



Final Mid-term Review Report

Biodiversity Management Programme in the Horn of Africa – The Tana-Kipini-Laga Badana Bush Bushle Land and Seascapes



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June 2017

Acknowledgements

Various individuals and institutions have contributed to this report different ways.

We particularly thank Malesu Maimbo the Principal Investigator and Josephat Nyongesa the Programme Manager for the ICRAF IGAD BMP project, for their technical guidance and Dr Jeremias Mowo, the Regional Coordinator for Eastern and Southern Africa for overall management. We also appreciate ICRAF staff; Grace Koech, Felix Hongo, Justine Busili, Rose Onyango, Eunice Wamwangi and Albert Mwangi who tirelessly worked with us in various elements of this process. For pertinent programme information and field guidance the team is highly indebted to Wilfred Muriithi for his unwavering support that ensured that all sites, communities, stakeholder, partners and respondents in Lamu were reached for this review.

The study team interacted and consulted a number of partners and stakeholders whose information contributed to shaping of this report. Thanks to; Lamu County commissioner – J Kanyiri, NRT Director and team – Umra Omar, Hassan Yussuf; KWS Senior warden – Jacob Orahle; NMK Curator – Haji Mohamed Ali and Mohammed Ali Mwenje, KFS Ecosystem Conservator – Mr Evans Maneno, KFS Forest managers – J.Mbori and Rodori, County Director of Agriculture – Allen Vindonyi, ASDSP - MoALF Coordinator – Beth Mwariga, LCT manager - Omar Ali, Lamu county government minister for trade and tourism – Hamisi Kaviha in Kenya; Abdulmaalik Abdullahi, Director of IRDO and Dr Mohamed Ibrahim, Managing Director of Savana Consultancy and Research Services (SCRS) in Somalia for the fruitful engagement and invaluable information.

Lastly, we appreciate the farmers, group leaders and communities for sharing information and their first hand experiences with this programme. Apart from providing insights into the review, the farmers and other beneficiaries were instrumental in the implementation of notable key value chain interventions contributing to the progress made by the programme.

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List of Acronyms and Abbreviations

AGM	Annual General Meeting
ANAFE	African Network for Agriculture, Agroforestry and Natural Resources Education
ASDSP	Agricultural Sector Development Support program
BBVC	Biodiversity Based Value Chain
BMP	Biodiversity Management Programme
CABI	Commonwealth Agricultural Bureaux International
CWCCC	County Wildlife Conservation and Compensation Committee
CDMP	Community Development Management Plan
CoMMS	Conservancy Management Monitoring System
CORDIO	Coastal Oceans Research and Development Indian Ocean
CSA	Conservation Solutions Afrika
CSO	Civil Society Organization
CWCC	County Wildlife Compensation Committee
EU	European Union
FGD	Focus Group Discussions
GIS	Geographic Information System
GPS	Global Positioning System
ICRAF	International Centre for Research in Agroforestry
IGAD	Intergovernmental Authority on Development
IRDO	Integrated Rural Development Organization
IUCN	International Union for Conservation of Nature
KALRO	Kenya Agricultural and Livestock Research Organisation
KARI	Kenya Agricultural Research Institute
KEFRI	Kenya Forestry Research Institute
KFS	Kenya Forest Service
KII	Key Informant Interview
KWS	Kenya Wildlife Service
LAPPSET	Lamu Port-South Sudan-Ethiopia-Transport
LUP	Land Use Planning
M&E	Monitoring and Evaluation
MNR	Ministry of Natural Resources
MTR	Mid Term Review
NEMA	National Environment Management Authority
NGO	Non -Governmental Organization

NMK	National Museums of Kenya
NRM	Natural Resource Management
NRT	Northern Rangelands Trust
OECD	Organisation for Economic Co-operation and Development
PA	Protected Area
QGIS	Quantum Geographical Information System
RAAS	Rainwater Association of Somalia
RWH	Rain Water Harvesting
SCRS	Savana Consultancy and Research Services
SHG	Self Help Group
SPSS	Statistical Package for the Social Sciences
SWNHS	Somali Wildlife and Natural History Society
SWOT	Strengths, Weaknesses, Opportunities and Threats
TCN	Tree Crop Nursery
TKLBBB	Tana-Kipini-Laga Badana Bush Bushle Land and Seascapes
TOR	Terms of Reference
UPS	Uninterrupted Power Supply
WFE	Witu Forest Ecosystem
WWF	World Wildlife Fund
MoALF	Ministry of Agriculture Livestock and Fisheries

Executive Summary

The transboundary coast area between Kenya and Somalia constitutes land and seas scapes with rich collection of invaluable species inhabiting forests, grasslands, agricultural land and near shore marine ecosystems. However, the context has exposed ecosystems to destruction along with unsustainable exploitation of species, hence putting benefits derived from ecosystems at risk. The Tana-Kipini-Laga Badana Bush Bushle Land and Seascapes is part of the IGAD Biodiversity Management Programme which aims to contribute to poverty reduction by improving the social and economic wellbeing of the populations in IGAD region, through a better regional integration in the environmental sector. The programme was implemented in number of interventions with the purpose of conservation and sustainable management of the ecosystems in the IGAD region, in order to contribute to lasting ecosystem goods and services. The programme has surpassed the implementation midpoint and ripe for the mid-term review (MTR) which has been conducted as per original plan.

The purpose of the mid-term review Mid Term Review (MTR) was to assess and measure project achievements in perspective of the expected 2 indicators result areas and compile report for the Tana-Kipini-Laga Badana Bush Land and Seascapes project. Specifically, the MTR assessed the level of support of stakeholders to attract investments in protected area management; level of growth for community assets/livelihoods of targeted communities, current achievements relative to objective and results; sustainability of the project and overall stakeholders' perceptions. The MTR also included insights into the status of various programmatic and operational components of the programme and documentation of lessons learnt.

Methodology: The review was post intervention in design, comparing the current status of the programme with targets. A standard evaluation criterion that assessed, relevance, efficiency, effectiveness, impact and sustainability was used as a guide to other methods. A mix of approaches including; quantitative, qualitative methods were applied. The evaluation grid and logical frame work analysis were used to directly measure the performance of the programme. A review of the impact of project structures on environment was also undertaken. The analysis of data was in line with the outcomes and presented in frequencies and tables. Content analysis of secondary and qualitative data was undertaken for in-depth explanations. Information from the three approaches were triangulated and incorporated in the findings.

Programmatic Findings: The expected results of the programme included; cross-border biodiversity conservation in land / sea scapes strengthened and institutional capacities for management improved. Based on the status of activities targeted activities, the programme registered mixed results with significant progress in the majority while few others experienced contextual limitations. Notably, the programme brought the attention of key stakeholders and county government to ensuring that biodiversity is mainstreamed in on-going land use planning. The expected result to generate investment interest from donors through structured stakeholder support from the programme was not achieved. However, the IGAD BMP supported community management development plan has already secured some funds for support of water and education interventions as part of Hanshak-Nyongoro conservancy. Similarly, a few organizations including; Equity Bank, Technoserve and Sun-culture expressed interest in working with horticultural value chains implemented under this programme. The programme intervention led to growth of community assets including, functional bee-keeping and horticultural value chains, and trees under agro-forestry and forestry and water infrastructure. The supported value chains have been translated to income and livelihood benefits in few of targeted community members. The implementation period coincided with prolonged drought which limited full realization of value chain benefits. However, supported value chains remained on

course in contributing to conservation of biodiversity as sustainable initiatives to degradation of ecosystems.

It is clear that the programme is on course to achieve the **first result, to strengthen cross border biodiversity conservation** but faces several contextual limitations to full realization. Variable progress in each of broad activities detailed below has been observed.

Cross border platform and Cross border biodiversity networks: Exchange and sharing of information and other engagements has been made possible in the platform established by the programme. The development of the cross border network is on-going after development of a guiding concept. The two will provide the needed collective response to conservation of biodiversity across the borders.

Cross border Cooperation for capacity building on biodiversity conservation: The programme has strengthened cross border cooperation through cross border meetings and exchanges. The forums and visits have deepened research, engagements, information sharing and capacity building for conservation of biodiversity and natural resource management. Realization of full cooperation has been limited by insecurity and differentials in capacity and systems between the two countries.

Strategic information on Biodiversity: The targeted areas in Lamu and Badhaadhe now have invaluable information on biodiversity generated by this programme. An Aerial Survey of biodiversity loss and a number of publications on biodiversity and socio-economic information has been published and made available in the programme portal. Biodiversity is now better understood in the sites and by various stakeholders. The information has been mainstreamed into planning, decision making and will serve as vital references now and in the future.

Biodiversity Based Value Chains: The programme successfully launched appropriate value chains readily accepted by communities and built sufficient capacity for their implementation. The target outputs were met, but translation of benefits into income and livelihoods faced limitations of water as drought affected colonization of hives and performance of crops in the horticultural value chains. As weather becomes favourable, the benefits of value chains from ecosystems will be fully realized.

Community Agroforestry: The programme surpassed the target of community members enlisted and trained in tree planting and water harvesting techniques by up to 23 %. Apart from delays on the Somalia side, the prolonged drought resulted to drying of seedlings in the community nurseries. One third of the targeted farmers (176)¹ received an average of 170 assorted seedlings out of which 29% of trees were surviving against a target of 40% at the time of the MTR. Overall, the progress on tree planting in number and survival is way below target and may be considered for improvement through replanting and protection from destruction by livestock, before the project comes to a close.

