



Kenya's National Forest Monitoring System

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Forests in Africa – How Satellites support climate actions

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Presentation Outline

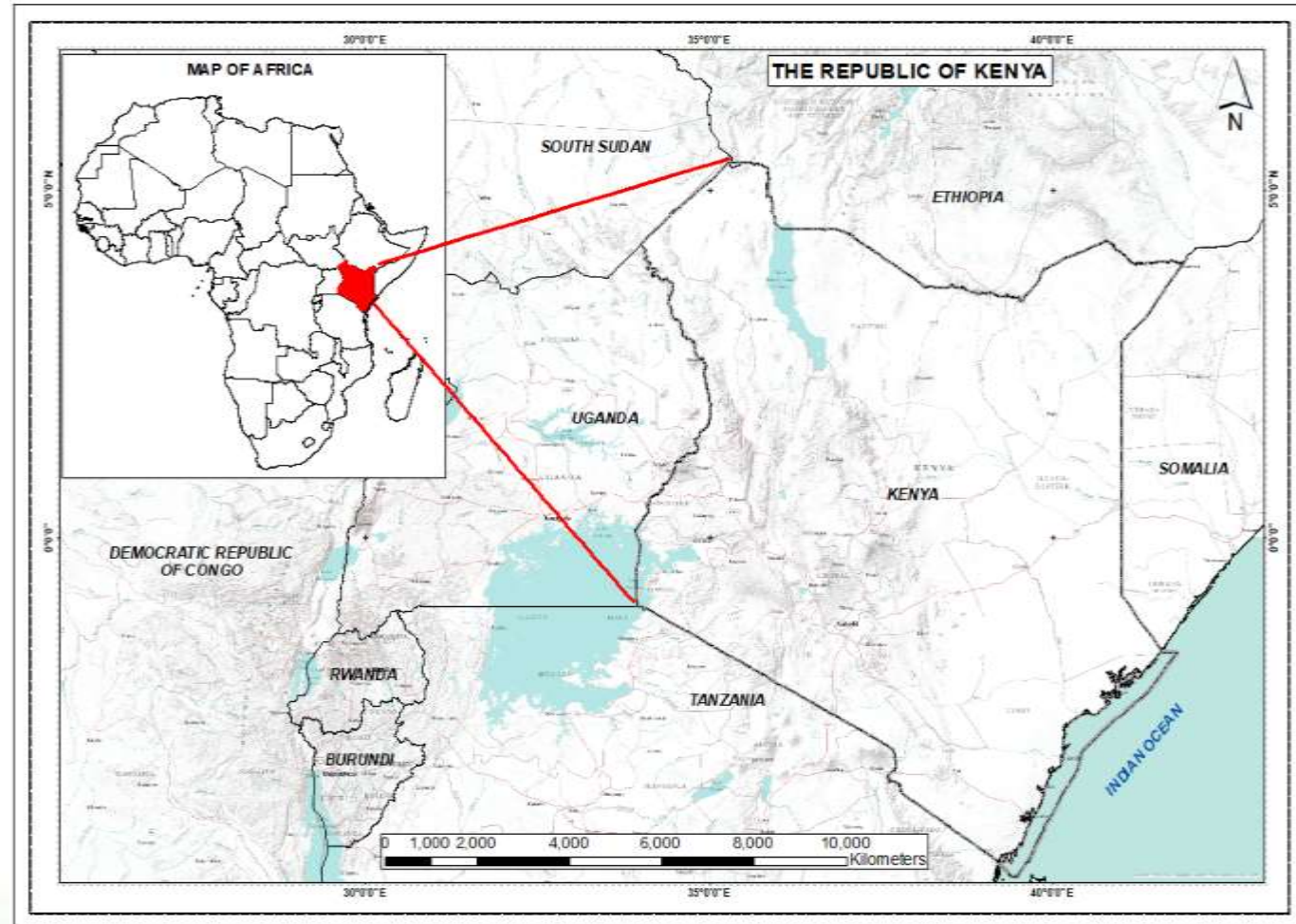
1. Introduction
2. Status of REDD+ Requirements
 - a) National REDD+ Strategy
 - b) Safeguard Information System
 - c) Forest Reference Level
 - d) National Forest Monitoring System
3. Way forward



Introduction

About Kenya

- Kenya is located in East Africa, and borders South Sudan and Ethiopia in the north, Somalia to the east, Indian Ocean to the south-east, Tanzania to the south and Uganda to the west.
- The country has a total area of 592,038 Km² including 13,400 km² of inland water and a 536 km coastline.)





