

# **GEO FCT ACTIVITIES IN TANZANIA**

## **Progress and Plans**

Jared Otieno & Gerald Kamwenda  
**Forestry & Beekeeping Division**  
**Ministry of Natural Resources and Tourism**

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# Institutional framework

Tanzania have over 33.5 million hectares of forests and woodlands which is about 40% of the total land area  
The existing data on the forestry resources at national level was based on reconnaissance type inventories

Climate change is one of the biggest global problems  
Posing challenges to sustainable livelihoods and economic development

Deforestation and degradation are taking place in both Reserved and unreserved forests but more so in the unreserved forests due to inadequate resources to implement active and sustainable forest management.

In 1999, National Forestry Resources Monitoring and Assessment (NAFORMA) project which is on going was started with financial support from the Government of Finland through FAO



# INSTITUTIONAL FRAMEWORK

The National REDD Framework developed to guide the process towards the development of the National REDD Strategy

The key issues addressed by the National Strategy according to the National framework for REDD include:

- Establishment of Baselines forest assessment & carbon emission
- Establishment of monitoring system for MRV
- Financial Mechanisms and Governance for REDD+
- Stakeholders engagement and involvement of local communities
- Capacity building, Research, Information dissemination & networking
- Pilot Demonstration activities



# NAFORMA OBJECTIVES

- Develop a broad consensus to NAFORMA process and approach including methodology
- Strengthen capacity of FBD in inventory and monitoring of forests and TOF
- to provide forest resources information for domestic use as well as for the international reporting requirements
- to establish a long-term forest and carbon monitoring system.
- Develop a national database on Forests and TOF
- Prepare national maps of forests and other land uses
- Define long term monitoring program – design and formulate specific management oriented inventories





# MAPPING STAKEHOLDERS NEEDS ASSESSMENT

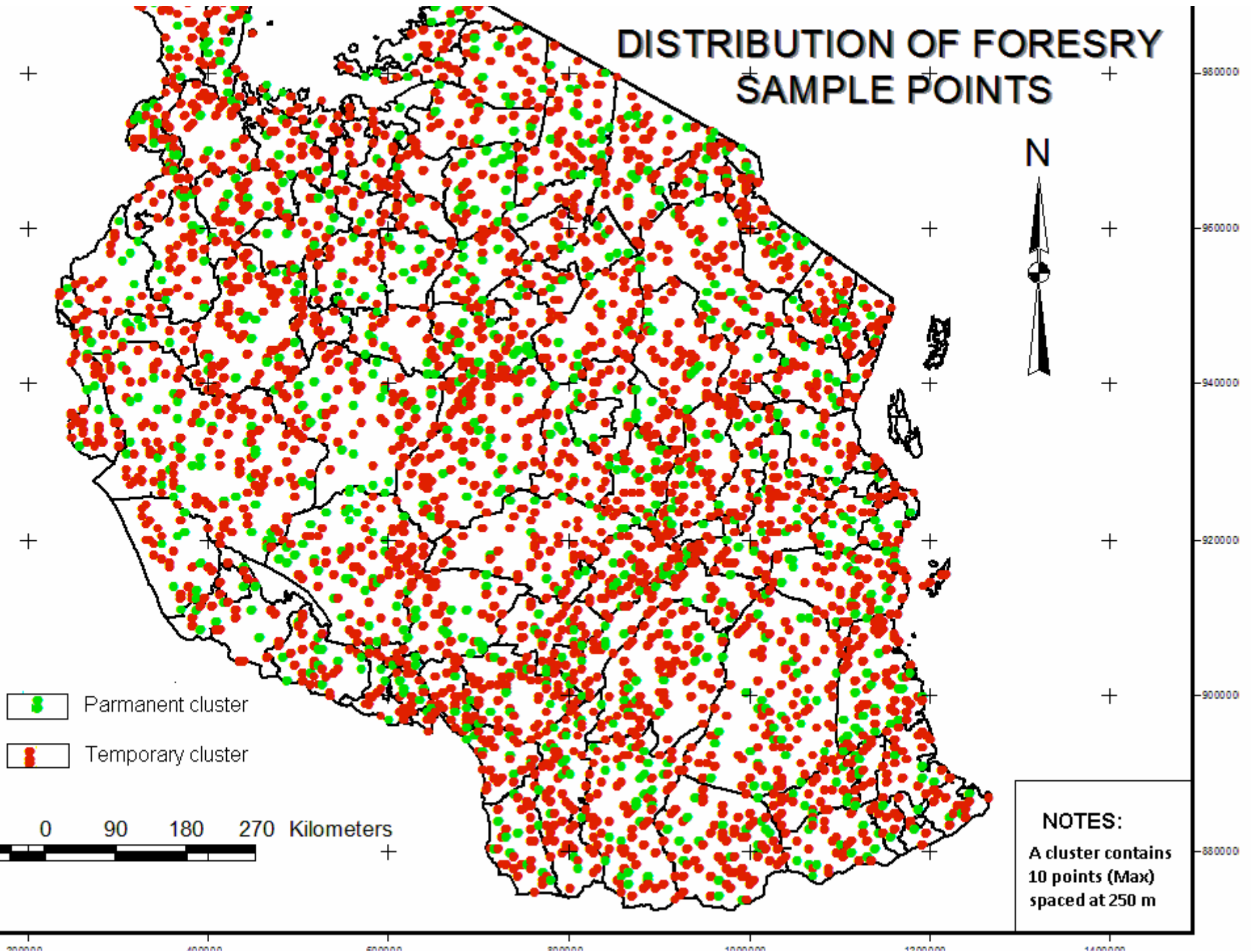
Extent of forest resources in Tanzania by categories of:


- vegetation type (species in plantations & natural forests)
- ownership (e.g size of reserved forests and forests in general land)
- stocking levels including carbon estimates
- ecological status
- use status (productive/protective e.g catchment & wetlands areas)
- Biodiversity status & Tree outside the Forest area
- NTFP



# DISTRIBUTION OF FORESRY SAMPLE POINTS

N



 Parmanent cluster

 Temporary cluster

0 90 180 270 Kilometers

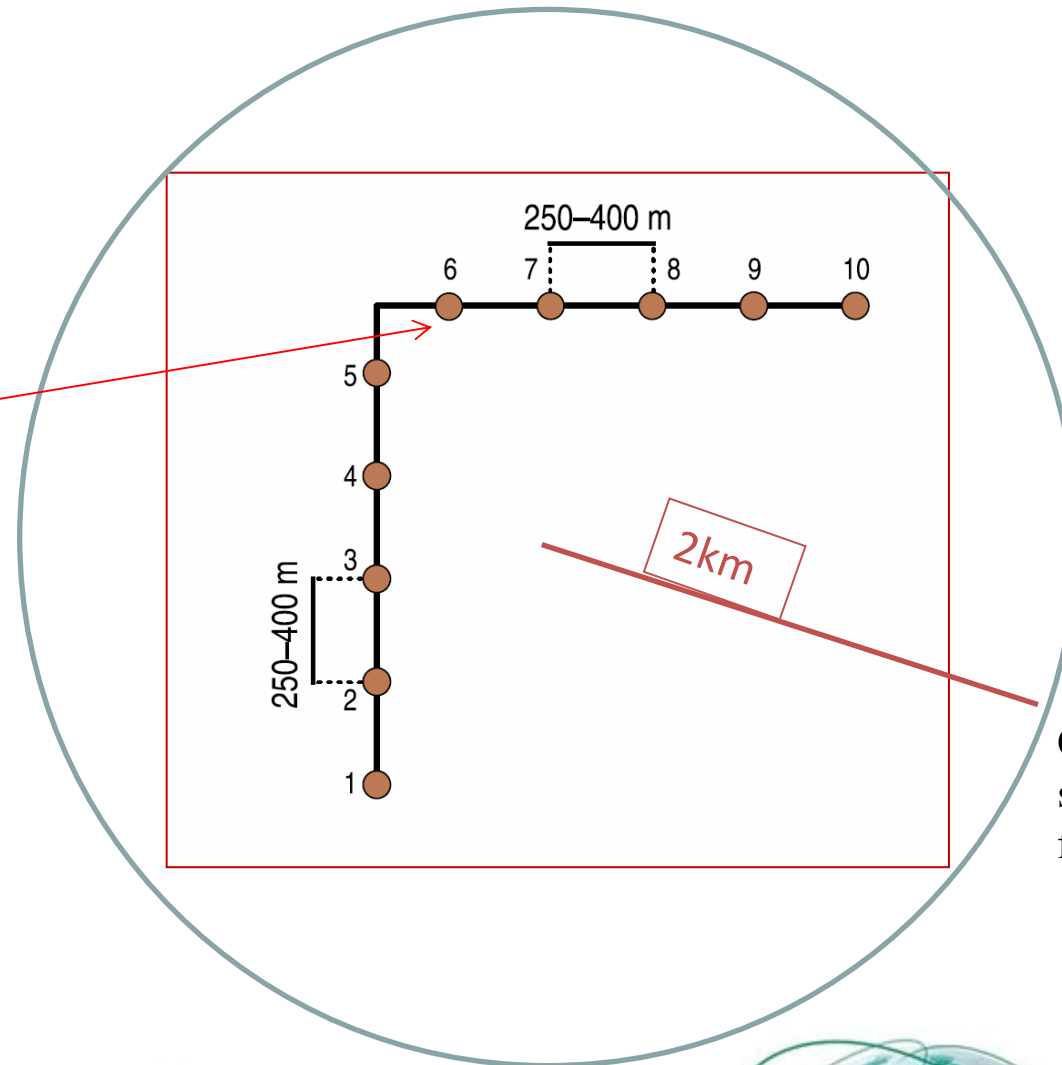


## NOTES:

A cluster contains  
10 points (Max)  
spaced at 250 m

# The NAFORMA cluster

Biophysical  
sample plot



Center of  
sampling unit  
for interviews





# Current Status of Carbon Emissions Estimation

- Currently, Tanzania have limited data on Status of Carbon Emission Estimation
- Therefore, forest and carbon stocks and emissions estimations being done using research studies and demonstration projects information