Afforestation and Restoration of ecosystems: Efforts were made to restore degraded sites in Witu protected areas and Kipini forest through tree planting and isolation of the targeted area for natural regeneration. Out of Sixty thousand² trees (in Kenya and Somalia) targeted for planting 37,500 (62.5%) were planted. This included; 1 hectare of degraded area secured for natural regeneration. The

¹ Initial log frame target is 500; ICRAF requested to amend this to read “1.6b At least 250 farmers each plant and manage an average 40 surviving trees on their farms by Q3_2017” Though the project implementation remain flexible considering the initial target

² Initial Logframe target for Kenya and Somalia. The project is not implementing the activity in Somalia. ICRAF requested this to be amended as “1.7 Degraded sites in protected areas are enriched or naturally regenerated with at least 30,000 seedlings of indigenous tree species with at least 40% survival by Q3_2017” Though the project implementation remain flexible considering the initial target

gains made in establishing nurseries and planting trees were significantly reversed by prolonged drought, resulting to reduced tree survival rate of less than 10 percent against a target of 40 percent. To fully realize the benefits of ecosystems restoration, the intervention needs to be revisited as weather becomes favourable.

Communication Strategy: An effective communication strategy that disseminated appropriate messages was put in place. Communities are comprehensively informed about conservation of biodiversity and exhibit changes in perceptions, attitudes and practices. Information materials aligned to various elements of conservation of biodiversity in print were put in place.

The second result entailed building institutional capacities for management. The findings show that there is significant progress in building the capacity of protected area management and land use planning. Cross border exchanges and exposure also enhanced the capacity of key stakeholders from the targeted areas of two countries as envisioned.

Support to Local Planning Units and Land Use planning: During the period, there was no land use planning process to be supported on the Somalia side. In Lamu, a planning unit was set up, equipped and followed with capacity building of staff. Land use staff, communities, NGOs and CBOs are more enlightened on integration of biodiversity conservation into land use planning at all levels. Apart from delays, the establishment of the planning unit is on course. At the time of the MTR, the spatial plan for Lamu was almost complete, awaiting the incorporation of biodiversity in the mainstream plan. After completion in the second quarter of 2017, biodiversity will be an integral part of county planning and development guided by a conservation sensitive document.

Management Plans for Protected areas Management: Results show that a lot has been achieved in building the capacity of Hanshak- Nyongoro conservancy with NRT partnership. The conservancy was substituted from Awer originally targeted for security reasons. The programme has transformed conservancy monitoring systems by building knowledge and equipment capacity in the practical aspects protection. Another notable achievement is the community development plan (CDMP) for the conservancy, a product of a participatory process which only awaits endorsement by the time of reporting. On the Somalia side, a vision and roadmap for the establishment of Laga Badana Bushle National park was completed as an important milestone and handed over to the authorities. Through the programme, greater attention has gone into management of PAs which form the bulk of trans- boundary ecosystems.

Status of Cross Cutting areas: The review also looked into the status of operational and facilitative aspect of the programme for concurrent support in the remaining phase.

Financial Status: The management of the funds was found to be effective. All sub-grants expectations have been met. The absorption trend is positive, with 66% of funds utilized by end of third year. Reporting has been timely as envisioned but slight operational delays in payments were noted. The diligence applied in procurement, contracting and payments was noted.

Project Risk and Mitigation: The implementation had to contend with a number of risks which were mitigated through a number of progressive and innovative actions. The context has been characterized by prolonged drought, insecurity, complex political/ governance structures and poverty with potential draw backs on the interventions of the programme. Operationally, turnover of partner focal points and budgetary limitations to implementation of critical value chain resilience activities such as alternative water sources were observed.

Partnership and Coordination: Effective partnership was maintained with all partners translating into the envisioned deliverables of the programme. Partners demonstrated appropriate skill set for various interventions but the selection of many of them based on task, raised questions of cost effectiveness. At the field level, there was smooth coordination between various stakeholders but bureaucracy was exhibited among in government based partners. On the Somalia side, insecurity impacted on coordination mechanisms. This further affected cross border coordination in the shared aspects of the programme.

Monitoring and Evaluation: Overall, the programme has an M&E tracking sheet in place of a comprehensive plan or framework. Routine monitoring and supportive supervision has been effective on the Kenyan side but the same was restricted by insecurity on the Somalia side. The programme has generated appropriate strategic information for planning and decision making. Notably, data capture has not been systematic and in some instances standard tools were not used. The information portal in place provides access to wide range information including the M&E data. Reporting from most partners and programme upward has been generally good with feedback in various forums. The M&E system has served the programme so far but needs to be improved to capture and transmit all the required information from both sides of the programme.

Sustainability: In the design and implementation, there were considerations for financial, institutional, policy and environmental sustainability. For financial and institutional sustainability the programme has been supporting operational costs and building the capacity of institutions by provision of knowledge skills and equipment. The plans for management of PAs have shown signs for fundraising based on the interest generated from Hanshak- Nyongoro and value chain as an example. Policy sustainability is inbuilt in the design of the programme and supported at regional level. The interventions implemented under this programme are conservation centred, thus they directly contribute to environmental sustainability.

Environmental Impact Implications: A number of infrastructural developments largely on household and institutional rain water harvesting were put in place. Similarly, shallow wells responding to the need for drought resilience were established. These new initiatives are potentially expected to change patterns of mosquito breeding and wildlife migration in search of water during dry seasons. Similarly, the honey value chains attract bees from their natural habitats to apiaries and hives in the communities. This has implications on safety of grazing animals and children, but also contribute to improved cross pollination.

Challenges: Even as the programme remained committed to deliver the planned activities, a number of challenges remained on the way of realizing full results. Apart from drought and insecurity cross cutting in all, other challenges include; ecological conflicts between humans and wildlife, high community expectations from the project, pest and fire and low colonization of hives, comparatively lower capacity of Somalia institutions, inconsistent representation and high cost of cross border meetings, changes in governance structures and some logistical delays associated with bureaucracy. The remaining implementation time needs to address the challenges for improved results.

Recommendations: The MTR has revealed the need for; promoting drought resilient water sources for value chains and agroforestry, provision of water in salient points for wildlife at times of drought, target champions farmers and individual centred approach to support value chains, consider integrating fruit trees in agroforestry with economic benefits and motivation to farmers, work with relevant stakeholders to integrate security in cross border meetings and support the endorsement of the CDMF. On operations, the MTR recommends; improve efficiency on logistics, ensure appropriate partners are selected for mandated interventions, work with less partners with several tasks rather than multiple single task based partners.

1. Introduction and Background

In brief below, the background, context, coverage of the TKLBBB –BMP interventions has been outlined. It gives a snap shot of pre-intervention situation, the objectives of the programme and partners that were engaged in the delivery of the programme.

1.1 Background and Context

The seascapes and landscapes of coastal Kenya-Somalia transboundary area hosts valuable ecosystem and biomes, which extent beyond the boundary. Instead they form a continuity of habitats networked across the boundary which host populations of a rich collection of species inhabiting the forest, grassland, agricultural and nearshore marine habitats³.

Unsustainable exploitation of plant and animal populations and degradation of their habitats threaten the integrity of biodiversity resources and the contribution that the transboundary area makes to global biodiversity conservation. It further threatens the availability of benefits that people derive from ecosystem services that this biodiversity supports.

Several factors⁴ that threaten the biodiversity and environmental integrity of these ecosystems include:

- Overfishing: Marine fish populations have suffered from overfishing with industrial fishing fleets from outside Africa.
- Change in Land use and development plans: Land use change driven by cropping and development has fragmented the coastal forest hotspot; There are a number of development plans launched in the area that will significantly impact the area economy and livelihoods of rural populations e.g. the LAPSSET (Lamu South Sudan Ethiopia Transport) corridor and the coal factory in Lamu county.
- High poverty levels: Poverty is widespread in the target area across the borders and the rural populations still rely very significantly on ecosystem goods and services provided by the biodiversity in man-made and more natural systems.
- Lack of security and stable government in Somalia. This results in an illegal charcoal production, hunting, fishing, unsustainable mangrove harvesting and coastal mining.

The effects of above on degradation and the extent of impact on their biodiversity is a knowledge gap that needs to be assessed and addressed. The BMP project hopes to help understand the situation better and set up systems and networks to address them.

Conservation of biodiversity require more improved management and control of degrading factors but also harmonization in the sectorial policies and strengthening of institutions that operate under such policies to avoid competition and obstruction of biodiversity conservation. The Preservation of the unique biodiversity of cross border area would thus require a combination of action at local level supported by appropriate policies, institutions and interventions to improve conservation of biodiversity within and outside protected area systems as well as policies to resolve conflicts and release pressure on biodiversity resources within and outside these systems. Achieving this requires engagement of national and local stakeholders in a policy development and implementation dialogue to ensure that planning from national to local level contributes to the larger trans-boundary

³ IGAD BMP Project Document, 2013

⁴ ICRAF IGAD BMP Baseline Report, 2014

biodiversity conservation strategies. Hence, the inter-sectoral multi-stakeholders approach in this IGAD initiative managed by World Agroforestry Center - ICRAF.

The Biodiversity Management Programme (BMP) is an IGAD initiative with the financial support of the European Union (EU) aiming to *contribute to poverty reduction by improving the social and economic wellbeing of the populations in IGAD region, through a better regional integration in the environmental sector.* Its purpose is *the conservation and sustainable management of the ecosystems in the IGAD region, in order to contribute to lasting ecosystem goods and services.*

ICRAF is one of the BMP Implementing Partners and is managing one of the three projects financed through the IGAD Biodiversity Management Programme in the Horn of Africa to develop collaborative management in three cross-boundaries land and seascapes sites; targeting 3 cross border land and seascapes;

- The Boma - Gambella Landscape (South East South Sudan and South West Ethiopia)
- The Lower Awash-Lake Abbe Landscape (North East Ethiopia and South West Djibouti)
- *The Tana-Kipini-Laga Badana Bush Bushle Land and Seascapes (TKLBBB) (North East Kenya and South East Somalia).*

The specific objective of the ICRAF IGAD BMP project (TKLBBB) is conservation and sustainable management of ecosystems in the Tana-Kipini-Laga Badana bushle Land and Seascapes in order to contribute to lasting goods and services. The programme has been implemented from Nov 2013 covering three years and 3 months of the four-year duration. The mid-term review (MTR) was commissioned to inform the programme on progress in various aspect detailed in the ongoing section for improvement in the remaining implementation phase.

