

Re-Rooting Disaster Management: The Role of Space Technology in Strengthening Nature-Based Solutions

Mangroves Forest Alerts, Coastal Erosion and Sedimentation



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Sydney Australia



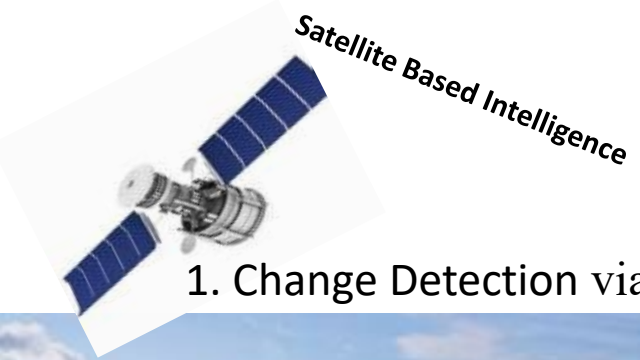
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The Mangrove Forest Alerts System



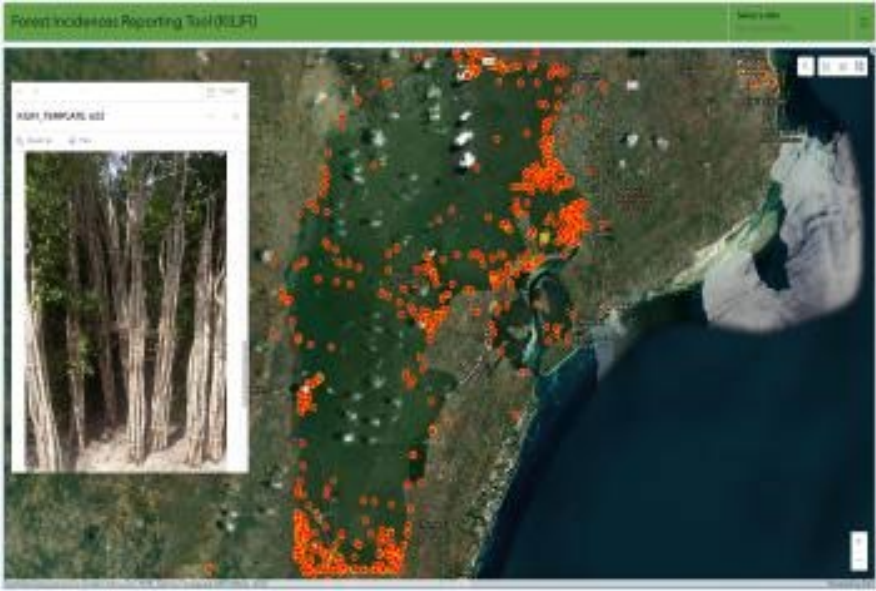
1. Change Detection via Sentinel 2

2. Field Verification via Mobile GIS

3. Reporting by Community scouts and Forest Rangers



Kilifi County (Kenya)



Overview of the System

The Mangrove Forest Alerts System is a state-of-the-art platform that leverages Big Data and AI to monitor and protect forests in Kenya.

How it Works

The system integrates satellite imagery, sensor data, and machine learning algorithms to analyze forest health, detect deforestation degradation, and generate actionable insights.

Key Features and Capabilities

From real-time alerts to predictive analytics, the Mangroves Forest Alerts System empowers forest managers with powerful tools for proactive decision-making and conservation efforts.

Community Engagement

CFAs scouts trained on Mangrove forest Alerts reporting using mobile GIS

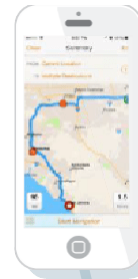
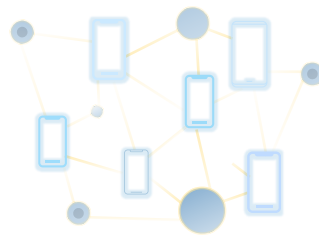
Mangroves Forest Alerts Reporting Workflows



Change Detection via Sentinel



Mobile GIS Data
Collection and
Navigation Tools for
field verification



Field Maps
Survey 123
ODK
MapsME

Live Monitoring KFS
HQs ENCOM Operation
Office



Data Insights for
Policy and informed
Decision making



Mangroves Forest Alerts Success Stories and Live Dashboard



Community Engagement
In Mangrove Restoration
and Protection
Through CFAs. AFR100,
Paris Agreement, Agenda 2030





Challenges: Coastal Erosion and Sedimentation and Its Effects on Mangroves (Ongoing PhD Research)

Sedimentation



Coastal Erosion



Effects on Mangroves



Nature and Technology Based Solutions





MINISTRY OF
ENVIRONMENT,
CLIMATE CHANGE &
FORESTRY

Contacts and Key Stakeholders



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