Introduction

*The **REDD+ activities*** as listed in the Cancun Agreements (UNFCCC decision 1/CP.16 para 70) are



(a) Reducing emissions from **deforestation**



(b) Reducing emissions from forest **degradation**



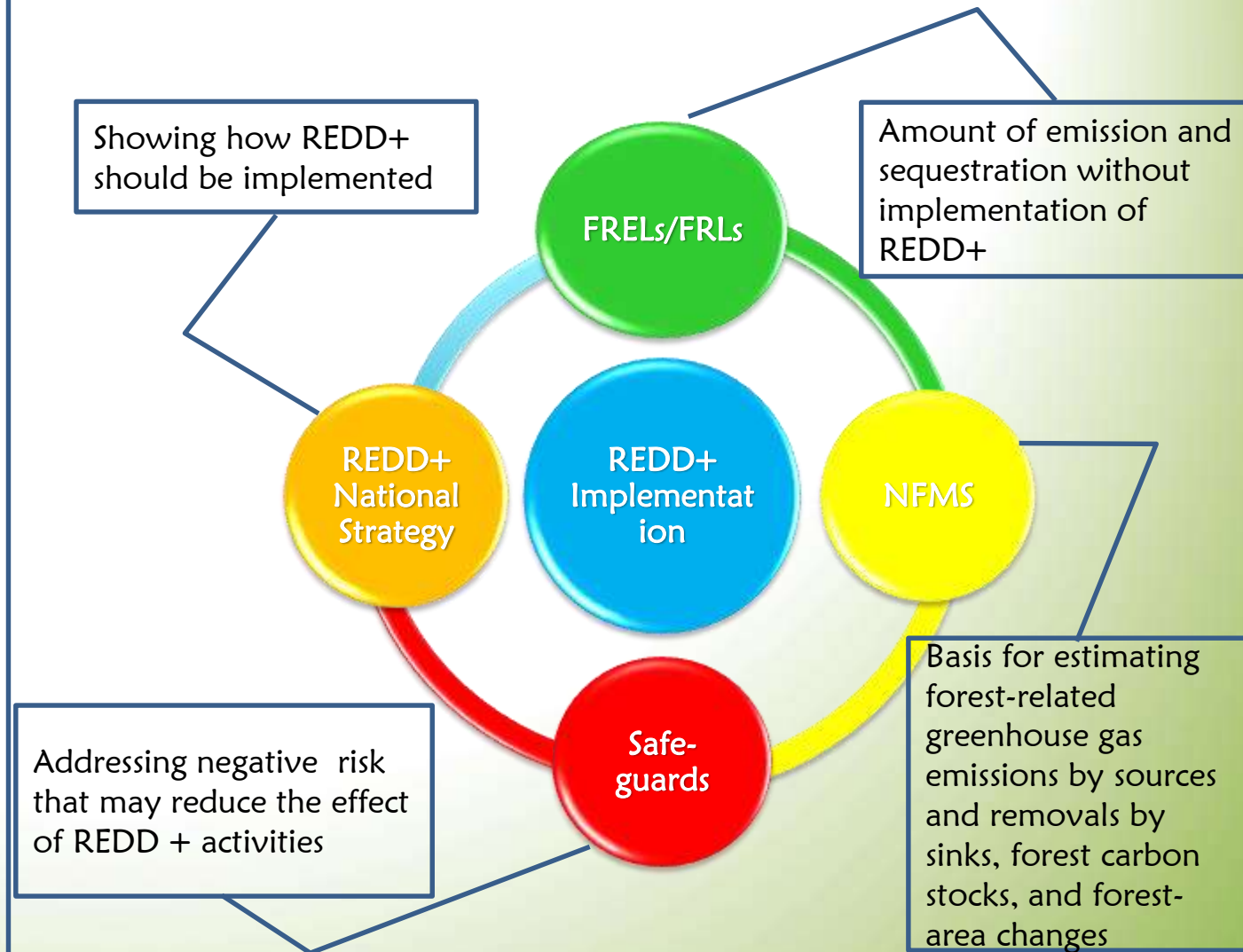
(c) **Sustainable management** of forests;



(d) **Enhancement** of forest carbon stocks.