1.2 Geographical location of the ICRAF IGAD BMP intervention sites

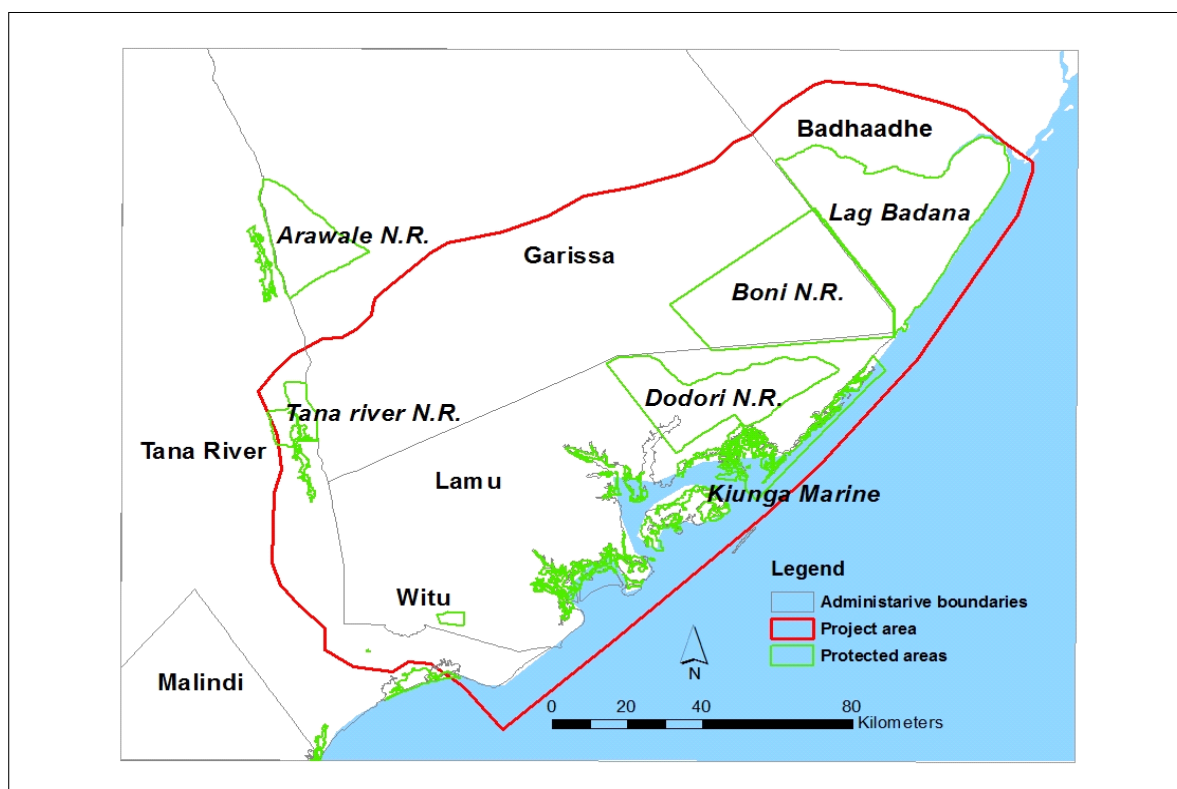
The TKLBBB programme is implemented in Lamu County of Kenya Badhaade district of Somalia. In Lamu County, the original target districts included Lamu East and Lamu West. In Somalia, the programme covered Bush Bushel area in Badhaade district. However, shortly after the roll out of the programme, deterioration of security forced the adjustment of targeting to only cover sites in Lamu West district and three sites in Somalia (Bur Gabo, Kidifani and Ras Kamboni). The adopted implementation approach focused on capacity building through cross border stakeholders' exchanges and establishment of the pilot sites from which awareness, knowledge skills and technologies on various interventions could diffuse to the targeted communities. Table 1 indicate the targeted sites in each of the respective districts.

Table 1: BMP-TKLBB Coverage in Kenya and Somalia

Country	District	Pilot Sites	Status
Kenya	Lamu West	Areas adjacent to Witu and Kipini Forests	Continued
	Lamu East	Awer (5 Villages) Kiangwe, Milimani, Mangai , Mararani, Basuba	Discontinued
Somalia	Badhaadhe	Bush Bushel Protected area (PA) Bur Gabo, Kidifaaani, Ras Kamboni (3 villages)	Continued

In each of the targeted pilot sites, a number of individuals, group, villages and demonstration centres are targeted by various interventions. Therefore, the programme had extensive intervention driven coverage for the delivery of the envisioned results. The cross-border coverage of the programme is illustrated Figure 1.

Figure 1: Illustrative Cross Border Map of the TKLBBB Programme Coverage



Source: ICRAF IGAD BMP baseline report – 2014

1.2 Programme Goals, Objectives and Approach

The TKLBBB project is funded by IGAD for duration of 48 months from November 2013- November 2017. The programme envisioned two main result areas in contributing to overall BMP goal and specific objective. In the first result, the programme expects conservation of cross-border biodiversity land and seascapes strengthened. Related to this is the second result that seeks to have institutional capacities for management improved. In delivering the above results, the programme was organised around 12 broad activities.

- Establishment of Baseline and development priorities
- Ecological review and biodiversity action planning
- Institutional support to land use planning
- Institutional support to protected area planning and management
- Cross border cooperation
- Development of benefits for ecosystems goods and services
- Development of forestry and agro-forestry programmes
- Development and dissemination of communication materials

The programme is implemented in two-pronged approach differentiated by regional and local cross-border interventions. At the regional level to which the TKLBBB contributes, the focus is to support interventions to enhance and harmonize biodiversity policies, data bases, information systems and capacity building. At the country level/ locally and cross-border, the approach entails; creation of

awareness and capacity building to sustainably manage available biodiversity resources and draw livelihoods from ecosystems goods and services at the demo/pilot sites

1.3 Implementing Partners and Associates of the TKLBB –BMP

The TKLBBB is implemented through partners / associates and consultants' coordinated by ICRAF in respective countries. Majority of contracted partners/ associates supports implementation of specific tasks in mandated and areas of comparative advantage and specialization. The main partners and associates include;

Table 2: List of potential Implementing Partners identified

Kenya Government

- National Museums of Kenya (NMK)
- Lamu District Administration
- Kenya Wildlife Services (KWS),
- Kenya Agriculture and Livestock Research Organization (KALRO)
- Kenya Forestry Services (KFS),
- National Environmental Management Authority (NEMA)
- World Wide Fund (WWF)

Somali Government

- Ministry of Natural Resources (MNR)
- Bhadhadhe District Administration

Civil society and consultants

- International Union for Conservation of Nature (IUCN)
- Coastal Oceans Research and Development Indian Ocean (CORDIO)
- North Coast Conservation Ltd.
- Conservation Solutions Africa (CSA)
- African Network for Agriculture, Agroforestry and Natural Resources Education (ANAFE)
- Commonwealth Agricultural Bureaux International (CABI)
- Northern Rangelands Trust (NRT)
- Rainwater Harvesting Association of Somalia (RAAS)
- Imaan Relief and Development Organization (IRDO)
- Savana Consultancy and Research Services (SCRS)
- Somali Wildlife and Natural History Society (SWNHS)

2. Purpose of the Mid-Term Review

The main purpose of the Mid Term Review (MTR) was to assess and measure project achievements in perspective of the expected 2 result areas *indicators* and compile report for the Tana-Kipini-Laga Badana Bush Land and Seascapes project. The assessment report was intended for the following users;

- World Agroforestry Centre-ICRAF
- Biodiversity Management Programme (BMP); Intergovernmental Authority on Development (IGAD) and European Union (EU)
- Project trans-boundary steering committee
- Project partners including governments of Kenya and Somalia

2.1 Mid-Term Objectives

Two main overall IGAD BMP program objectives guided the MTR in assessing and measuring the project achievements. These included;

- Assessment of the extent of contribution of BMP project intervention sites in improving wellbeing of IGAD populations through a better regional integration in the environmental sector,
- Evaluation if ecosystems goods and services and protected areas (PA) are being recognized as viable sustainable development options by stakeholders in the project sites

2.2 Scope of the Mid-Term Review

The MTR covered all the project activities and interventions undertaken at ICRAF headquarters and field implementation sites in both in Kenya and Somalia. Field work/visits however, were confined to intervention sites located in Lamu Kenya due to insecurity and related logistical challenges in accessing the Somalia side.

Specifically, the MTR sought insights into the following;

- Level of support to stakeholders to attract investments in protected area management,
- Level of growth for community assets/livelihoods of BMP target sites
- The project's current achievements relative to the project's objectives and expected results in the *Log frame*,
- Evaluate expected results sustainability after end of the project and document on key stakeholder's perception about the project.

The specific tasks undertaken in the review include;

- Assessed project implementation achievements under expected two (2) results indicators,
- Relative to (i) above, reviewed and documented achievement on all expected indicators in relation to the project's objective,
- Evaluated the project financial status in terms of grant disbursement and utilization,
- Evaluated project risk register and assess the extent to which the risks have impacted on the project and mitigation measures,
- Identified current strength, weakness, opportunities and threats that have had or will have positive and negative impact on future implementation,
- Assessed partnership engagement in project implementation and have suggested areas to improve to enhance future performance,
- Reviewed ICRAF internal existing monitoring system (M&E) tool to evaluate its robustness in documenting project performance against results indicators,

-
- Documented on lessons and experiences based on achieved results in relation to project objective,
 - Outlined recommendations including; how to support project mitigate risks in (iv) above, reviewed actions that will improve performance and planning of future activity implementation to realize results not achieved

3. Methodology and Technical Approach

This section describes the focus of the review, the design, approaches to data collection, analysis, interpretation and reporting.

