Kenya – monitoring and reporting ecosystem restoration

GFOI: Ecosystem Restoration Plenary

Peter Nduati, Kenya Forest Service
Background

• 30% of Kenya's landmass is degraded

• **AFR100** Commitments to restore **5.1 million ha** of degraded land by 2030. & increase forest cover to 10%, along with other commitments through MEAs.

• Major challenge in reporting on NDCs, biodiversity, LDN AFR100 etc. in a coordinated and consistent manner, in order to reliably track the progress, outcomes and adapt restoration interventions.

• Through the FOLAREP – a cross sectoral multi-stakeholder coordination framework, the proposal for an integrated monitoring and reporting framework to report on all restoration interventions across Kenya.
The framework is multipurpose in that it aims to:

1. Coordinate restoration monitoring and track progress at national, subnational, regional and international levels to assess failure and identify barriers.

2. At the national level it aims to enable government to easily report to MEAS and regional, national commitments (simplify the reporting burden).

3. Further, aims for development partners to easily and comparably quantify their investments and track their impacts of restoration efforts.
Framework development

The Kenya Forest and Landscape Restoration Monitoring Framework was developed through a consultative process led by the members of the Kenya Landscape Restoration Monitoring Technical Working Group (TWG).

The key steps involved in its development are highlighted in Figure 1. These steps outline both the process and the information sources that contributed to the framework.

**DECEMBER 2021-MARCH 2022**

**County consultations**

Seven engagement forums brought together national government, all 47 counties, the Council of Governors, and development partners to review drivers of degradation and barriers to restoration, top indicators for restoration monitoring, and County Environment Committees (CECs), which are the proposed structures for mainstreaming forest and landscape restoration at the county level. A synopsis report of the engagements was produced.

This top five indicators crucial for a national restoration monitoring system in Kenya as noted by counties were:

- **Area of forest and forest land restored.**
- **Number of existing plans, policies, strategies, regulations, reviewed and developed.**
- **Area of degraded agricultural lands restored.**

- **Areas of landscapes under improved management to benefit biodiversity.**
- **Trends in population accessing adequate quantities of safe water in urban/peri-urban areas.**

It was noted that county environment committees (CECs) are active in only 18 of the 47 counties. Further, 25 of 47 counties mentioned that county climate change entities are critical to enhancing the CECs’ ERM functions. This indicates that all counties have distinct FLR monitoring structures, including CECs monitoring and evaluation committees, and units. This distinction arises from a unique clustering and nomenclature of county departments, which highlights the importance of harmonized departments to allow for easier implementation and monitoring of FLR.

**National Validation Workshop**

To validate the monitoring framework, the validation workshop gathered relevant stakeholders to provide final feedback. On the county engagement synthesis report, FOLAREP and the national restoration monitoring framework. Additional sub-indicators and refinement of the monitoring framework took place. The next steps and way forward for landscape restoration monitoring were also agreed upon during the workshops.

**14 SEPTEMBER 2021-20 JULY 2022**

**Six meetings of the TWG**

The TWG is officially formed by the Principal Secretary of the Ministry of Environment and Forestry to develop a monitoring framework in support of restoration tracking, assessment, and reporting. The TWG held a total of 6 meetings from September 2021 to July 2022, through which the monitoring framework was developed.

This key considerations of the TWG when developing the indicator framework can be summarised as follows:

- **Considered drivers of degradation, inputs in terms of activities, outcomes, and national and international commitments.**
- **Based on a specific set of criteria, indicators must be relevant, accurate, and cost-effective/ measurable.**
- **Grouped indicators under relevant categories.**
- **Separated indicators into those that could be measured now and later, given the capacity and the spatial and temporal scales of the indicators.**

**Webinar on Forest and Landscape Restoration Monitoring**

Participants agreed on the need for a national restoration monitoring framework with clear indicators, methods of assessment and mechanisms for learning and adaptive management. It was also proposed to form a national technical working group to spearhead the formation of such a framework.
Indicator considerations

- A flexible and adaptable framework with core and additional indicators proposed
- A manageable set of indicators which captures key drivers of degradation
- Is measurable in the present and future to account for the lag and capture both effort and impact
- To understand changes in restoration investment and implementation and how these impact ecological function.
- Builds off existing indicators which institutions and agencies collect and have experience with
- Being cognizant of the capacity which is needed to monitor against selected indicators
Framework Structure

