SOUTHERN KENYA LANDSCAPE RESTORATION INITIATIVE:
A LANDSCAPE APPROACH FOR LIVELIHOOD IMPROVEMENT AND BIODIVERSITY CONSERVATION AT SCALE

A CONCEPT NOTE

Introduction

The Southern Kenya landscape is famous for its natural resources, indigenous cultures and a variety of internationally renowned and iconic conservation areas that reflect its extraordinary biodiversity and tourism value. The landscape supports the livelihoods of many communities (ca 22m People) through agriculture, livestock and small-scale enterprises. It is also home to key tourist attractions contributing significantly to the Kenyan economy. The tourist attractions include protected areas such as the Tsavo National Park, Amboseli national park (a UNESCO Biosphere Reserve), Masai Mara (the world's largest terrestrial large mammal migration feature), Important Bird Areas (Amboseli, Loita, Taita Hills) and community conservation areas. This landscape also connects to other iconic protected regions of Tanzania including the Mkomazi NP, Kilimanjaro NP and Serengeti NP to form the Tsavo-Mkomazi; Amboseli-Kilimanjaro and Mara-Serengeti transboundary landscape.

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The foregoing implies that a wide range of stakeholders have interests in the southern Kenya landscape ranging from communities, civil society and government agencies. Although the interests vary, they all depend on ecosystem health and landscape connectivity within, and beyond protected areas. The main community livelihood activity is pastoralism which has historically co-existed with wildlife conservation. However, the landscape is losing productivity quickly occasioned by anthropological drivers exacerbated by climate change.

Land degradation and land use change have significantly affected livelihoods and connectivity between protected areas and dispersal areas resulting in disenfranchised communities as well as human-human and human-wildlife conflicts. Resource flows such as water, nutrients and genetic resources among other natural capital stocks are getting fast depleted, leading to threats of the ecological and socio-economic collapse of this fragile ecosystem. This calls for the urgent mobilization of the multiple stakeholders interested in this delicate landscape comprising 13 counties. These are **Garissa, Kajiado, Kilifi, Kitui, Kwale, Lamu, Machakos**, **Makueni, Mombasa, Nairobi, Narok, Taita Taveta and Tana-River**.

The problem context

Vast landscapes in southern Kenya (at least 75% of lands in the area of interest covering 13 counties) are ASAL, and as a result, communities' livelihood options are limited by hydrological flows. These livelihoods are being threatened by loss of productivity as a result of poor agricultural practices, land subdivision, and climate variability resulting in recurrent droughts and floods. In addition, huge swathes of land in southern Kenya have been gazetted as protected areas (national parks and game reserves). In contrast, the community-owned land or community conservation areas serve as critical wildlife dispersal areas and corridors that link the iconic protected areas in the landscape. The landscape is thus a significant biodiversity conservation area, with as much as 65 - 70% of wildlife found outside of protected

areas either seasonally or permanently (Ojwang et al. 2017) and human-wildlife conflicts are rampant.

The key threats to landscape sustainability can be summarized as poorly planned development, unsustainable and incompatible land use practices, high-density settlements and unplanned land sub-division. The scenario challenges the communities as escalating human-wildlife further aggravates rural poverty levels. Engagement of the communities in ecotourism enterprises, education, employment and healthcare initiatives for continued support for conservation has not fully improved their livelihoods. Up to two-thirds of the population in Mara and Amboseli remain poor (Wishitemi et al., 2015).

Community livelihood pathways drawing on the fragile natural resource base have intensified across the landscape with land degradation as a key outcome. Land use changes and unsustainable land use practices in upper catchments, have seen alarming levels of streams drying and the resultant water scarcity in the lower areas. This translates to gradual desertification of the landscape. Such degradation threatens community livelihoods and commercial ventures supported by multiple value chains at scale.

A landscape approach to improving hydrological and other ecosystem flows presents a huge opportunity for livelihood improvement for the communities and business sustainability across the landscape. It is critical to build the capacity of key stakeholders, including the community, and identify appropriate nature-based incentives for sustainable interventions that mitigate drivers of degradation in this important human-wildlife interface space. Fortunately, several projects (some including nature-based solutions) have been piloted by conservation and development partners with various levels of success thereby laying a good foundation for lessons learning, replicating and scaling successes through landscape approaches.

Overall Objective

The overall objective is to restore the southern Kenya landscape to increase livelihood resilience while ensuring that wildlife habitats are sustainably connected and conserved.