3.1 Overview and Evaluation Focus

The assignment was aligned to three main components that were stipulated in the scope of work outlined in the TOR. The first component focused on the contribution of the project in delivering results and effects as viewed in log-frame. The second component appraised the effectiveness of the project in attracting investments in protected area management and accruing benefits leading to the growth of the community assets/livelihoods of BMP target sites. The last component focused on the sustainability of the project and documentation of the underlying perceptions of the project among the stakeholders and community beneficiaries

Based on the objectives and review questions, a triangulation of methods including; secondary data review, quantitative, qualitative, participatory and, observational methods were employed to arrive at plausible findings. The MTR further documented lessons learnt to take into onward planning. The approach was structured so as to generate strategic information to establish the status and performance of the project in the medium term.

3.2 Mid Term Review design

At time of the MTR, the programme was past mid-way, specifically in the last year of implementation. Therefore, the review will be post intervention in design taking a retrospective look of the achievement to the situation pre-intervention. A standard evaluation criteria focusing on implementation processes, effectiveness, efficiency and sustainability among other methods was embraced. The review was guided by the broader activities and the logframe in determining the progress by various indicators.

3.3 Methods of Data Collection and Data Analysis

To be able to answer evaluation questions and meet the stated objectives, triangulation of primary, participatory and secondary data sources were applied. The objectives of evaluation required both descriptive and in-depth explanations of the results generated from the implementation processes and the associated challenges. The review was also keen on learning, thus the approach also documented lessons from primary and secondary sources. Below is detailed account of the sources and approaches employed in data collection.

3.3.1 Secondary Data/ Desk Review

A comprehensive review of internal and external documents associated with the project was done. Through this, it was possible to establish the reported performance in comparison with the mid-term

targets and pre-intervention situation. Documentation/ publications generated from implementation partners and consultants submitted to ICRAF were also reviewed.

The next level of review focused on comparing the proposed interventions and emerging results from the interim annual reports generated so far and lessons learnt in the implementation process. This informed a number of objectives and guided design to generate sufficient data on inputs, processes outputs and select outcomes. The review further generated information on the relevance, effectiveness, efficiency of the implementation approach and the envisioned results and targets reached to date.

There was a review of publications from external sources to understand the context in-terms of socio-economic profiling, status of conservation and the various impinging factors. The information provided background for sampling considerations and understanding local perceptions on conservation of biodiversity with potential bearing on programme performance.

3.3.2 Primary Data Collection

The review employed qualitative, quantitative and participatory methods to answer key evaluation questions and ensure that accurate and self-validating data is collected. The rationale of using the three methods is founded on the need for descriptive, in-depth and objective data for establishing various elements of the project using standard criteria. Secondly, the interventions accrued both numerical and non-numerical results such as; capacity building and may have faced challenges that require a mix of methods to elucidate.

Quantitative Data Collection: To determine the level at which the results have been achieved, quantitative data was utilized for attribution. Data was collected for specific indicators measuring performance in community targeted interventions. A structured questionnaire was administered to a representative sample of 50 constituting the beneficiaries of the various value chains. Through this, it was possible to generate data for some indicators and quantify the effects of the programme at the community level.

Qualitative Data collection: Qualitative methods were applied to provide in-depth information to answer pertinent question that did not require numerical responses. The method was applied to generate information on the changes made by programmatic interventions, perceptions, and the capacity of institutional structures, barriers and limitations that projects faced. The method was vital for some of the behaviour centred outcomes of the implemented interventions. It was also applied in generating information for SWOT analysis which required some in-depth reflection.

The approaches applied include key informant interview (KII), focus group discussions (FGDs) and In-depth informant interviews. The KII informant interviews targeted the partners, key stakeholders and other respondents with expert information on the project and biodiversity as an area. FGDs were conducted among beneficiaries of various value chains and selected stakeholders. The interviews and discussions were guided by tools aligned to the main review questions and objectives.

Participatory Methods Taking cognizant that the project approach is largely participatory, a number of participatory methods were employed for physical verification, consensus and to elicit collective standpoints on programme performance. Observation was used to verify existence of facilities, visual interventions, infrastructure and other physical verifiable attributes. It was also used to understand body language and non-verbal clues in FGDs and in-depth interviews. Onsite verification of reported data and status of various activities and their effect on the environment at the supported sites were

made possible through physical observation. Transect walks were undertaken along with the beneficiaries to observe the value chains, community agro-forestry and infrastructure and to gauge perceptions and capture their experiences.

Documentation of Lessons and Best Practices: Lessons emerging from the implementation were documented from both primary and secondary sources. For primary sources, the implementing partners, ICRAF and other stakeholders were interviewed. From this, alternative approaches and recommendations were documented.

Log-frame Design Matrix Analysis: The Consultant assessed the programme using the log frame or M&E Plan matrix to establish the performance of each the respective key indicators. The log frame was an important reference for assessing project level performance and was populated with validated results depicting progress in each. The ICRAF internal M&E tool was reviewed to evaluate its application in tracking project progressive performance against results indicators.

Evaluation Grid: A structured matrix encompassing the five Programme/programme evaluation criteria of relevance, effectiveness, efficiency, and sustainability and impact signs was used to objectively assess the mid-term performance of the project. The Evaluation grid was used for the refinement of questionnaires, identification of study targets and in the selection of the data collection methods. The approach brought out the linkages between management, implementation and the performance aspects of the project and made fitting recommendations for the remaining phase.

Financial Management and Responsiveness: ICRAF responsiveness in management of the funds to the partners in kind or cash, and the systems in place was evaluated. It entailed discussing with the ICRAF finance team on the processes and systems in place including the working status and the reasons behind functional limitations. The same was extended to partners so as to determine the effectiveness of sub-grants management and challenges in need of improvement.

Review of the Project Risk Register: The consultant reviewed the risk register and the critical assumptions and determined their effects on the Project. The mitigation measures were assessed for their effectiveness in managing potential risks. This was compared to SWOT analysis for expanded interpretation.

Environmental Assessment: A general overview of the effects of infrastructural establishments observed in various set ups were undertaken. The views of the key informants were sought on potential effects environment and supplemented with observation. The obvious effects and their occurrence were documented as no major infrastructural establishment was undertaken beyond the support that went to value chains.

3.4 Data Management and Analysis

Quantitative data was edited and entered in SPSS version 20. Data was then analyzed to generate results on specific indicators. Qualitative was summarized and content analysis undertaken. Secondary data was organized by indicators in the matrix and interpreted in terms of performance. After corroboration of all data sources, the findings were included in the report. All sources were triangulated to come up with plausible findings and directly linked to conclusions and recommendations.

3.5 Limitations of the MTR and Mitigation Measures

The MTR implementation process was faced with various contextual and methodological challenges that had an effect in the conduct of the review.

Insecurity: Due to security limitations, it was not possible to undertake field visit to the targeted sites in the Somalia side. The reliance on secondary data, remote sensing and phone interviews may not have generated valid data for analysis in totality. Triangulation of data from remote sensing, reports, interviews and participatory workshop validated the findings ensuring that a level of precision was attained.

Timing of the MTR: The project was delayed for one year which had implications on the timing of the MTR. The results reflect the progress made beyond the midpoint of the programme and therefore appropriate to inform the upcoming final evaluation.

Uncooperative respondents: Some of the key potential respondents were not accessible to participate. Due to this, the review may have slight miss of some perspective of performance and other individual experiences. However, the counterparts of these respondents were reached to ensure that the information sought by the study was elucidated.

Respondent Bias: The effects of prevailing drought on the targeted value chains demotivated some of the beneficiaries with potential bias in their judgment of project performance. This may have exposed the responses to influence of external factors and not actual project performance. To avoid bias, more probing was undertaken in the discussions and interviews to ensure that responses reflected the ground realities.

Abandoned Households: Due to prevailing droughts, some of the targeted beneficiaries relocated to look for casual labour as alternative source of livelihood. Some relocated to the Tana Basin and Mpeketoni where they could not be reached for interviews, despite participating in various value chains that the programme supported. This was common in areas where the bee-Keeping value chains were supported. The research team expanded coverage to ensure that right mix and sample of respondents participated in the review process.

4. Progress by Results and Targets

The analysis below presents the findings of the MTR with the expected results of the Programme. Under each result is the presentation of the progress made in the broader activities planned for its achievement. The Programme has one specific objective which seeks to have **Conservation and sustainable management of ecosystems in TKLBBB land and seascapes in order to contribute to lasting goods and services**

4.1 Result 1: Cross-Border Biodiversity Conservation Strengthened

In strengthening cross-border biodiversity conservation, five broad activities against which findings have been organized were planned for implemented. Therefore, the outputs were envisioned in the five result areas.

1. Cross Border Stakeholder Cooperation and collaboration
2. Ecosystem Services community value chains
3. Community Agroforestry
4. Afforestation and Ecosystem restoration
5. Communication Strategy aligned

4.1.1 Cross- Border Cooperation and Collaboration

The achievements under each broad activity are detailed below.

Setting up a Cross -border stakeholder dialogue platform and meetings.

The Platform was put in place as expected in 2015. So far there have been consistence annual meetings since then in 2015, 2016 and 2017. Three meetings bringing together cross-border stakeholders from Somalia, Kenya and representatives of ICRAF and IGAD were conducted in Nairobi and not the cross –border areas as planned before. The changing of the venue from cross-border areas due to security concerns had budgetary implication while participants did not have the opportunity to experience the envisioned cross-border reality as all meetings were held in Kenya. Participants did not have an opportunity to experience the real situation in Somalia for comparative purposes.

Training and exchange visit to build capacity for Biodiversity conservation and NRM:

A Training and Research exchange write-shop involving 15 participants was held in November 2015. The write shop was followed by an excursion to share experience and learning on the various biodiversity based value chain (BBVC). The products of the write shop include a publication of Biodiversity based value chains in line with the programme. These BBVC are: Honey, Tamarind, Seafoods, Gum Arabic and aromatic resins, Carbon credits and Butterfly value chains. In August 2016, a draft publication on ‘Review of Best practices on BBVC for Pro-poor biodiversity conservation’ was produced and made available in the IGAD BMP web based informational portal.

The participants in the training and exchange activity facilitated by ANAFE signed a declaration on need for capacity building program for the IGAD region.