(e) **Conservation** of forest carbon stocks

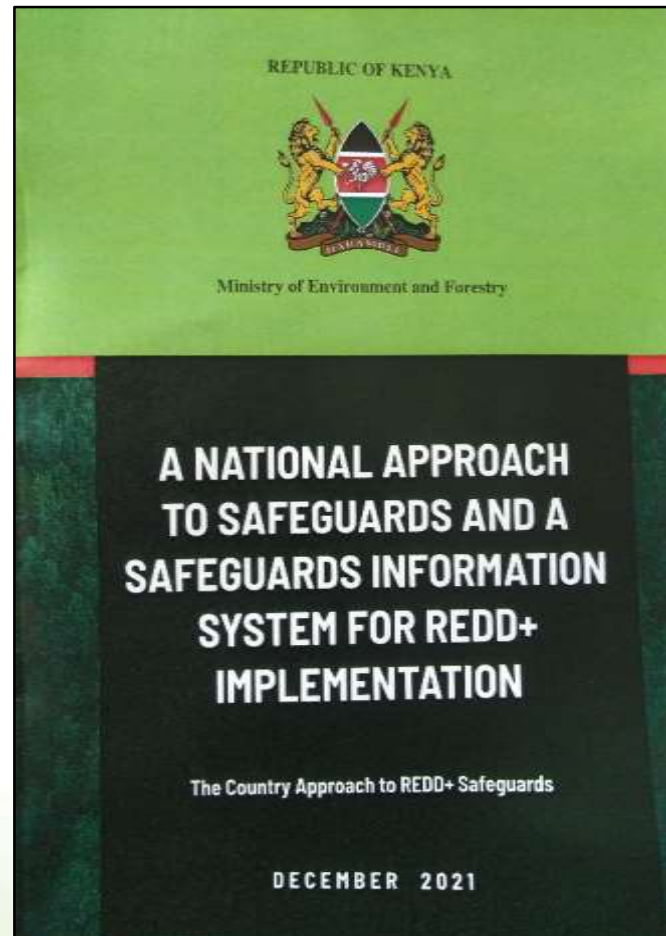
REDD+ key requirements





Status of REDD+ Key Requirements in Kenya – Strategy and SIS

1. National REDD+ Strategy
2. Safeguard Information System



Complete under support of UNDP; financing from FCPF



Forest Reference Level

3. National Forest Reference Level

Constructed In partnership with JICA and has been submitted to UNFCCC

Republic of Kenya



Ministry of Environment and Forestry

The National Forest Reference Level for REDD+
Implementation

August 2020

Condition	Decision
Forest definition	a minimum 15% canopy cover; minimum land area of 0.5 ha and minimum height of 2 meters
Scale/Approach	National
Scope of REDD+ Activities	Reducing emissions from deforestation, Reducing emissions from forest degradation, Sustainable management of forests, Enhancement of forest carbon stocks
GHG Gases	CO ₂
Forest Strata	Montane & Western Rain Forest, Coastal and Mangrove, Dryland Forest, Public plantations
Carbon Pools	Above Ground Biomass (AGB) and Below Ground Biomass (BGB)
Reference period	2002-2018 Data points: 2002, 2006, 2010, 2014, 2018
Construction method	Historical Average of emissions and removals between 2002 and 2018, monitored at 4-year intervals