- Tanzania plan to use NAFORMA and project level data to establish baseline information for forest and carbon stocking and emission level in the future



# REDD readiness & MRV implementation

## **Data, Models/methods planned to be used in the MRV system:**

NAFORMA data is planned to be used for the development of forest and carbon monitoring guidelines, Development of allometric equations for modelling and Development of reporting and verification guidelines based on IPCC guidance and guidelines

## **The participation to the GEO FCT will support National MRV implementation:**

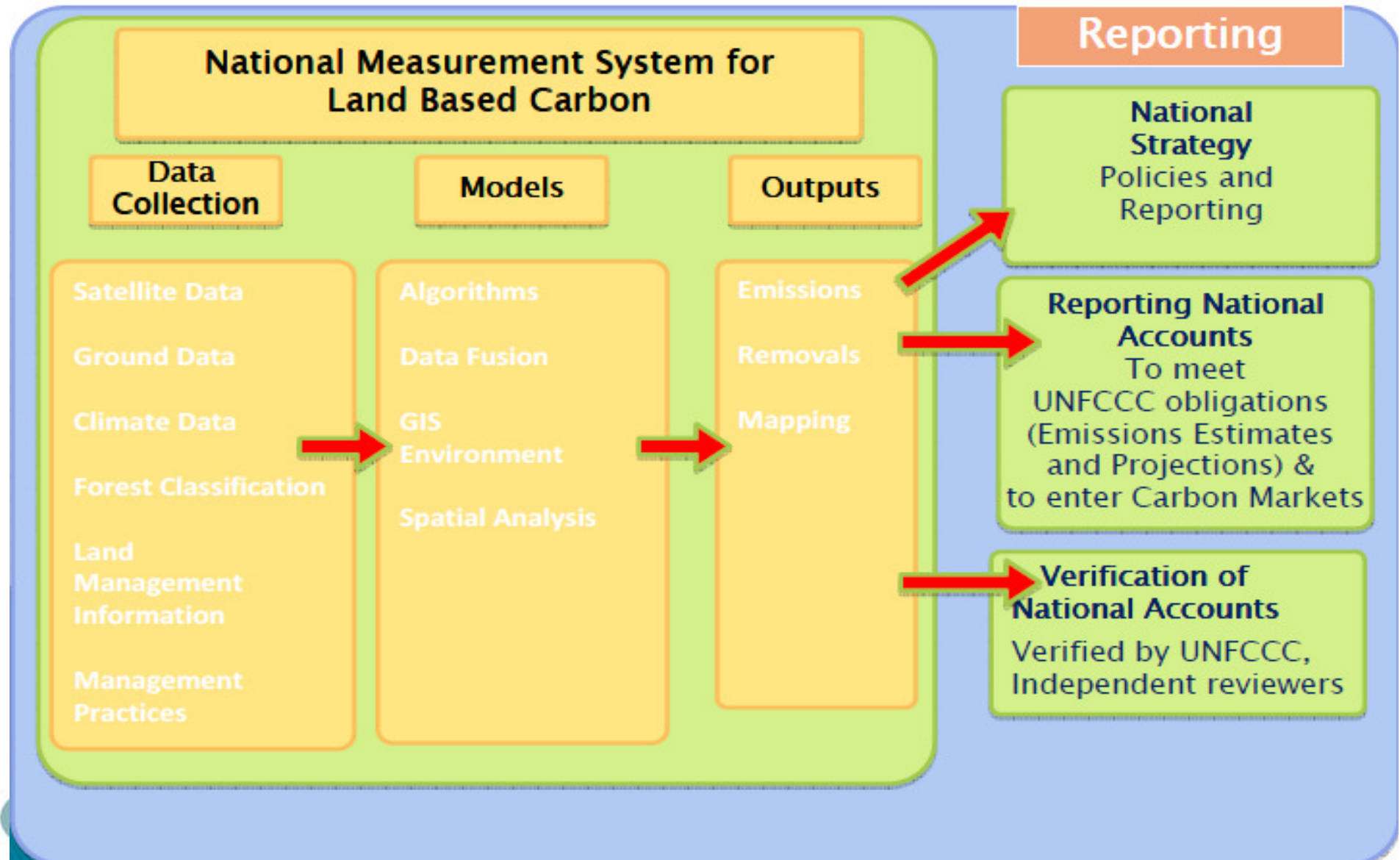
It is planned that GEO-FCT will continue supporting in country capacity-building, material and methodological information for effective national MRV. It will also continue supporting the establishment of national forest carbon centre and supporting the acquisition of high resolution satellite data processed from selected satellite data providers