The institutions that signed the declaration were:

- Universities in Kenya – UoN, Kenyatta and Pwani Universities
- Universities in Somalia – Benardir and East Africa Universities
- Finland – University of Helnsiki
- Kenya Forestry Research Institute – KEFRI
- National Museums of Kenya – NMK
- African Network for Agriculture, Agroforestry and Natural Resources Education (ANAFE)

-
- Ministry of Environment – Jubaland government
 - World Agroforestry Centre –ICRAF

In 2016, an exchange visit was organised by ICRAF and visits made to Northern Rangeland Trust and its Conservancies in Isiolo. Twenty-seven (27) participants from Somalia, Kenya ICRAF office and IGAD office in Djibouti were involved. A third exchange tour was made soon after the Cross Border Stakeholders Platform (CBSP) meeting in Nairobi. The group visited sites in Laikipia. The suggestion for development of a cross border network of Biodiversity conservation areas in the region has not taken off yet, but efforts were under way for discussion during the cross border stakeholders meeting in April 2017. Considering these were two main task, only one was not complete at the time of the review. The Cross border network on Biodiversity conservation areas concept was ready for discussion during the CBSP meeting.

4.1.2. Ecosystems Service Community Value Chains

The ecosystem service community value chains were mainly in Lamu west sub-county in Kenya. This was mainly due to in-security situations that escalated in Lamu East sub-county Boni Forest in Kenya and on the Somalia side. The interventions were implemented and piloted in five demonstration sites around the Witu Forest/ Kipini forest reserves in Kenya. The demo /pilot sites were: Soroko/TCN, Maisha Masha; Witu-Nyongoro; Tangeni; Witu Secondary school and the Lamu Conservancy Trust – (LCT). The demonstration /pilot sites were on Rainwater harvesting technologies, Agroforestry involving a number of tree species that farmers planted in woodlots or along the boundaries; reforestation and regeneration of the degraded forest areas with local indigenous trees; efficient soil and water conservation technologies e.g. use of zai pits, drip and micro irrigation, ground water/ shallow wells for farming/ domestic use; and honey value chain development using the langstroth bee hives technology

By use of this pilot/demo site model, skills and technologies can diffuse to target communities through copying, influence and direct mentorship support. It also concentrates the project efforts in one area before expanding to other areas in future. It offers an opportunity to learn and identify what works for future upscaling and replication, while building partnerships with the various stakeholders in the area.

In Somalia, work was concentrated in Ras Kamboni and Bur Gabo. ICRAF engaged consultants to provide support in awareness creation and development of value chains. However, this was done late in 2016. The value chains used modern technology (Langstroth Bee hives) and promoted gender sensitive and friendly approaches with resultant increase in women participation.

In Kenya:

There was significant success in sensitizing 700 community members on community agro- forestry and rainwater harvesting management out of the planned 1,000. Ninety-nine people were sensitized on the honey value chain while KWS sensitized out of the planned 100 in Kenya. KWS also sensitized and trained a total of 167 people on their Wildlife management and Conservation Act of 2013 (WMCA, 2013) and its implication on biodiversity conservation. The creation of awareness was a joint effort between ICRAF in partnership with various key stakeholders. The key stakeholders involved included KWS, KFS, Agricultural Sector Development Support program (ASDSP) and Ministry of Agriculture, Livestock and Fisheries, the county government of Lamu and the communities in West and East Lamu sub counties. These collaborative efforts brought by various stakeholders and participation of the

communities ensured appropriate messages were received from the right institutions while building partnerships for conservation of biodiversity.

The capacity building of value chains reached 99 farmers with training on honey value chain in Lamu East and West sub-counties. This constituted 99 % of the envisioned farmers in Kenya. Farmers were also supplied with 60 Langstroth Bee hives through two groups in Lamu west. The two groups - Witu Nyongoro Self Help group (SHG) received 36 hives while New Kumekucha beekeeping SHG got 24 Bee hives. Wild fire, wildlife and livestock interference made the community apiary untenable. For harvesting and value addition purposes, each group received a honey processing equipment set and two set of harvesting gears from the project and training.

Based on the outputs, it is clear that the envisioned training and support targets were achieved as planned. Furthermore, the bee-keeping value chains were initiated with necessary training to impart required skills and knowledge to make them manageable and profitable. However, despite the projects efforts and investments the development of the value chain coincided with a prolonged drought prevailing for three seasons in the target area. This resulted in poor colonization of hives and poor harvests. Initially the beehive colonization was good at 80% in Lamu, but with the continued drought for the last three seasons the bees fled. This was due to lack of water and nectar for the bees. The project beneficiaries reported delays or lack of catcher boxes to hasten colonization. Poor pest management due to lack of management skills by the bee-keepers were observed and noted to have aggravated the negative impacts of poor weather. On average majority of hives were reported to have yielded up to one kilo of extracted honey.

In Somalia

Two consulting Somalia based firms were hired to implement the planned activities in late 2016. These were Imaan Relief and Development Organization (IRDO) and Savana Consultancy and Research Services (SCRS). Each conducted baseline studies /assessment work and identified community participants for trainings. Sensitization and creation of awareness was successful reaching 550 people with key messages on Natural Resource Management (NRM).

A total of 100 participants were trained on Honey Value chain, 50 for each organization in specific target areas. This constituted 100 percent of the total targeted. A total of 20 Langstroth were distributed to those trained (ten hives in each area). Two sets of processing and harvesting gears were provided in Somalia Ras Kamboni and Bur Gabo area where the two groups were situated. The colonisation of the hives was reportedly very poor and low due to the prevailing drought and aridity. Since the activity was implemented during the dry season, the hives set up are waiting for the rainy season when water and nectar will be in plenty for colonization to take place. Two hives were set up in Ras Kamboni, good colonization initially realised lasted a short while. There after the bees yielded to pressure of drought and left.

In Ras Kamboni, a community water pan was desilted by the community members, but in the absence of rain, no water was collected as anticipated despite the effort.



Figure 2: Honey value chain development demonstration sites in Lamu West Sub county: A signage in Witu Nyongoro site, and their apiary on the right. Below are individual farmers langstroth beehives in Maisha Masha pilot/demo site beehives

Challenges in Honey Value Chain

A number of challenges experienced in the implementation of honey value chain in both countries were noted. In Kenya these included – low colonization (<20%), low honey yields, pests' infestation in the hives, prolonged drought /lack of water, lack of bee forage, forest fires, wild animals (honey badgers) and observed neglect / poor apiary management at farmer/group level. Apathy in group management was reported and observed. The group members said that this was due to the many problems as a result of drought that limited the time for group activity on their hives. Also the individual farmers faced similar challenges from drought and concentrated on the more basic needs. Little effort was given to the hives. The group members in the demonstration site indicated that search for water was the biggest challenge that took most of their time limiting time for productive activities on the farm.



Figure 3: Honey value chain farmers displaying some of the challenges. Left: a farmer displaying how the provide water to his bees in Maisha Masha. Right: Mrs. Manyara in Witu Nyongoro bee keepers SHG display pest damaged honey combs.

4.1.3 Community Agro - Forestry

Training and support on tree planting:

The activity coordinated by ICRAF was carried out by the Kenya Forestry Service (KFS) Ecosystem Conservators office in association with the Forest managers for Witu Forest Reserve and the Kipini Provisional Forest reserve in Lamu west sub-county.

The project targeted to create awareness to a total of 1000 beneficiaries. The activities were sequentially implemented starting with awareness creation with key messages on biodiversity including; importance of forests, roles of communities, biodiversity hotspots, the major catchment areas and the very sensitive buffer zones with rich wildlife, high population and proposed government development projects and possible impact on eco-systems.

In total 700 out of expected target of 1000 (70% of community members were sensitised by KFS on agroforestry/tree planting in Kenya. An addition 315 were reached through farmer exchange tours and field days. In Somalia a total of 550 sensitised on Natural Resource Management (NRM).. A total of 1,865 community members have been sensitised in the target areas on NRM in the target area.

Two (2) community nursery/demo sites were set up in Soroko – (Soroko Tree Crop Nursery (TCN) where 40,000 seedlings were raised and; Tangeni community nursery where 7,000 seedlings were raised according to reports by the ICRAF field officer. Most of the seedlings from the two community nurseries were distributed freely to identified farmers within the pilot areas. On average a farmer got at least 100 seedlings, a few received 500 in Kenya. A total of 29,500 assorted tree seedlings species were distributed as follows: 22,100 to 171 farmers and 6,500 distributed to unregistered farmers though within the target area. One school (Chamalulu primary school) received 1,200 assorted seedlings from Soroko TCN. No tree seedlings were given out or raised in Somalia

The tree species raised and distributed were – *Casuarina equisetifolia*, *Eucalyptus camaldulensis*, *Azelaia quanzensis*, *Terminalia spinose*, *Milicia excels*, *Markhamia lutea* and *Cassia siamea*. These are the species preferred by farmers in addition to fruit trees like Mango – *Mangifera indica*, Coconut – *Cocos nucifera*, *Anacardium orientale* (Cashewnut), *Citrus spp* (Oranges / Lemon), and Avocados. Farmers planted the tree seedlings in their farms mainly along the boundary and as woodlots in their farms as observed in the photos in Figure 5.



Figure 4: Soroko TCN Nursery demonstration site, showing: Top: Right the tree seedlings being raised by ICRAF in partnership with KFS, Bottom Left: A shallow well fitted with a solar submersible pump and Bottom right are community members benefiting with domestic water from the shallow well.

The tree seedlings survival rates were observed to be very low in most agricultural farms mapped for tree planting. Only 21.6% of the households surveyed had attained the targeted 40% or more survival rate. The main reasons for this were poor rains soon after planting before tree seedlings established the roots, damage by pastoralists livestock, wildlife and some damage by bush fires. The MTR review found that for a sample of farmers from the pilot site clusters the survival rate of seedlings planted was only 26.6% on average below the targeted 40% rate expected by the end of 2017.