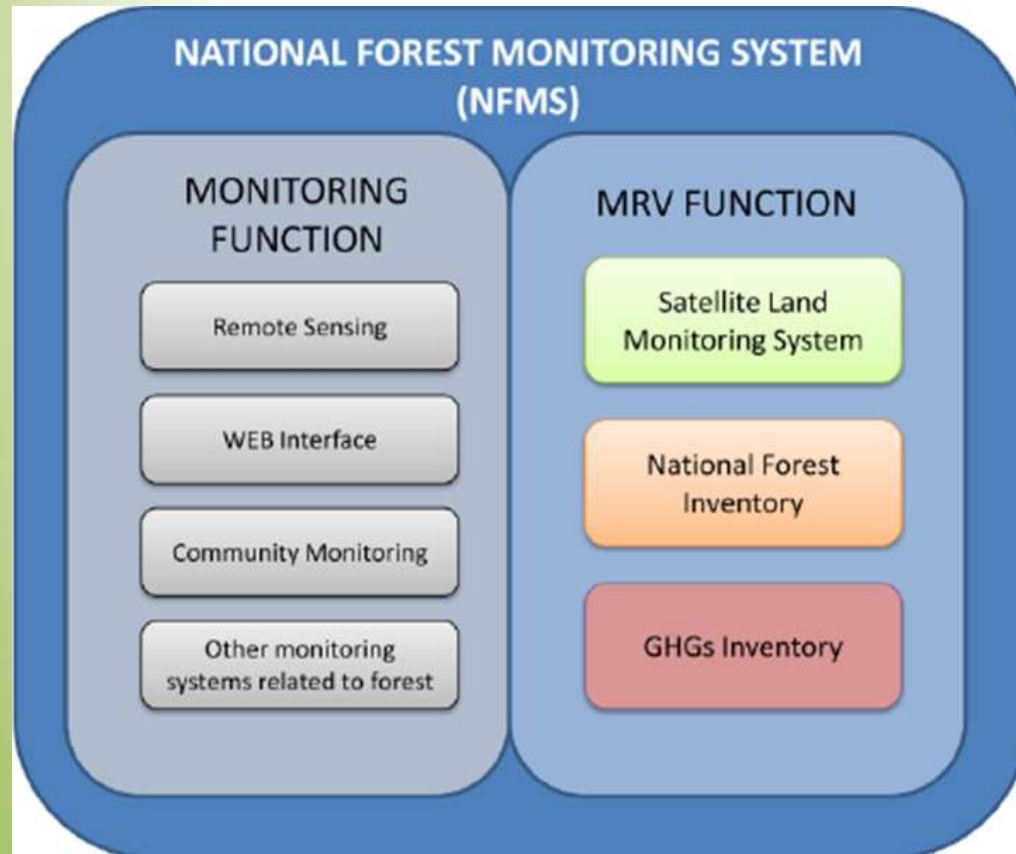


National Forest Monitoring System

4. National Forest Monitoring System

Basic consideration for Kenya's NFMS

- Land use categorization – Reference to IPCC classes but Kenya has modified to 10 classes
- Forest Definition – 0.5ha, 15% CC and 2m height
- Forest stratification – Montane and western, Coastal forest and mangrove, Dryland and plantation forest
- Carbon pools – AGB and BGB
- Scope Gas – CO₂

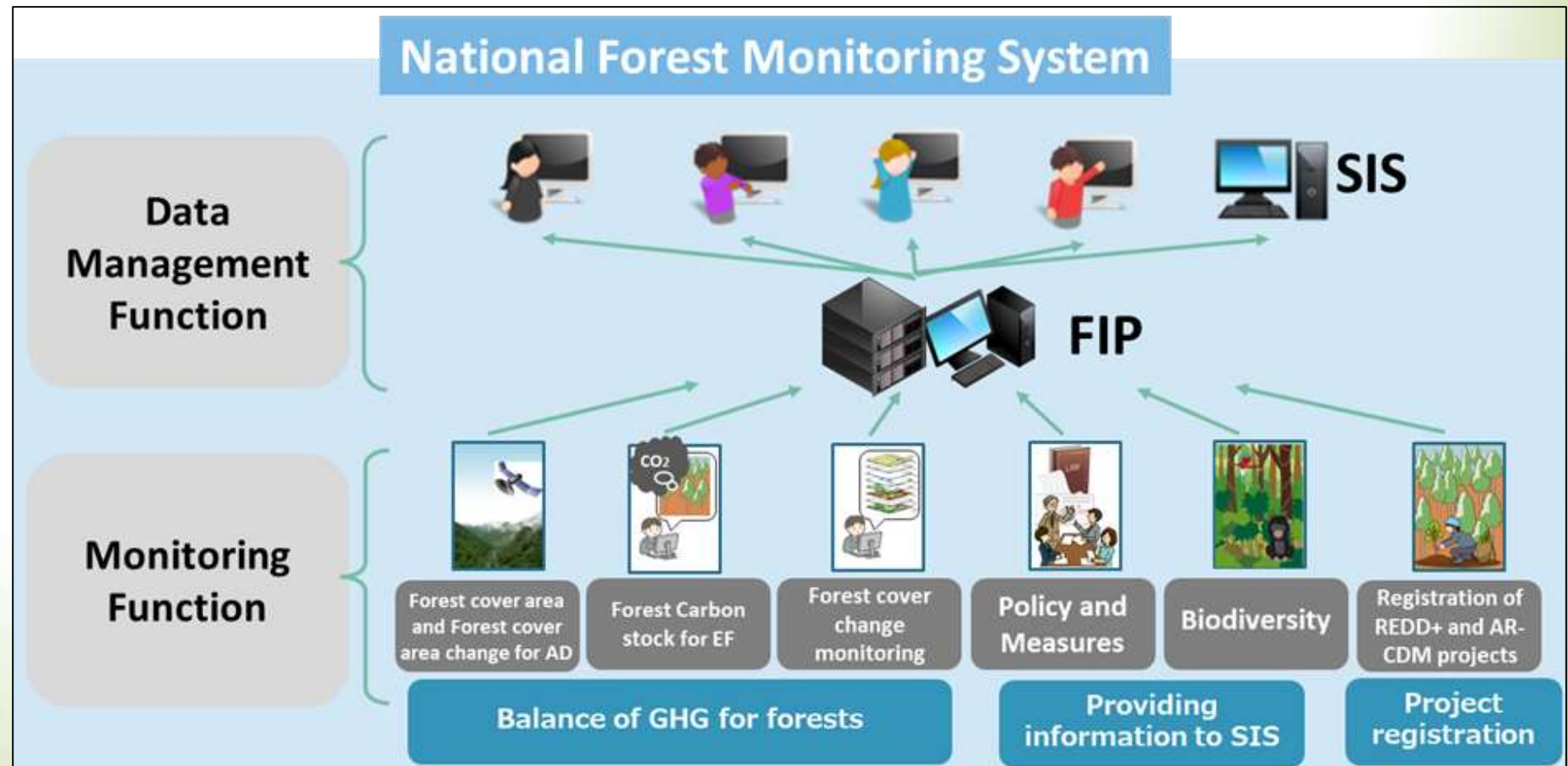




Conceptual Design of Kenya's NFMS

Developing country Parties implementing REDD+ activities are requested to develop NFMS for the monitoring and reporting of the REDD+ activities