Purpose

To create a high-impact innovative model for evidence-based landscape restoration based on stakeholder engagement and land use planning at a scale that regenerates land productivity, builds sustainable businesses and addresses human-wildlife conflicts.

Outcomes

This is a 10-year initiative that will mobilize resources from both the public and private sectors to restore land, improve livelihoods and conserve biodiversity. It will deliver the following outcomes:

1. Good governance and enduring institutional mechanisms for landscape restoration in southern Kenya.
2. Restored landscapes and sustainably managed natural resources.

3. Improved community livelihoods.
4. Sustainable wildlife populations.

Rationale

This programme will deliver development outcomes to the communities living in the landscape and contribute to national commitments under the 2030 agenda for sustainable development, among others. As the country strives to deliver the Big 4 Agenda, this initiative will go a long way in delivering food security and poverty reduction among communities in the target landscape. Kenya has also committed to environmental conservation in the Vision 2030 and achieving 10% forest cover is a key goal in the 2010 constitution. To this end Kenya developed a national strategy to achieve 10% tree cover by 2022. This initiative will contribute to this goal by regenerating woodlands and promoting tree growing among its activities. Under the strategic plan for biodiversity (2011 – 20200) Kenya has pledged to review and enact statutes and regulations and take up measures to ensure that ecosystems are restored and maintained for the sustenance of ecosystem services (MENR 2016).

Through the ROAM methodology, Kenya identified various opportunities to restore 5.1 million hectares of degraded land by 2030. A plan to meet half of the commitments by 2025 is under development by the Ministry of Environment and Forestry. The Ministry of Agriculture is also developing the National Agroforestry Strategy to contribute to wealth creation and restoration of croplands among other agricultural landscapes. This initiative will therefore be a flagship for some of these goals and strategies. The implementation period coincides with the **UN Decade on Ecosystem Restoration 2021-2030** which will place Kenya ahead in the agenda of *"Preventing, halting and reversing the degradation of ecosystems*" (UN/RES/73/284). Other contributions come under the 2015 Paris Climate agreement where Kenya committed to reducing greenhouse gas (GHG) emissions by 30% by 2030 in the first NDC (Nationally Determined Contributions) submitted in 2016, and recently updated this to 32% GHG emission reduction by 2030.

Program components

The proposed initiative will use an integrated landscape and people-centered approaches guided largely by multi- stakeholder platforms to deliver the above outcomes. The special focus will be on nature-based interventions incentivizing wildlife conservation and livelihood resilience. The circular bio-economy concept will be applied to ensure zero-net waste in the value chains especially within the water-food-energy nexus. Therefore, five broad components are envisaged as outlined below:

1. **Landscape characterization**

This component involves a stock take of the landscape following an adapted model of the six groups of landscape questions (Who, How/What, Where/when, so what, Who cares, Why; Figure 1), in order to identify and prioritize critical intervention areas such as:

- Land degradation hotspots
- Areas where pluralism of resource management jurisdictions are evident
- Hotspots of human-wildlife interactions including critical pastoralism areas
- Other critical intervention areas

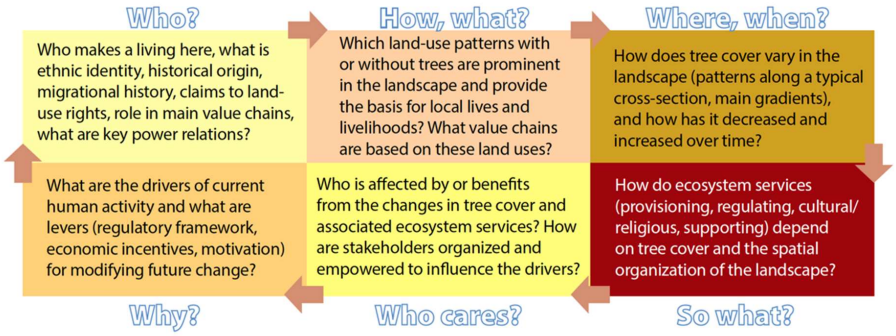

Figure 1: Landscape characterization aspects for designing an agroforestry project (Van Noordwijk *et al.,* 2013)

Program partners will agree and adapt characterization tools already used by various institutions. The broad activities under this component include:

- Mapping degradation and identifying hotspots through GIS and partners' tools (soil erosion, vegetation, etc.)
- Socio-economic characterization of communities – assets, livelihood opportunities, gender aspects, markets (including rural-urban linkages), conflicts etc., using various poverty assessment tools, value chain analysis tools etc.
- Governance and institutional analysis (policy/legal framework, power and influence matrix, stakeholder networks,) including cross-border processes.
- Catchment/waterer potential analysis using the WAMPA tool and others
- Assessment of wildlife corridors for prioritization and implementation of immediate interventions.
- Land tenure, use, planning assessments using spatial planning tools.
- Assessment of the effectiveness of wildlife conservation outside protected areas (IMET, PAME, COMIT, METT and PAPF).