Table 3: Distribution of seedling survival by Household in Lamu west sub county

Survival rate	Frequency	Percent (%)
No Survival	14	37.8
1-10%	2	5.4
11-20%	9	24.3
21-40%	4	10.8
Above 40%	8	21.6
Total	37	100.0



Figure 5: Agroforestry at the farm level. Left a one-year-old eucalyptus tree in Mr. Mbatia's farm near the Soroko TCN. Right: *Casuarina* all planted along the boundary in the farmers' fields

Challenges in Tree Planting

The low survival of seedlings is attributed to the challenges. These included; the prolonged drought that contributed to inadequate water at establishment, the high incidences of human – human conflict between the livestock /pastoralist and the agricultural farmers. Pastoralists drove livestock through the farms causing irreparable damage both to crops and tree seedlings. This problem was exacerbated by lack of fencing farms and lack of a system to hold pastoralists accountable even when they threatened farmers with arms as they destroyed their crops and trees. There was no supplemental water to irrigate the seedlings though farmers had constructed water infrastructures. These were empty and had not recharged by the rainwater harvesting runoff expected from the seasonal rains that failed after construction.

Farmers trekked far (some up-to 6km) for domestic water and had no means to water the seedlings as a matter of priority. Lack of rain also contributed to higher than normal incidences of wildlife – human conflict. As the wildlife moved from their habitats in search of water, they encountered and browsed and sometimes uprooted the budding tree seedlings. In Figure 6. are browsed seedlings and dry water runoff structures constructed by farmers with project support.



Figure 6: Left: A *Eucalyptus* tree seedling browsed by livestock. Middle: an empty 25M² Rain Water harvesting structure. Right: a dry water pan/pond at the Tangeni TCN site

Rain water harvesting (RWH) Techniques

In- situ rain water harvesting, run off water harvesting and efficient water use in the farms and at community levels were promoted and demonstrated/piloted in Lamu west sub county. Among them was- roof runoff, ground runoff, in-situ (Zai pits) water harvesting at planting, direct seeding instead of planting in nursery beds and shallow wells water extraction using solar power/pumps and efficient use through micro sprinkler irrigation and drips irrigation, sunken beds and mulching



Figure 7: Lamu Conservancy Trust RWH infrastructure for roof water harvesting in Witu

Various methods were used to reach and train farmers amongst them were: on-farm demonstration and field days, farmer learning exchange tours (where farmers visited other progressive farmers in Mpeketoni, where they saw, learnt from them and exchanged ideas with fellow farmers) and residential trainings. For RWH structures a total of 14 artisans from the targeted clusters were trained on construction. This provided a pool of technology skilled farmers in the community to support in training other farmers and overseeing their constructions. A total of 315 farmers participated in the farmer exchange tours which were facilitated by ICRAF in collaboration with Ministry of Agriculture Livestock and Fisheries (MoALF)) in Lamu West Sub County. The community now has inbuilt capacity to develop rain water harvesting structures and shallow well that will go a long way in sustaining value chains and community agro-forestry.

Alternative Water Structures - Impact of shallow wells

On water use technology for alternative livelihoods, ICRAF encouraged farmers to form common interest groups and centred on farmers with shallow wells. Farmers were trained and started practicing in- situ RWH methods and efficient water use technologies for increased climate change resilience to ease pressure on the natural resources and promote biodiversity conservation. These were important programme adjustments coming at a time when RWH structures were in place, yet the rain was not forthcoming. Notably, this was an important response that contributed immensely to value chains, community agro-forestry and access of water for household use.



Figure 8: Left: Mr. Silas Orembe's farm – shallow well with an elevated tank where water is pumped by solar that is used to irrigate by drip and micro-sprinkler. Right: Water efficient methods – Micro drip irrigation demonstration planting tomatoes in same farm in Soroko, Lamu West Sub county.



Figure 9: A tomato crop at Joyce Muthoni's farm in Soroko.

Farmers have adopted and adapted some of the technologies demonstrated and seen during the farmers' exchange tours.

Some farmers were observed and indicated vegetable and fruit tree seedlings in their farms mainly tomatoes, kales, capsicum and chillies largely learnt from exposures and mentorship provided by the project.

Horticultural value chain demonstrated very high potential with produce sold and bought at farm level and market with major challenges. More farmers are encouraged and making great strides where there are shallow wells for crop production. They have improved their livelihoods and encouraged other as envisioned. The upscaling of this overall will divert communities from livelihoods activities that threaten conservation of biodiversity.



Figure 10: Improved nutrition and incomes through shallow wells and use of appropriate and efficient water management technologies in Ms. Joyce's farm in Soroko pilot site.

Various technologies were applied in the operations of shallow wells. Some were installed with pumps that were petrol driven or solar driven or string and washer pump and are being used to raise vegetable / fruit tree seedlings and high value vegetable crops in their farms. Such technologies will help in sustaining the value chains, provide livelihood options and contribute to conservation of biodiversity. Ms. Joyce Muthoni and Mr. Silas Orembe farms were clear examples in Soroko as seen in the photos in figures 8-10.

Challenges in RWH Demonstrations and other Technologies

The initial stages demonstration focused on the construction of water pans, and runoff water catchments from roof or ground. The immediate benefits of this were impended by inadequate precipitation/rainfall experienced in the last 3 seasons. Most were not recharged and many accumulated very little water that ran out after a few weeks. The project had to adjust to shallow wells for the continuity of value chains and has positive outcomes so far.

Wild animals were attracted to the stored water, escalating the human – wild life conflict especially between man, buffalos and baboons.

In the farmers' fields in Tangeni pilot sites, some farmers had taken up the RWH structures (shallow wells and water ponds) construction, however, capital limitations on their contribution led to incomplete structures in their farms. The water structures in their homes/farms need to be fenced to keep of animals and guard children and livestock, they also need a shade net to protect against baboons accessing and contaminating the water and mosquitoes breeding.

In some cases, a razor wire fence had to be added to keep off the baboons e.g. the one in Witu secondary school. All these have additional cost, potential health and environmental implications.

In Somalia:

Two consulting organizations (IRDO and Savana) were commissioned by the project to support rain RWH in Burgabo and Ras Kamboni- Somalia. The two organizations contacted baseline assessments and built stakeholders capacity including local community and authorities on RWH. A water pan was rehabilitated in Ras Kamboni for rain water harvesting. The roof water catchment structures were considered expensive and capital intensive?



Figure 11: Run off Water infrastructure at Witu Secondary school, protected by a razor wire.

4.1.4 Agroforestry and Ecosystems Restoration

Kenya Forestry services (KFS) spearheaded this activity in the provisional and reserved forests of Kipini and Witu in Lamu West Sub- County respectively as planed in the log frame. Lamu West sub-county accommodates more than 70% of the Lamu county population.

According to Lamu County development plan 2014, the county has a young population. Most (76.5%) of the population is under the age of 35 years. This is a highly dependent population and is composed of infants- 15,5%; children (4-15yrs) – 26.2% and youths (15-34yrs) – 34,8%. The youths are active in extracting natural resources from the forest reserves for their economic wellbeing unless well engaged in other economic activities. However, with limited alternative livelihoods options, their energy is directed to unsustainable mining of ecosystem goods and services to support their well-being. The increased demand for natural resource benefits lead to overexploitation and natural resources degradation in the area.

The implementation of this activity was systematic with selection of sites with conservation relevance. In this regard the KFS as per their report on 'Mapping of degraded sites in Witu Forest Ecosystem (WFE)' identified four rehabilitation sites, two in each forest.

Their prioritisation was based on the following criteria:

- Areas with critically endangered species
- Areas with low species diversity
- Areas with a history of poor vegetation
- Areas with endemic species.

The programme targeted to rehabilitate the prioritised areas through enrichment planting or by promoting natural regeneration. The Lamu district Ecosystem conservator reported that, a total of 28 hectares were identified and earmarked for rehabilitation through the ICRAF support in Lamu west Sub county. According to the information gathered from the forest managers in charge of Witu Forest Reserve and Kipini Provisional Forest reserve stations, a total of 25 Ha identified for re-forestation and 3 Ha for natural regeneration. Witu forest reserve replanted 10 Ha with 15,000 assorted seedlings and set aside 2 Ha for natural regeneration; while the Kipini Provisional Forest planted 15Ha in two blocks with 22,000 seedlings and set aside 1Ha for natural regeneration. The KFS was facilitated by ICRAF to buy 30,000 seedlings, and also got an additional 7,000 from the Soroko TCN to restore the degraded areas in the Forests. It is clear that the programme met the restoration in terms of coverage and number of seedlings planted⁵ although survival rate was impaired by other factors.

The tree species planted in these areas were a mix of local and indigenous trees suitable for ecological conditions of the context. These include; *Terminalia spinosa* (Mwangati), *Croton metacarpus*, *Azelaia quanzensis* (Mbambakofi), *Trichilia roka* (Mti Maji), *Erythrophleum guineense* (Mkelekele), *Milicia excels* (Mvule), *Terminalia kilimandscharica* (Mbambaro), *Mimusops fruticosa* (Mnguvi), *Dalbergia melanoxylon*. These were planted in Maisha Masha in Witu Reserved Forest and Maji Glass area in Kipini Provisional Forest.

The area soil type range from sandy to sandy clays. The water retention is poor thus, with the inadequate rains experienced soon after planting; the tree seedlings had little chances of survival. The few seedlings that established were destroyed by wildlife, livestock through breakages and browsing while some uprooted by baboons. The survival rate at the reserved / provisional forest areas in Kipini and Witu Forest reserves, was estimated at 7.5%, against a project target of 40%. Supplemental water from shallow wells in the vicinity could have improved survival to large extent. The KFS and programme overall need to move from rain-fed reforestation and pursue watering as an alternative in the current era of climate change.