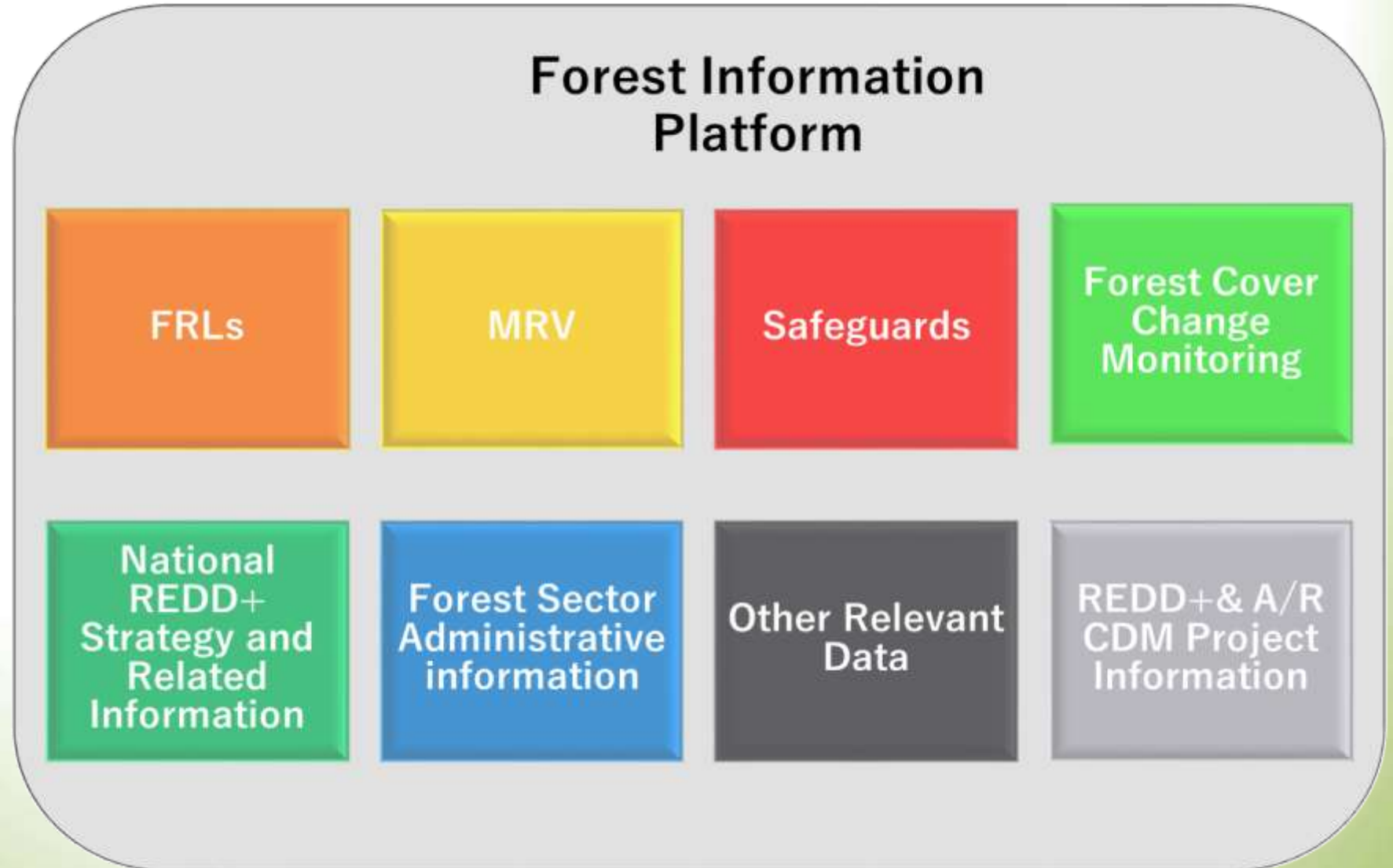
1. Data management function
2. Monitoring Function





