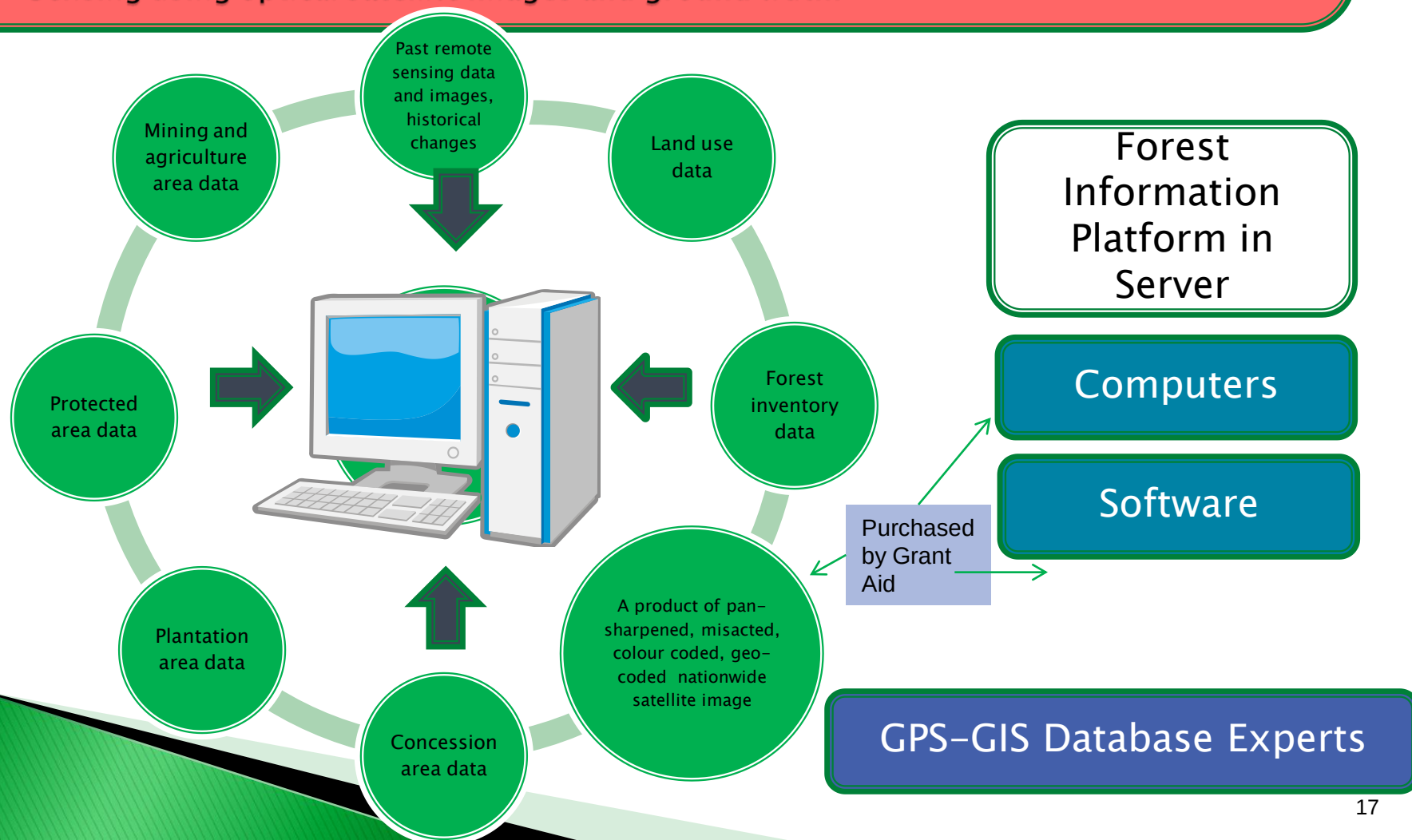
In the future

Cooperation/
Coordination
with
other relevant
initiatives &
projects
on
REDD+

1. Establish and functioning Database system as information Platform of Forest resource

1-1 Create a database in DNTF HQ GIS facility with a nationwide satellite image map product and all available forest and geographic information

1-2 Produce forest cover and land use maps for 2 provinces (Gaza and Tete) by Remote Sensing using optical satellite images and ground truth.



2. Developed the base of MRV to sustain the forest information Platform

2.1 Develop capacity in Remote Sensing to detect forest cover changes using SAR in 2 provinces (Gaza and Tete)

2.2 Establish on the ground monitoring system and implement

- Establish inventory system in 2 provinces and each 2 target districts in the 8 provinces
- Establish the monitoring systems in each 2 districts for the 10 provinces

Províncias	District 1	District 2
Maputo	Matutuine	Magude
Gaza	Bilene	Mabalane
Inhambane	Mabote	Vilanculo
Manica	Gondola	Macossa
Zambezia	Murrumbala	Gile
Tete	Moatize	Tsangano
Sofala	Golongoza	Cheringoma
Nampula	Mecuburi	Mossuril
Niassa	Nuembe	Majune
Cabo Delgado	Ancuabe	Montepuez

Geographic information

Forest Utilization Plan + Monitoring Plan

Deforestation/Forest Degradation Detection & Report Training (GPS, GIS)