**PROCESS INDICATOR CATEGORIES**

- Area of land under restoration
- Restoration project data
- Investment
- Policy and advocacy
- Value chains
- Communication and knowledge

**OUTCOME INDICATOR CATEGORIES**

- Land health (LDN)
- Tree cover and type
- Socio-economic
- Capacity
- Biodiversity
- Climate change

30 indicators | 45 Sub indicators
<table>
<thead>
<tr>
<th>Category</th>
<th>Indicator</th>
<th>Sub-indicators</th>
<th>Metrics</th>
<th>Frequency</th>
</tr>
</thead>
</table>
| Area of land under restoration   | 1 Area of landscape under improved practices and/or undergoing restoration | A. Land use type: forest, grassland, crop land, rangeland etc. from national typology  
B. Restoration type from national typology | A. Hectares  
B. Hectares | Annually   |
| Restoration project data         | 2 Project name                                                             |                                                                                  | A. Open  
B. Geospatial polygon, GPS coordinates  
C. List/Typology  
D. List/Typology  
E. List  
F. Start/end date  
G. List | Annually   |
|                                  | 3 Project location (geospatially explicit)                                 |                                                                                  |                                |            |
|                                  | 4 Restoration actions                                                      |                                                                                  |                                |            |
|                                  | 5 Beneficiaries of restoration initiatives (disaggregated)                 | A. Number of community members engaged and disaggregated by gender, age and other groups |                                |            |
|                                  | 6 Project partners (names of institutions)                                 |                                                                                  |                                |            |
|                                  | 7 Duration of the project                                                  |                                                                                  |                                |            |
|                                  | 8 Challenges and mitigation in the project                                 |                                                                                  |                                |            |
| Investment                       | 9 Amount invested in landscape restoration (KSH/USD)                        | A. Source of funding/investment (private, donor, national government)  
B. Types of funding (loans, grant, equity, in kind)  
C. Where it was invested (county, sub-county, ward)  
D. How it was invested (project, finance access, policy) | A. List and KES / USD  
B. List  
C. Location (county, sub county, ward)  
D. List (project, finance access, policy) | Annually   |
Tools to measure indicators

• A range of tools exist, which could be used to monitor several indicators
• How easy are they to use? How much training is required? How accurate are they? Are they available for deployment? Field based or EO tools?

Earth observation tools

**COLLECT EARTH (MOBILE)**

Indicators it can measure:
Socio economic data, Project investment, Knowledge, Tree cover, Land cover, Forest cover, Area of land under restoration, Biodiversity. (Earth observation tools are unable to differentiate invasive species in tree/vegetation cover)

Accuracy:
Very accurate

Current availability:
Free and open source; available on Google Play Store

Ease of use without training: ★★★
Training required: ★★

**COLLECT EARTH (ONLINE)**

Indicators it can measure:
Land use change, Seasonality of vegetation, Area of land degraded, Land health, Area of forest/tree cover, Management practices, Area with agricultural practices, Type of agricultural systems, Area under restoration over a period of time, Degraded land area

Accuracy:
Accuracy challenges unless ground-truthed

Current availability:
Free and open source; available on Google Play Store

Ease of use without training: ★★★
Training required: ★★
Identified features

The TWG has identified several important features of an online data management and reporting framework:

- Allows for continuous monitoring (i.e., real-time monitoring)
- A private database and also a public platform for information dissemination.
- Contains data/information sensitivity classification.
- Guided by data sharing protocols to avoid duplication of data collection efforts where necessary and ensure data contribution to the system.
- Accessible and user-friendly.
- Captures/aggregates all indicators in the framework.
- Builds on existing institutional structures.
- Promotes data sharing by creating incentives such as competitive reward systems.
- A gateway to other systems (especially if the information is not available).
- Contains only verified data and information.
- Designed in consultation with the stakeholders.
National strategy for achieving and maintaining over 30% tree cover by 2032.

- Launched as a *whole-of-government* and *whole-of-society* approach;
- 15 billion trees for restoration of 10.6 million ha of degraded lands by 2032;
- Increase national tree cover to 30% from current 12.3%;
- Multiple interventions across landscapes; Conservation and commercial drivers;
- 15 billion tree growing campaign - **300 trees per person over ten years**;
- A Green Army of youth and women a major facet of the initiative.
- Green Ambassadors at national, county and sub-county level
- Multi-layered governance structure;
- Requires shared responsibility, enhanced ambition, innovation, renewed commitment and adequate funding.
Thank you.

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