## **Planned resources to support implementation:**

The Government supports the establishment of National REDD framework, National REDD strategy, National forest Inventory and local awareness. GEO-FCT in collaboration with NORWAY, FAO/UNREDD are planning to support the implementation of national REDD strategy by Strengthening cross-sectoral participation in forest and carbon assessment, monitoring and reporting



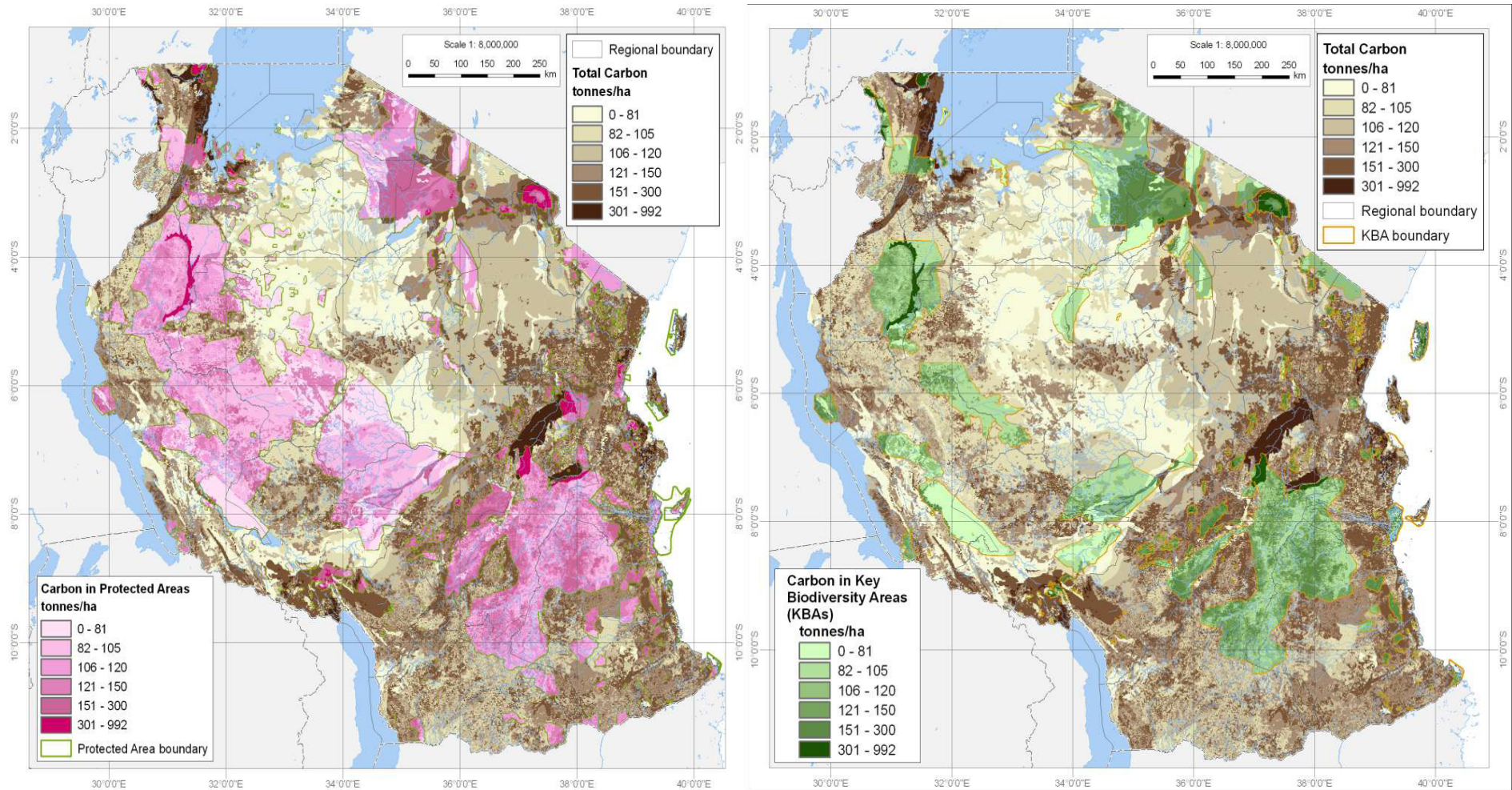
# REDD readiness & MRV implementation





# Forest & carbon overview/historical data

## MNRT/UNEP-WCMC,2009



# Available Data

- Currently, access to regular (coarse and medium-resolution earth observing) satellite data for the country is limited
- Forest and carbon information collected by reconnaissance inventories, Research and demonstration project are currently, used for different decision making process
- In-situ, forest inventory data for the whole country will be available for GEO task after completion of NAFORMA in 2012.
- NAFORMA data will be used to updated national land cover and land use maps