Data management function of NFMS

Components of FIP





Monitoring Function of NFMS

The activities for monitoring function include

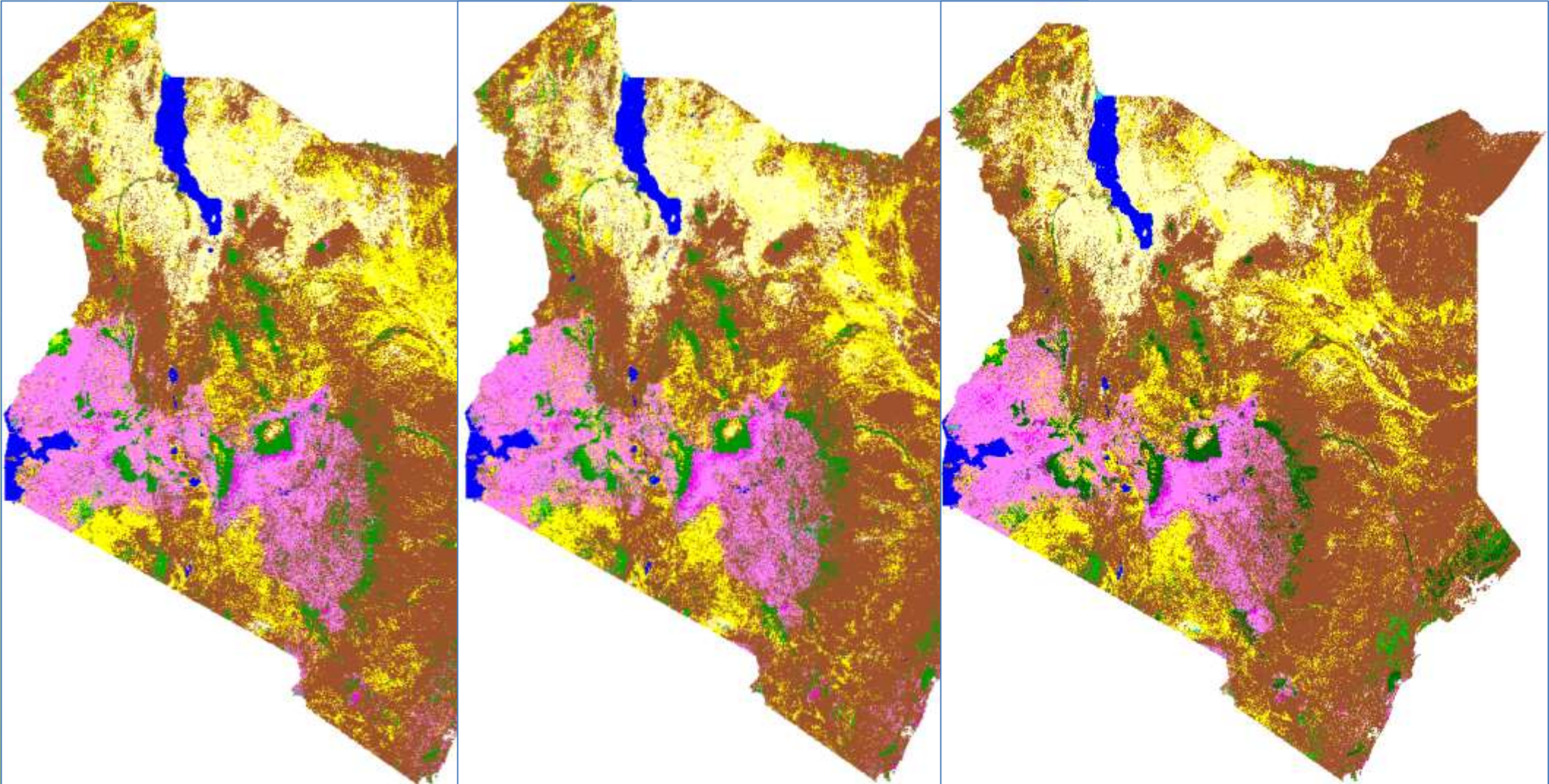
1. Activity Data (AD) - Forest cover area and forest cover change maps for Kenya
2. Emission Factors (EF) – Forest carbon stock for EF from pilot data collected and use of IPCC default values.
3. Forest cover change monitoring –
 1. JJ-FAST – uses ALOS 2 – monitors deforestation
 2. Near Real-time Forest Alert System
4. Policies and Measures (PaMs),
5. Biodiversity and
6. Project registration





Monitoring Function of NFMS

Activity Data (AD) - Forest cover area and forest cover change maps from 2002 – 2018





Forest cover change monitoring

Forest cover change monitoring – JJ-FAST – uses ALOS 2 – monitors deforestation

Forest Information Platform

Home

Forest Reference Levels (FRLs)