2. Governance and institutional development

The component seeks to understand various organizations' mandates, roles, responsibilities, and capacities to build synergies and mitigate overlaps and conflicts at both planning, implementation and management levels. It will harmonize natural resources management with a special focus on biodiversity conservation activities with community, county, and national governance structures to steer local development plans toward better land use, conservation, and resilience to climate change. Sustainable solutions are contingent on: (1) clear known legislative frameworks; with coordinated institutional mechanisms at all levels, (2) enduring multi-scale local institutions, and (3) engagement of multi-sectoral stakeholders to leverage information and capacity. The key interventions aim to strengthen **local and subnational institutions,** leadership capacity, mandate clarity, legitimacy, and agency. The program will strengthen land and resource rights, link and nest local institutions into subnational, national and regional processes, and establishing multi-stakeholder platforms for dialogue, learning, lobbying and advocacy. The component will also seek to achieve transboundary governance and conflict management through engagement with Tanzanian actors, with the area of interest being Northern Tanzania.

The following stakeholders have an interest in the landscape:

- County & National Government and their respective agencies
- Non-governmental organizations: local, national and international
- Community-based groups and organizations
- Grassroots communities through structures and spaces they control
- Corporate organizations/private sector
- Educational institutions
- Research institutions
- UN (United Nations) and other international bodies/agencies

A facilitated interaction of evidence and knowledge/data in the repositories of the knowledge systems is therefore necessary to create an integrated ecosystem management masterplan among other outputs, building on the results of the landscape characterization component. Various tools such as the SHARED methodology developed by ICRAF (see Annex Figure 3) will be used in this component aiming to achieve policy harmonization by bringing evidence to bear on decision-making and creating a negotiation platform between stakeholders. The facilitation will look to deliver key outcomes based on the four returns for nature focusing on the four key pillars of landscape restoration listed below[1]:

- **Inspiration** - Giving people hope and a sense of purpose to anchor landscape restoration
- **Social capital** - Bringing back sustainable jobs, business activities, education and security
- **Natural capital** - Restoring biodiversity, soil, and water flows and capturing carbon
  Financial capital - Realizing long-term sustainable profit and financial returns for all the landscape actors

3. Community livelihoods, business development and infrastructure restoration practices, investments and incentives

This component will seek to promote sustainable land use practices for agricultural, pastoral and forest management to enhance livelihoods and environmental sustainability. Community capacity will be built around best practices such as soil and water conservation, land rehabilitation, rainwater harvesting techniques for farm and domestic use with associated health benefits including flood-based livelihood systems, grazing management, farmer-managed natural regeneration and fodder bulking, diverse portfolios of tree and vegetable species, and production and sustainable sourcing of woodfuel among others. Climate change vulnerability assessments will be undertaken to ensure that the current climate sensitivity of the landscape and local communities is considered and planned interventions provide optimal climate change adaptation and resilience.

Developing enterprises in **competitive value chains** will be a key intervention for incentivizing sustainable practices. Opportunities that empower women and youth (e.g. in small-scale mechanization and livestock production, among others) to participate effectively and benefit

[1] an approach and methodology developed by the Commonlands Foundation and proven in practice

will be explored and supported. To improve viability, business enterprise development activities will be supported by rigorous financial modeling and business plans, training, and market linkages. These practices are knowledge-intensive and vary in context hence collaborative learning and innovation platforms including citizen science approaches will be embedded.

Private sector engagement for performance-based financing including PES, carbon accounting etc is a key activity in this component. For instance, Wildlife Works' Kasigau Corridor REDD+ Project generates climate finance by selling credits for avoided deforestation via global private sector partners, including banking, transport and energy. This model will extend scope, scale, and partnerships to target new dryland forest areas and land restoration activities. Water is a key ecosystem service generated from this landscape and benefits several private and public sector partners downstream in the ecosystem. This will require new approaches to develop diversified investment opportunities for those interested in restoration actions, e.g., tree planting, water credits, carbon offsets, and biodiversity offsets.