SDAE*

GPS report

SPFFB**

Survey Report

DNTF HQ***

Check ground data with satellite images (MODIS) and update base Map

Forest Inventory Expert

GPS-GIS Database Experts

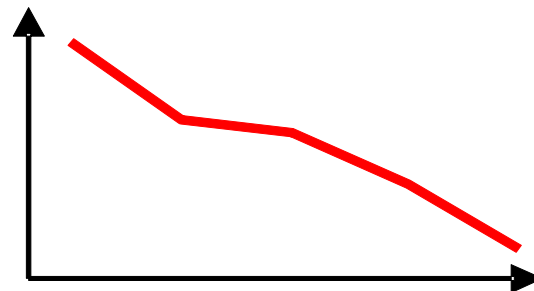
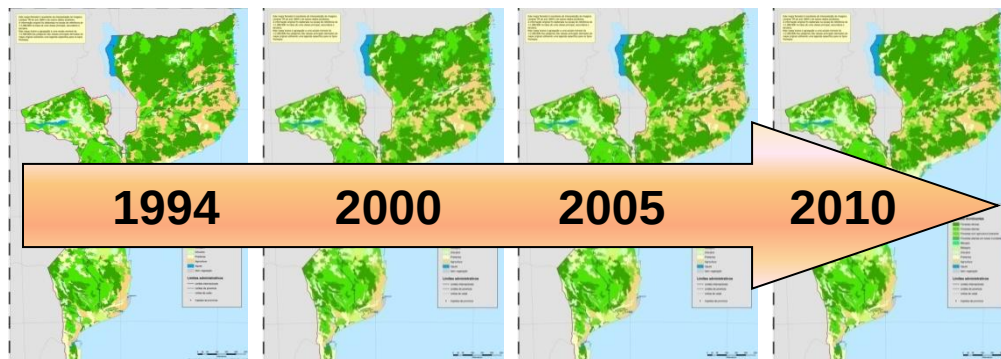
<Note>

*SDAE: districtal service of economical activity (Agricultura, Forestas, etc)

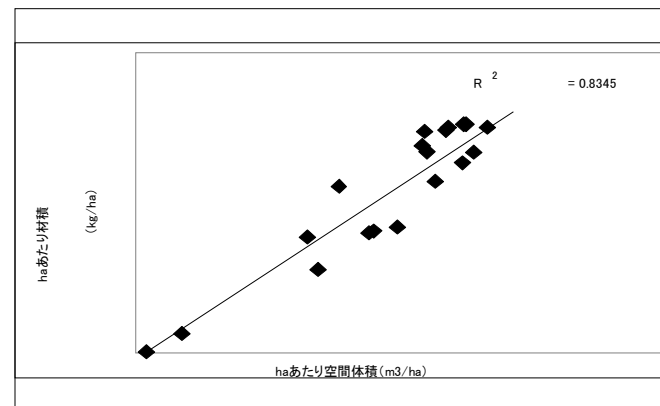
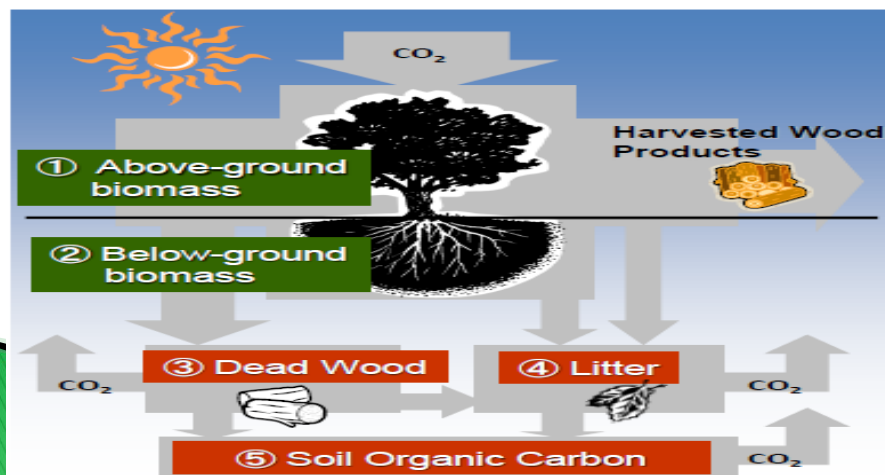
**SPFFB: Provincial service of forest and wild life

***HQ: Department of Natural Resource Inventory

3. Create RELs/RLs for Natural Forest Resource Information Platform



4. Prepare data sets for biomass and carbon estimation



Elements into consideration for REDD+ (1 / 2)



➤ Indicators

- Ecological zones;
- Distance;

➤ Monitoring target of each forest

- Deforestation;
- Degradation;
- Afforestation;
- Conservation;

➤ Identification of the driving force of DD and DF

- DD
 - Increasing demand for biomass energy
 - Hunting, particularly the use of fire in land clearing
- DF
 - Clearence for agriculture;
 - Mining and infrastructure development including expansion of urban areas;
 - Shifting cultivation;



Elements into consideration for REDD+(2 / 2)



- ▶ Accuracy level to identify the area/scale/classification
 - accuracy should be between 86% –90%;
 - land cover map at scale 1: 50 000;
- ▶ Approach to identifying areas
 - Wall to wall (accordingly to the forest type);



Thank you Obrigado Arigato

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