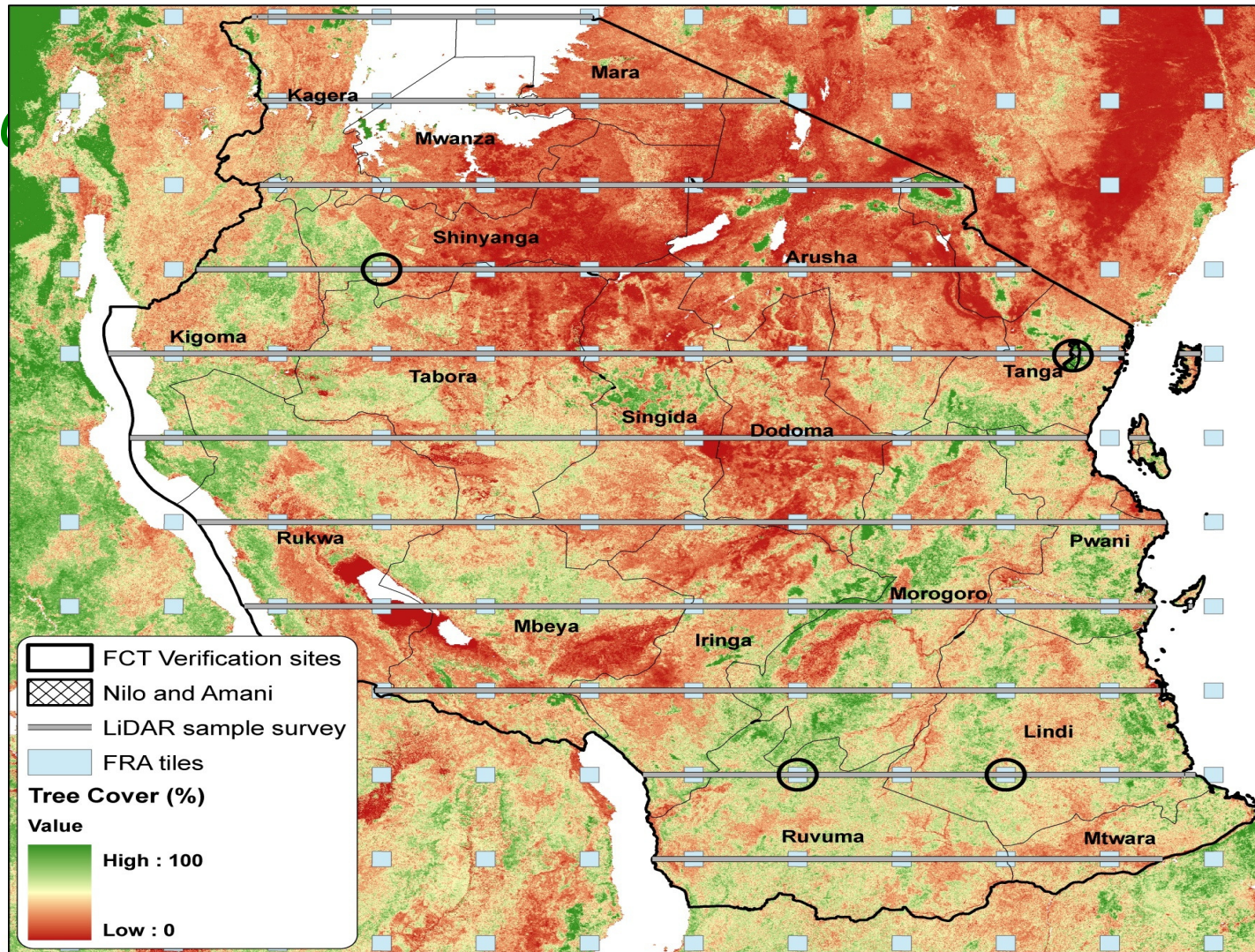


# The Verification Sites (VS)

NAME	LOCATION (Longi/Latit)	AREA (Ha)	MAIN FOREST ACTIVITIES	HISTORICAL DATA	GROUND BASED INFORMATION
NILO & AMANI	38° 39' 00" E 4° 55' 00" S	4,698	Protective nature reserve	Biological survey data and Management plan available	Government management systems in place
ANGAI	38° 03' 45" E 10° 07' 00" S	138,770	Protective & productive village forest reserve	Village forest Management committees, village land management certificate availbale	Village management areas demarcated and patrolled
SHINYANGA	-	143,000	Protective game controlled area and productive village forest land	WMA Management plan available	Government/Village management agreement in place
RUFIJI	39° 14' 00" E 7° 56' 30" S	67,612	Mangroves protective forest reserve	Biological survey data, Management plan available	Government management systems in place
SELOUS	-	231,000	Protective Game Reserve	Game management plan available	Government management systems in place



# The Verification Sites (VS)





# Spatial Data Infrastructure & Data processing

- No spatial-data infrastructure, GIS and web-based delivery systems for national forest and carbon reporting established. Process of developing this web-based infrastructure is going on between Tanzania and Google earth outreach.
- Tanzania is currently using Google developed androids for collection of socio-economic data within NAFORMA project.