Challenges to Ecosystems Restoration

Overall, a number of challenges were encountered in the reforestation and support for natural regeneration in the degraded areas of the targeted national forest reserves in Lamu. These included, Wildlife damage, Livestock damage, Drought – inadequate rain at establishment and soon after planting, lack of supplemental irrigation water, Invasive species – *Prosopis juliflora*, Neem tree, human encroachment/settlement, forest fires and slash/burn, and planned development projects by government and investors. The forest Services lacked adequate resources and manpower, low staff morale due to insecurity and inadequate baseline information on the areas environmental related dynamics. The encroachment in gazetted and provisional forest land, squatters' permanent settlements had an impact on ecosystems restoration efforts

⁵ ICRAF requested IGAD for a review of the initial target of seedlings to be planted downwards from 60,000 to 30,000.



Figure 12: Reported and observed Ecosystem challenges in Lamu west Sub Top Left: Invasive species (*Prosopis juliflora*), Top Right: Dried Lake Kenyatta – inset : attempts of recharging from borehole water to save the Hippos and marine life. Bottom left: forest fires; Bottom middle: browsed planted seedlings; Bottom Right: carcass of a dead hippo in lake Kenyatta

4.1.5 Communication Strategy

Communication is one of the areas that yielded good results as manifested in the high level of awareness and positive attitude to conservation of biodiversity in the targeted communities. This was made possible through appropriate messages delivered through print materials. Notably, the sensitization and mobilization of communities included awareness on biodiversity that delivered by the right stakeholders. This had far reaching impact on advancing changes in attitudes and perceptions on how conservation is viewed from the community. The observed impact of the prolonged drought reinforced the messages on conservation as the impact of climate change which is obvious for all to see.

A communication strategy has been developed for the whole project and shared with IGAD for endorsement. However, only 50% of it has been implemented.

At least 5 communication packages, educational, advocacy materials were planned to be used and distributed to relevant stakeholders. Communication products developed include an up to-date ICRAF IGAD BMP project dedicated web-based informational portal.

<http://www.worldagroforestry.org/project/igad-biodiversity-management-program-horn-africa>, where all digitized reports and publications can be found and is accessible to public. It has frequent updates on the project activities, pictorials and progress. Other project materials developed include – project publicity signage at the pilot/demo sites in the field and a biannual newsletter – BMP NEWS. The 1st issue on project was produced on 1st December 2016. Project pamphlets as in Figure 14, in English, Swahili and Somali were produced and used in the project, and technical briefs. These together with promotional materials like Banners, poster, t-shirts and caps have been used and are still available in the project especially in Kenya. The materials were instrumental in taking the programmes communication agenda forward.

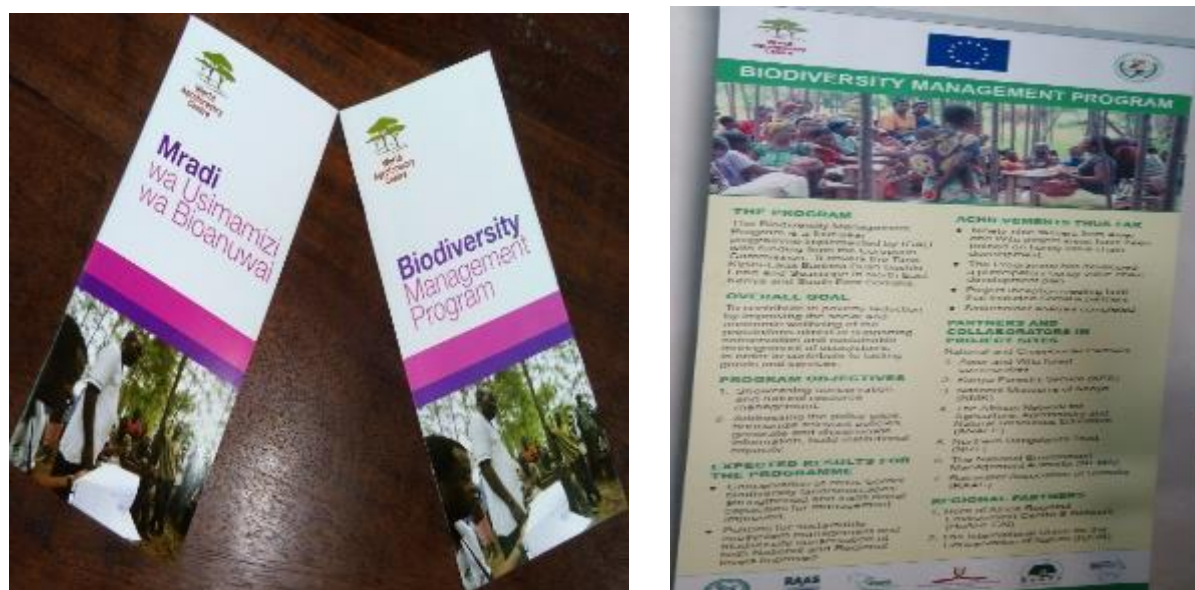


Figure 13: Left: BMP pamphlets used in the project in Swahili, and English; Right: A banner used in sensitization in Lamu office to inform on the project.

4.2 Result 2: Institutional Capacities for Management Improved

Under this result, the programme focus is to strengthen capacity of institutions to deliver on various interventions while enhancing sustainability of the project intervention beyond the project life. Result 2 is a product of a number of broad activities that were reviewed to determine the progress made.

The expected outputs in this result area include:

- Mainstreaming of Biodiversity Conservation to ongoing planning
- Support to Local Planning Units
- Management Plans for Protected Areas
- Capacity Building for communities and stakeholders on conservation strategies
- Support fundraising and Increased sustainability of protected Areas management

This section will review the status on each of these outputs at the time of the MTR in April/May 2017.

4.2.1 Mainstreaming of Biodiversity Conservation to on-going Planning

Generation of strategic information

ICRAF worked closely with partners with comparative advantage on the various areas to generate the required information for programming, planning and mainstreaming to wider institutional driven planning with implications on conservation of biodiversity. ICRAF therefore commissioned a number of relevant studies to generate strategic information in various areas regarding biodiversity and socio-economic information about the cross-border ecosystems in targeted project areas for conservation and management.

As a result, baseline, biodiversity and socio economic information has been collected, compiled, documented and shared with stakeholders: The reports and publications or draft publications can be found in the projects website informational portal, thus accessible to the public. These reports are also being used to develop working papers, technical and policy brief. The information is will also be used and be part of the biodiversity data bank being developed at the county level for Lamu spatial planning unit where any relevant information on biodiversity will be available and accessible from a central point. The County government of Lamu county planning department commissioned a consultant to develop a spatial plan. A draft report is in circulation for the stakeholders to ensure biodiversity information is incorporated.

Other studies undertaken by the programme, consultants and government Partners /departments include;

- i. Mapping of degraded sites in Witu Forest Ecosystem (WFE) by Kenya Forest Services (KFS)
- ii. Marine habitats of the Lamu-Kiunga coast: an assessment of biodiversity value, threats and opportunities – done by CORDIO in July 2015
- iii. Assessment of the biodiversity in terrestrial and marine landscapes of the proposed Laga Badana National Park and surrounding areas, Jubaland, Somalia – consultant – Dr. Gedow
- iv. Biodiversity assessment of Witu forest terrestrial landscape Lamu county, Kenya by CSA
- v. An ecosystem service perspective on benefits that people derive from biodiversity of coastal forests in Lamu County, Kenya done by Msc. student through ICRAF support.

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- vi. Invasive species in Witu demonstration site, their environmental and social impacts on livelihoods and approaches to manage the invasive species-by CABI
 - vii. Opportunities for community based biodiversity conservation and management in Kenya

These reports have been submitted to ICRAF, shared with stakeholders and are available in the information portal.

One of the **Marine biodiversity** study titled '*Marine habitats of the Lamu-Kiunga coast: an assessment of biodiversity value, threats and opportunities*', conducted in this project has been translated into an ICRAF working paper and is available in the portal link -

<http://outputs.worldagroforestry.org/cgi-bin/koha/opac-detail.pl?biblionumber=39710>

The working paper indicates that the oceanography, geology, connectivity with Gulf of Aden, diverse ecosystems and cultural world heritage are the outstanding universal values of Lamu-Kiunga seascape. The oceanography supports a productive marine ecosystem that hosts a variety of marine species. The coral cover in 2015 averaged 16%, with a range of 35% inshore <5% on the deep offshore reefs. Globally, rare coral genera of *Siderastrea*, *Horastrea*, *Caulastrea*, *Moseleya* and endemic angelfish *Apolemichthys xanthotis* as well as six shark and nine ray species, Dugongs, turtles, whales and dolphin occur in the seascape.

Mangrove cover and quality is good but has reduced over decades. The main threats to marine biodiversity include; increase in human population, high poverty levels, deforestation of mangroves, clay mining for pottery and land tenure. In response to these threats, public and civil institutions have engaged in providing solutions. Enactment of a wide range of national, coastal and environmental legislation is part of the policy response to the threats. The adoption of locally-managed marine areas has also improved management of marine biodiversity.

It is envisioned that integrating local knowledge, government regulations and science through mainstreaming marine biodiversity information to spatial planning approach has the potential to benefit ecosystems and communities living around this unique part of Kenya's coast.

4.2.2 Support to Local Planning Units

Two (2) local planning units (Lamu and Badhaadhe) were targeted for support with equipment and capacity building. To date Lamu County Planning unit under the Lamu county and jointly with the National Museums of Kenya (NMK) have been facilitated with equipment and training. The representatives received GIS training in April /May 2016 which is an important application in spatial planning. In Sept 2015, 36 selected Kenyan stakeholders were trained on Participatory land use planning by ICRAF and NMK. The programme also provided Lamu County planning department and NMK with hardware equipment – Desktops, laptops and Uninterrupted Power Supply (UPS) - Power backups to use in the setting up of the database office. The NMK has given office space for the setup of the database office in their offices. The set up was in progress by the Lamu county planning office at the time of the study.

The Lamu county planning department engaged a consultant and at the time of the MTR a draft Spatial Plan was ready and shared with relevant stakeholders for review/input by end of April 2017.

In Somalia, two personnel were trained with the Kenyan counterparts on *Quantum Geographical Information System (QGIS)* so that they can offer technical support to their relevant ministries. With training it easy for them to take up the planning activities once they are initiated.