4. Corridor connectivity and wildlife management

A significant proportion of the community-owned land adjacent to the iconic Protected Areas (Parks and Reserves) serve as critical wildlife migratory corridors and dispersal areas that link these Protected Areas in the landscape and thus their enduring connectivity, sustainable conservation and management is fundamental to the long-term survival of the Protected Areas (PAs). This component will seek to secure connectivity to provide healthy wildlife meta-populations, migration routes and genetic exchange. It will replicate and scale up some of the existing conservation models while strengthening the governance system in the community-based conservancies and ranches, where the community members benefit from tourism revenue. Lessons collated from existing conservancy models and ecotourism enterprises in the corridors will be internalized in adaptation. Basic wildlife monitoring will be strengthened to collect baseline information for effective wildlife management e.g. habitat protection measures and more effective human-wildlife mitigation, seasonal migration patterns, and human-wildlife conflict. Similarly, and noting the recent impact of the covid-19 pandemic on overreliance on tourism revenue, additional revenue streams will need to be identified for the sustainability of the conservancies and ranches that rely on eco-tourism revenue.

Based on integrated land use planning and as a component of conservancies and wildlife ranches, wildlife migratory corridors and dispersal areas will be secured as conservation zones with no or only seasonal land use compatible with wildlife migration patterns. The introduction of the sustainable farm- and rangeland management in adjacent areas through Component 3 will further reduce land use pressure on corridors and other critical wildlife habitats. Reforestation of degraded areas, particularly in upstream catchment areas of important river systems such as Mara and Tsavo, will stabilize their water regime and soils and thus provide a sustainable water supply for local communities, wildlife and livestock. Water allocation and management plans will be developed and implemented along rivers of particular economic and ecological value (e.g. Mara, Tsavo) to prevent water resource over-utilization. The current and forecasted carrying capacity of rangelands in critical areas will be assessed as a basis for sustainable livestock numbers and grazing systems and demarcated in spatial and land use plans.

5. Knowledge management, monitoring, evaluation, adaptation and learning (KMEAL)

An integrated landscape approach to land management is both innovative and complex. It requires action learning to identify synergetic actions, bottlenecks, externalities, trade-offs and spin-offs, and institutional formations that can effectively deliver. The multiplicity of actors and approaches will require a well-implemented knowledge management component embedded in the monitoring framework. Research activities geared towards the refinement of approaches as well as data archiving will be undertaken in this component. A dashboard will be developed for performance monitoring, evaluation, and an impact assessment built around the developed master plan. Performance monitoring will involve the quarterly or bi-annual collection of performance indicator data (activities, outputs, and outcomes) throughout the program life cycle to document implementation progress and results. Progress monitoring will look at indicators such as the number of people trained in sustainable landscapes, the number of institutions with improved capacity to address sustainable landscape issues, the number of restoration-related businesses developed, etc. Performance monitoring will be coupled with impact assessments to generate evidence on the effectiveness of integrated cross-sectoral programming based on tools and approaches that partners will agree on.

Program roll-out

The focus landscape comprises 13 counties covering over 40% of the country. This makes it difficult to roll out activities across the landscape at once. Three phases are therefore proposed for a 10-year program as follows:

1. **Inception phase.** This phase will mainly consist of the characterization phase and initial stakeholder engagement processes. The main output will be the integrated ecosystem management master plan and program implementation plan for the subsequent two steps. The inception phase will run for 2.5 years as per the detailed work plan to be developed.
2. **Startup phase.** This phase will implement activities in selected areas with a high potential for impact as identified in the inception phase. Areas will be selected based on the intensity of land degradation, human-wildlife interactions, pluralism of resource management jurisdiction, land use/land cover change etc. and other parameters that partners will agree on based on the characterization studies. The start-up phase will run for four years as per the detailed work plan to be developed. It will include a higher intensity of research/learning-for-development activities for innovating in context.
3. **Scaling phase.** This phase will seek to scale up lessons from the start-up phase in wider areas in the ecosystem as per identified scaling domains. County governments, local institutions and partners with interest on the ground will take the lead in this phase as national and international partners offer supportive roles. The scaling phase will run for five years as per the detailed work plan to be developed.

The three phases will build into each other such that the start-up phase begins six months before the end of the inception phase with quick wins initiated from early lessons and the scaling phase will start one year before the end of the start-up phase making a total of ten years.