- In-country capacity to process data and prepare forest/non-forest maps and carbon estimates is available but lack some technical and material support. GEO-FCT is planned to support it.
- After finalizing NAFORMA and signing MOU with Google Earth outreach Tanzania, will be able to use GIS and web- based delivery system for national REDD reporting systems.



# Capacity-Building & Support Needs

- The main capacity building needs:
  - Development of spatial-data infrastructure, GIS and web-based delivery systems for national forest and carbon reporting systems
  - Support in-country capacity to process data and prepare forest/non-forest maps and carbon estimates
  - Development of participatory methods for estimating deforestation, carbon sequestration and emissions and MRV;
  - Support use of remote sensing (time series images) wall to wall mapping and in-situ sampling in forest and carbon monitoring;
  - Exploring and mapping of national co-benefits options in carbon, biodiversity & ecosystem services



# Support Needs

## ➤ **Financing upfront capacity-building (readiness):**

- Monitoring emissions reductions
- Clarifying forest & land tenure
- Strengthening institutional capacities for law enforcement
- Supporting the establishment of National Carbon Accounting System (NCAS)

## ➤ **Financing on-going emission reduction costs:**

- Costs of implementing the policies and measures inside & outside the forest sector
- Forest protection costs
- Opportunity costs





# Thank you