Measurement, Reporting and Verification (MRV)

Safeguard information system

Forest Cover Change Monitoring

National REDD+ Strategy and related information

Forest Sector Administrative Information

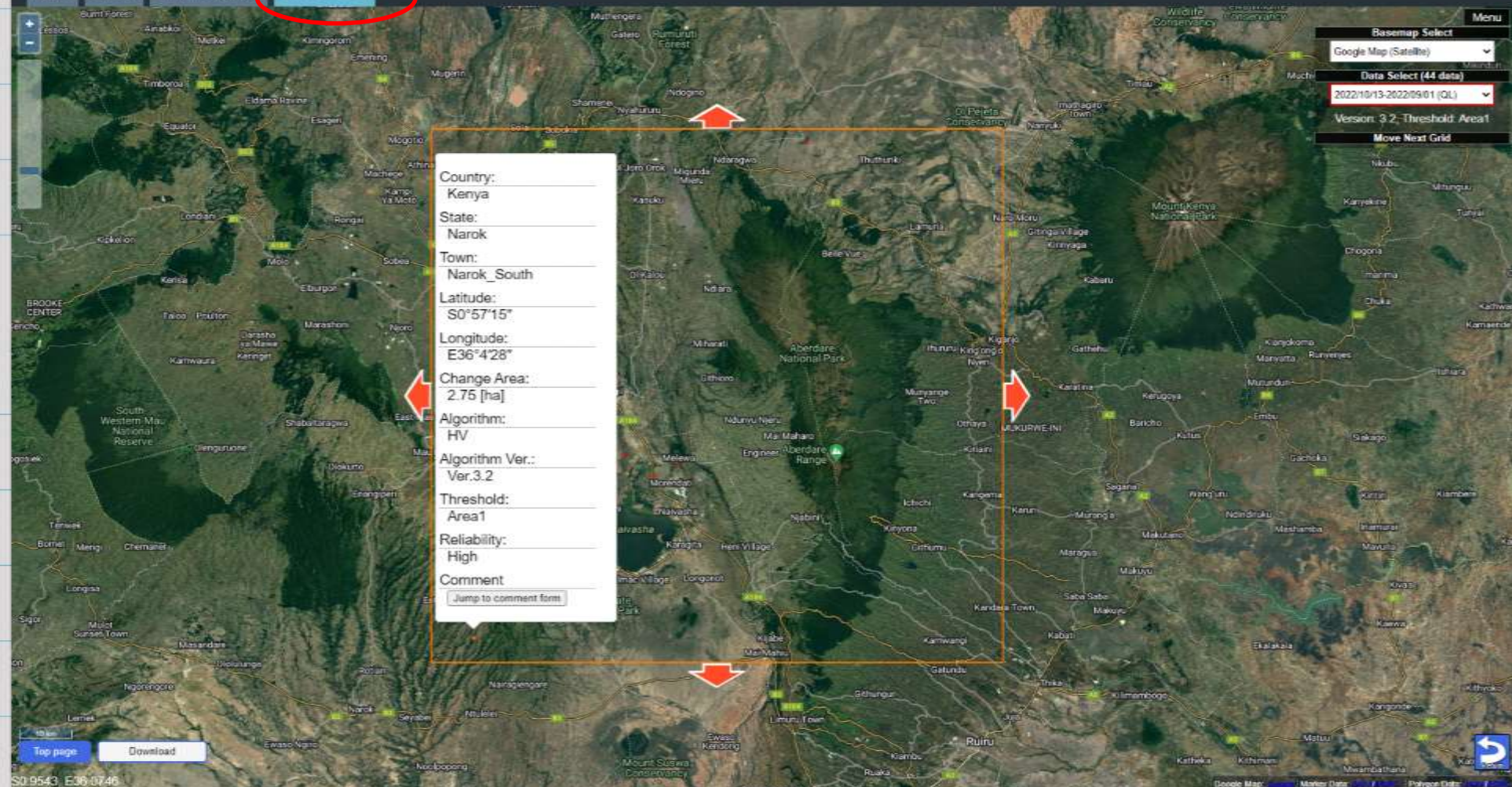
Other Relevant Data

Biodiversity

REDD+ & A/R CDM Project Information

Forest Cover Change Monitoring

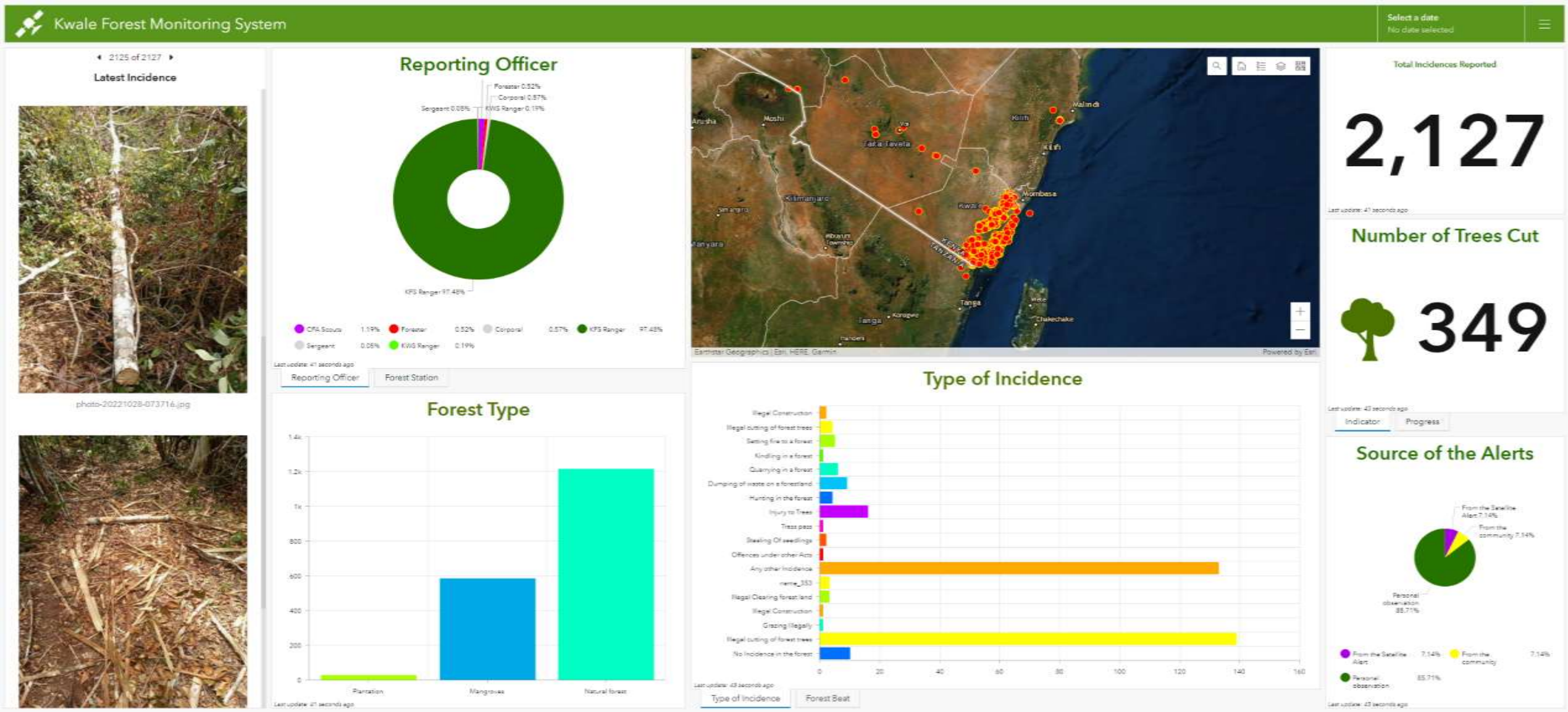
JJ FAST NRTFAS Field Survey Report **FAST (Outside)**





Forest cover change monitoring

Near Real-time Forest Alerts System – Uses Survey 123 tool for data collection and reporting





IMPRESS

- After FRL submission, there were a set of recommendations available for methodological improvement that were raised in the technical assessment.
- Improve Measurement for Payments to Reduce Emissions and Strengthen Sinks (**IMPRESS**) project supported by UK-PACT through FAO
- Support improvement of emission estimate (AD) –
 - High-integrity forest data that meet enhanced technical requirements of new carbon standards.
 - Open up access to carbon finance
 - Climate change mitigation and sustainable development objectives
- Objective
 - Generation of High-quality activity data for deforestation, forest degradation and forest restoration
 - Produce Better information on wetlands
 - Aggregate emission trends and carbon finance opportunities
 - Leveraging improved data for better policy planning and implementation
 - Lessons learned, south-south exchange and replication in other countries



Things to do

1. Kenya has relied on pilot data and IPCC default values to calculate Emission Factors and therefore need to undertake a National Forest Inventory to support improved emission factors.
2. Upscaling of the NRTFAS to report forest disturbances at a national level.
3. Previously utilized Landsat images that are freely available and have access historical data to establish FRL. Need to respond to new demand to access carbon market. Eg LEAF 5yrs we may need to revise the FRL therefore request for free images (Radar, High res etc).
4. Emerging need to assess and monitor tree cover.



THANK YOU