Program coordination – borrowing from the coordination group

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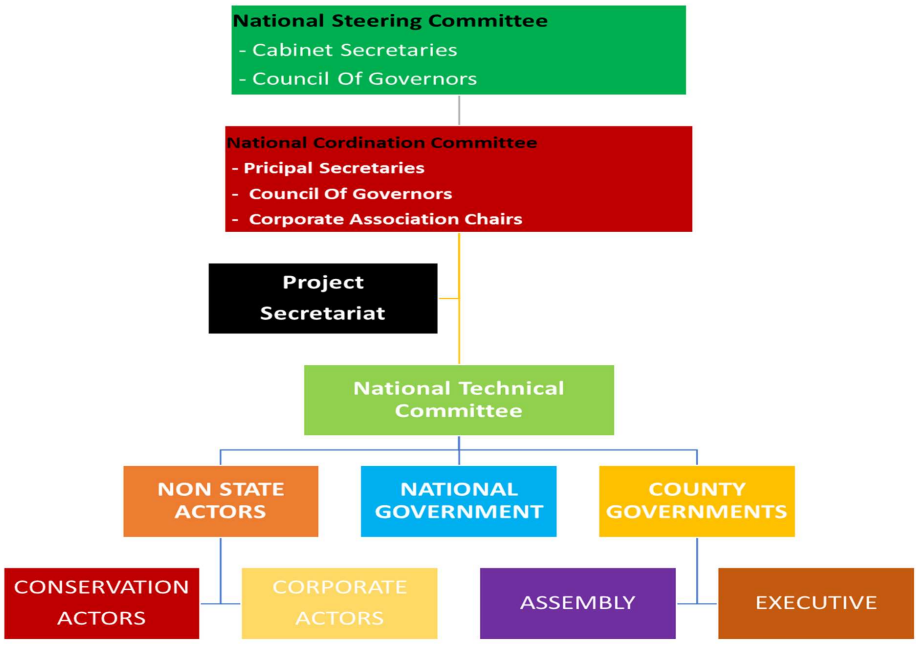
The southern Kenya landscape restoration initiative is a government-led initiative domiciled within the Ministry of Environment and Forests to link to national accounting mechanisms on land restoration, biodiversity conservation and climate action. It is. However, an intersectoral initiative bringing together several national and county government ministries. It will be guided by a national steering committee including Cabinet Secretaries from the ministries and the Council of Governors' committee sectoral committee chairs. Implementation will be led by a National Coordination Committee involving the Principal Secretaries of the ministries, the Council of Governors and CEOs of participating non-state actor agencies (NGOs and Private sector corporations). A secretariat will be established at the Ministry of Environment and Forestry to coordinate a national technical committee bringing together ……



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Van Noordwijk M, Lusiana B, Leimona B, Dewi S, Wulandari D, eds. 2013. Negotiation-support toolkit for learning landscapes. Bogor, Indonesia: World Agroforestry Centre (ICRAF) Southeast Asia Regional Program

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Wishitemi, B.E.L., Momanyi, S.O., Ombati, B.G. and Okello, M.M. (2015). The link between poverty, environment and ecotourism development in areas adjacent to Maasai Mara and Amboseli protected areas, Kenya. *Tourism Management Perspectives 16:306-317*

Annex figures

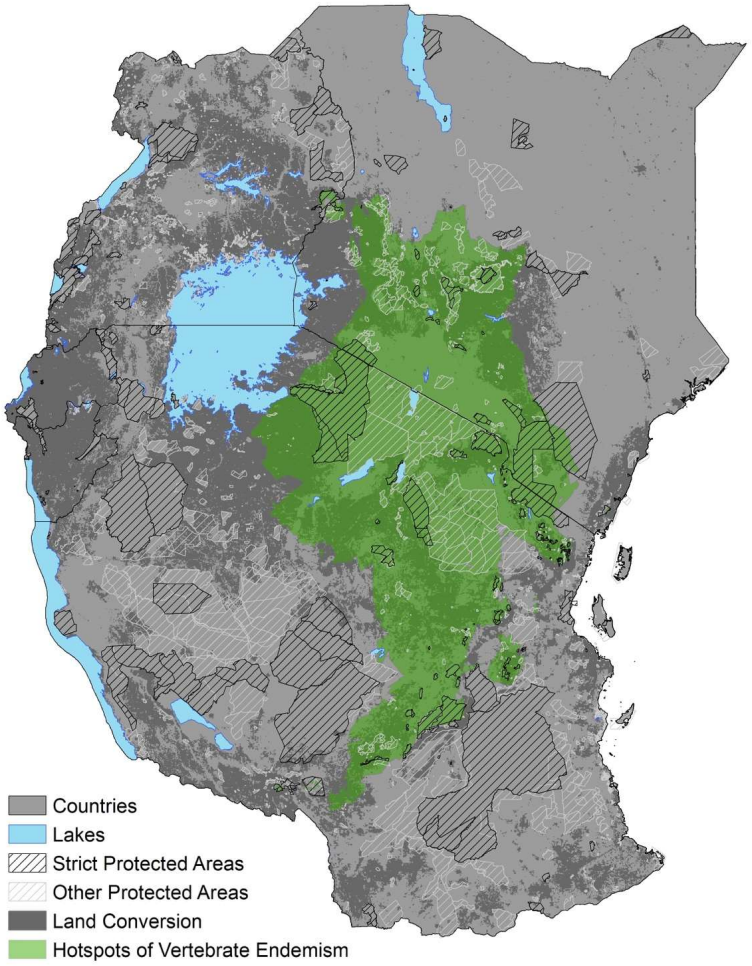


Fig. 1. Distribution of protected areas and hotspots of vertebrate endemism across East Africa in relation to land conversion (Source: Riggio et al, 2019).

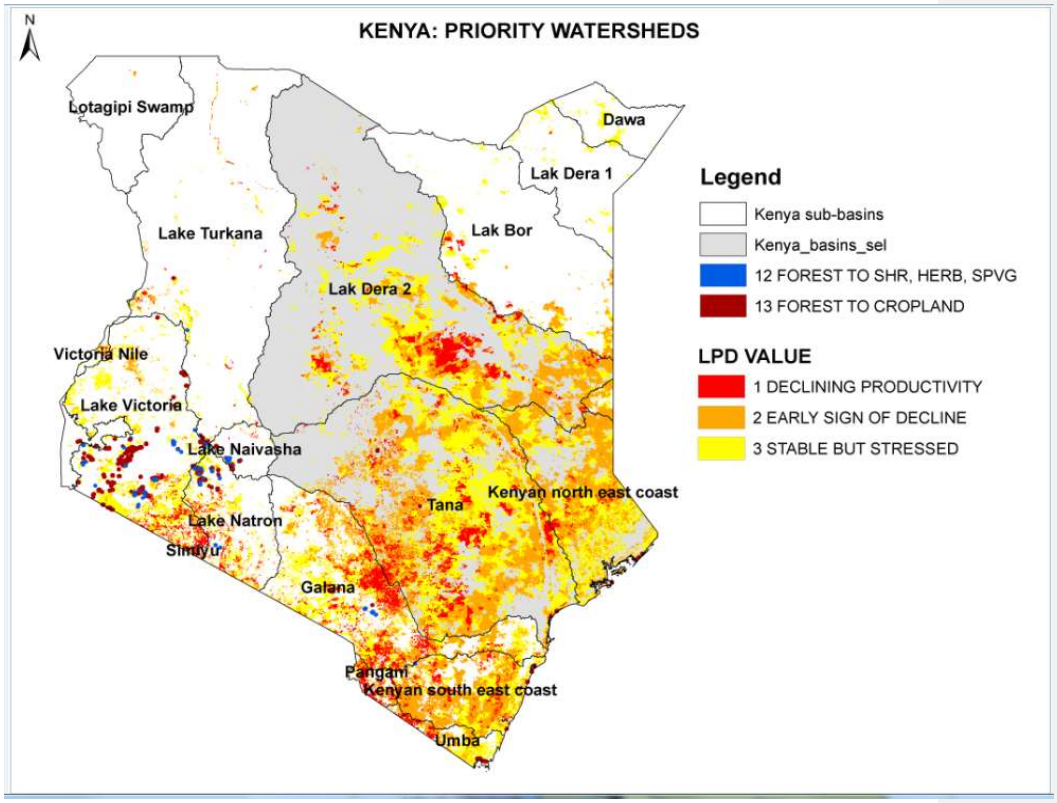


Figure 2: Map of Kenya showing land degradation trends in Kenya's priority watersheds (Source: ELD)

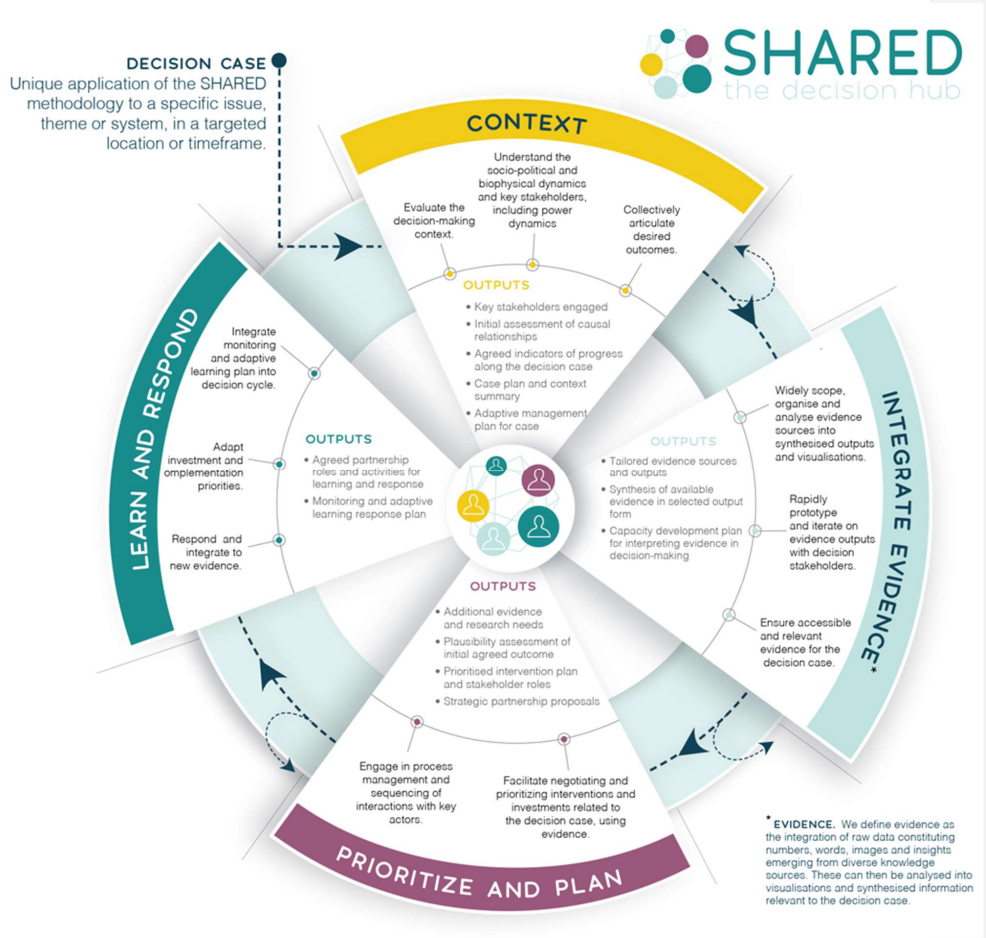
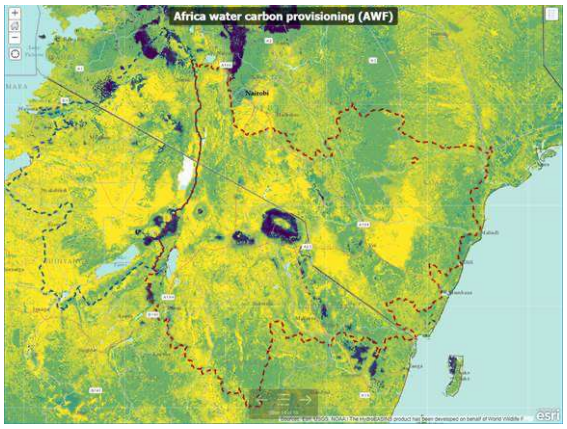


Figure 3: Summary visualization of the ICRAF SHARED stakeholder facilitation approach



Country Boundaries

Africa Water+Carbon Provisioning
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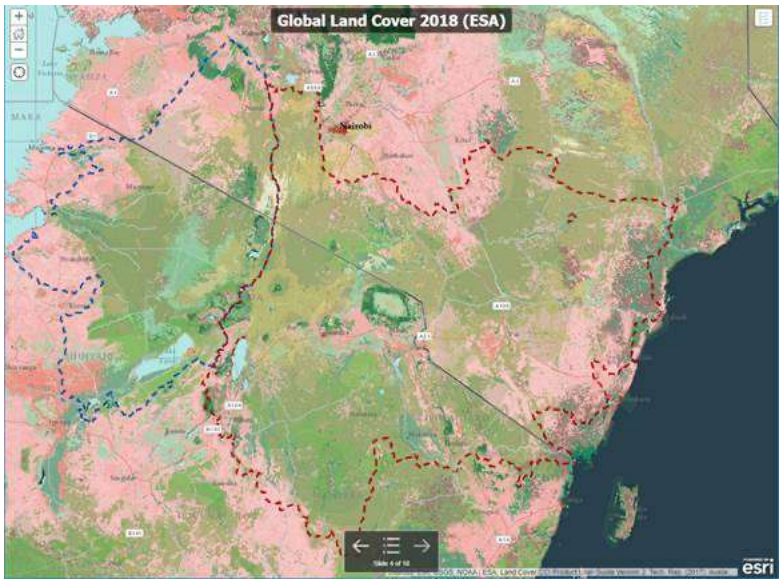

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- Closed Canopy Needleleaved Deciduous Tree Cover
- Open Canopy Needleleaved Deciduous Tree Cover
- Mixed Tree Cover
- Mostly Trees and Shrubs in a Mosaic with Herbaceous Cover
- Mostly Herbaceous Cover in a Mosaic with Trees and Shrubs
- Shrubland
- Evergreen Shrubland
- Deciduous Shrubland
- Grassland
- Lichens and Mosses
- Sparse Vegetation
- Sparse Trees

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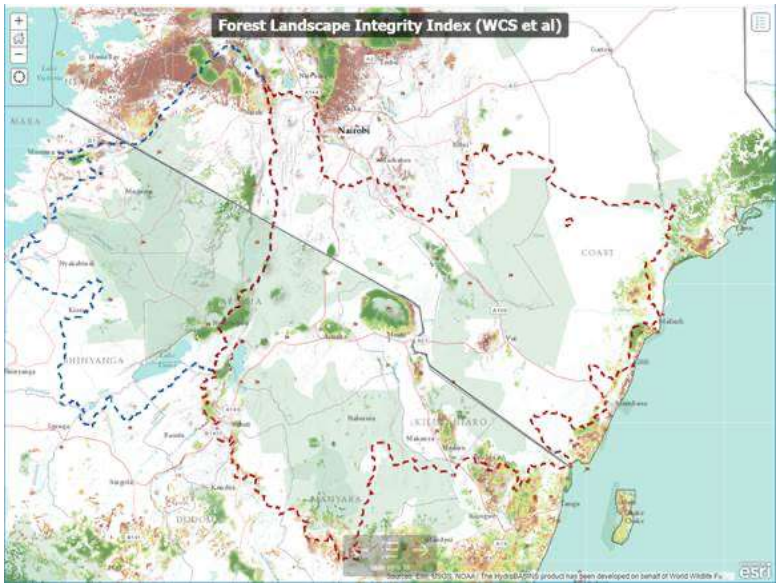

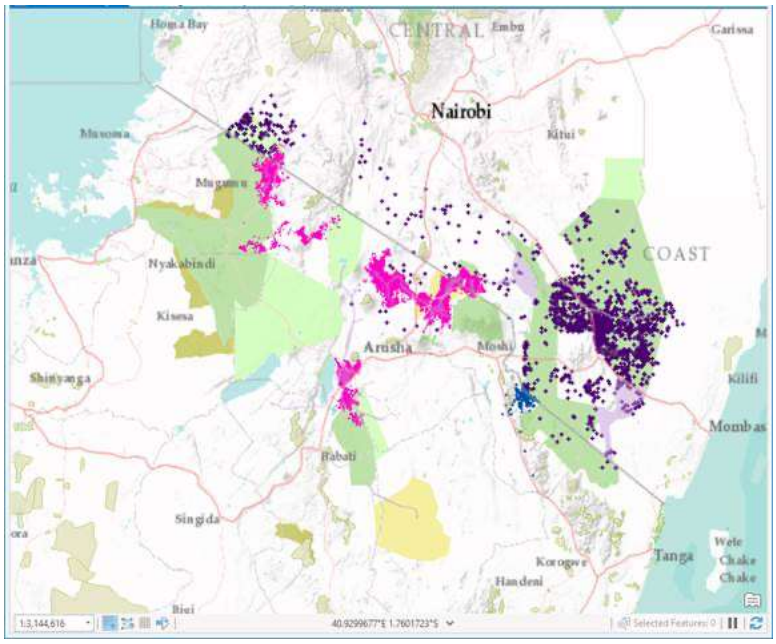
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