4.2.3 Management Plans for Protected Areas

Two management areas were planned to be set up in the target area, each in Kenya and Somalia sides.

In Kenya, Lamu: the area targeted was Awer near the Boni Forest. However, the deteriorating security at the time necessitated the adjustment to a relatively secure site. Hanshak Nyongoro Conservancy under the Northern Range Trust (NRT) was identified for support. A Community Development Management Plan (CDMP) has been developed, and validated by community but not yet endorsed by County Wildlife Compensation Committee (CWCC) and Kenya Wildlife Services (KWS). This is significant progress since the document is community owned after a participatory development process.

In addition to the management plan the conservancy has gone through two phases of training on Conservancy Management Monitoring System (CoMMS). The CoMMS is in place and being used by the trained rangers to collect relevant data on wildlife movements, wildlife – human conflicts, insecurity, illegal activities and any biodiversity issues in the area. The information is used to support any compensation claims made to the KWS on Huma-wildlife conflicts. It is also shared with the NRT coastal office in Lamu. The Conservancy was provided with camping equipment: 16 tents, while the NRT control office in Lamu was supplied with laptops, GPS equipment. This has been source of a morale booster to the rangers, NRT staff and communities with renewed energy for conservation.



Figure 14: Top Left Hanshak-Nyongoro Conservancy office; Top Right -consultant sharing information with the rangers; Centre: Control centre in NRT head office in Lamu island showing some equipments from ICRAF; Bottom left: shallow well next to Moa Ox-bow lake to reduce crocodile attacks to community members; Bottom Right: Consultant meeting the beneficiaries in Moa Village within the conservancy

Challenges

NRT was commissioned with ICRAF budget to develop CDMP/COMMS and do training. However, despite the support received and progress made, they reported experiencing some challenges. These included, need of funds to implement their CDMP plans and build and develop Headquarter office, purchase more equipment & training to implement CDMP/CoMMS e.g. binoculars and smaller mobile tents to use when in the field. The sixteen (16) tents provided by ICRAF are used at the head offices.

NRT reported delays in funds disbursements from ICRAF. This resulted in delayed completion of the planned activities like: validation of the CDMP at the AGM and endorsement of the plans by KWS.

NRT reported that their CoMMS reported increased human – wildlife conflict incidences as a result of the prolonged drought.

There's need for safe water points for humans and animals since the fresh water ox-bow lake at Moa village that residents get their water for domestic use is no longer safe. They reported increased wildlife conflicts where a number of human lives have been lost from crocodiles, hippos and buffalos attacks at the water points.

In Somalia:

In Laga Badana Bush Bushle National reserve, lower Juba, Jubba Land, a study was commissioned by ICRAF through a consultancy and a vision and roadmap for establishment of Protected Area prepared. The findings validated in workshop and submitted to Somali authorities and report published as a working paper. Security concerns have been the main challenge and a lack of convergence between the two levels of government -i.e. the federal and Jubbaland regional governments.

4.2.4 Support for cross border stakeholders exchange to build capacity on biodiversity management

Cross border activities: Two cross border exchange visits to Kenya have been carried out. This involved the stakeholders from Somalia and Kenya. However, none of the cross border activity has been carried in Somalia due to security concerns. A write-shop and exchange visit to various sites in Kenya took place and helped develop the information in some of the target biodiversity based value chains. From the write shop a publication on Biodiversity Based Value Chains (BBVC) was developed and is available for reference to stakeholders. The digital version is available at the project portal.

It targeted six BBVC that include: Honey, Tamarind, Butterfly, Seafood, Carbon credits and Gum Arabic and aromatic resins value chains. The cross border write-shop team came up with a declaration on biodiversity conservation and management capacity building in the IGAD region. This is also available in the web portal.

Training sessions: In Kenya training sessions on integrating biodiversity conservation and use at landscapes scale into Land Use Planning was modified into an awareness raising activity on the possibilities for community based biodiversity conservation offered by the recent *Kenya Wildlife Conservation and Management Act, 2013*. This was done in three sessions – a residential workshop and two public forums in Witu and Hindi with support from KWS, ICRAF and NRT. A training report is available in the project portal titled: '*Awareness creation among local Community Members on the Kenya Wildlife Conservation and Management ACT (WCMA 2013): Training and public sensitization meeting report*'. An awareness creation manual titled '*Opportunities for community based biodiversity conservation and management in Kenya*' has been developed with ICRAF support. This will be used as advocacy and communication material on existing opportunities presented by the KWS WCMA 2013. A digital: <http://outputs.worldagroforestry.org/cgi-bin/koha/opac-detail.pl?biblionumber=39705> version of this training manual is available in the BMP web portal.

4.2.5 Establishment of a cross-border network of biodiversity conservation areas

This aspect has not been developed though some concept on establishment of cross border networks has been developed and was discussed during the Stakeholders cross border meeting on 18th April 2017. There is plenty of biodiversity information that has been generated, but it is not exhaustive. New areas can be developed for each respective country on the common biodiversity conservation/management areas. The opportunities that are realised and agreed upon can then form the basis for discuss with donors (around table) for funding and enhanced sustainability/scaling up.

4.3 Progress in Cross-Cutting Areas

In line with the TOR, an assessment of a number of operational and strategic elements of the programme was undertaken.

4.3.1 Financial Status

The performance of the grant and the sub-grants has met the expectation so far. All partners are largely compliant to both financial and programmatic commitments. At the point of the review, ICRAF had received two tranches from the donor. There were absorption delays in the first year of implementation but reversed in the subsequent years resulting to 66% absorption rate by end of the third year. However, since the project is in the final year, one third of the budget remains to be absorbed. Notably, a significant proportion includes some obligated costs and disbursements to the partners which will reduce the budget significantly. On average, partners have spent over 70% of their sub-grants, while others have exhausted their budgets and only awaiting disbursements on expenses.

The management of sub-grants has reportedly been satisfactory. However, a delay in disbursements and payments has raised concerns with NRT. The delays are associated with the due diligence processes undertaken by ICRAF, but there were negative effects on programmatic processes.

Feedback delays were also reported whereby partners indicated longer response times for reports and other financial correspondences with ICRAF. Further delays in procurement and logistics were reported especially for the pooled procurement of value chain supplies and equipment.

4.3.2 Project Risks and Mitigation

The design of this Programme had envisioned potential risks and proposed mitigation measures to address them. In the course of implementation, the Programme has encountered other risks which necessitated some adjustments. This was meant to mitigate potential effects in programmes and operations to improve effectiveness. Most of the risks were associated with contextual dynamics in the two targeted cross border areas. So far, the risk register and mitigation measures undertaken are detailed below. The programme will continue to be responsive to any emerging risks in the remaining implementation period.

Table 4: Programme Risks and Mitigation Measures

Risks	Mitigation
Prolonged drought	<p>The RWH structures did not recharge as the expected water from the rain did not materialize. The drought significantly affected the value chains and agroforestry. The mitigation measures taken include;</p> <ul style="list-style-type: none"> • Shallow wells rehabilitation to provide water for the tree nurseries • Community groups engaged in value chains received material and technical support in establishment of shallow wells as alternative sources of water • Provision of technical support to project beneficiaries in prospecting potential aquifers and positioning • Establishment of shallow wells water points in farming households as a result of project capacity building and cross learning
Insecurity	<p>The state of security on the Somalia side was acknowledged at the conception of this Programme. On the Kenyan side, security deteriorated during the early stages of implementation. The following measures were taken.</p> <ul style="list-style-type: none"> • Adjustment of targeted geographical areas that covered the entire Lamu County to focus on Lamu West. Activity implementation in Lamu East targeting 5 villages Kiangwe, Milimani, Mangai, Mararani, Basuba in Awer was suspended from the original target • On the Somalia side the impact of insecurity was mitigated by contracting and working through local partners. On the Kenyan side the programme worked closely with County security personnel in monitoring security situation before embarking on field activities particularly at the time of security emergency • On Somalia side, partners support was task based to enhance effectiveness and minimize the risks associated with limited monitoring • Innovative methods such as remote sensing were used to validate reported activities which could not be physically verified on the Somalia side • For security reasons, cross border meeting and exchanges were moved outside the field to Nairobi, but with some negative budgetary implications
High turnover of partner staff/ Representatives	<p>The government employees who started off the project as partner focal points were deployed to other areas or locations. This posed a risk to the continuity of some interventions and overall momentum of work. The mitigation measures included;</p> <ul style="list-style-type: none"> • Hastening the integration and orientation of the incoming replacement into the programme • Entrenching team work bringing stakeholders together for continuity of activities to ensure that activities continued during the transition

Political alignments and governance complexities	<p>The representation from the Somalia side includes the Federal Government of Somalia and Jubaland administration sometimes leading to participation of different representative in cross border meetings. Follow up of actions is affected by bringing of new participation of new participants with no grasp of the ongoing issues (high staff turnover)</p> <p>In Kenya, devolution of some functions altered the original plan to partner with national institutions to working with the county structures. Relating to the above, some mitigation measures were undertaken</p> <ul style="list-style-type: none"> • Seeking political good will from two levels of government from the Somalia side • Adjusting to the Lamu County spatial planning process and provision of technical support on a need basis • Working towards securing project buy in from government partners in each of the locations
Contextual poverty	<p>The poor state of livelihoods among the community members that were supported for the value chains risked abandoning project in search of alternatives. This is exacerbated by the high expectations and perceived benefits from the community.</p> <p>Mitigation measures undertaken were as follows:</p> <ul style="list-style-type: none"> • Champion farmers and responsive groups were supported to take the value chains forward. The targeting of the two has kept the interventions forward • The adoption of technologies and value chains focused on individual households through increased contact and support ensuring that diffusion and motivation of others remained on course • The programme has been open to various stakeholders/partners who support livelihoods to ensure that their contributions are leveraged in supporting value chains
Budgetary Limitations	<p>The demand for alternative water sources for the value chains following failure of rain water harvesting increased budgetary allocation beyond technical support.</p> <ul style="list-style-type: none"> • The effect on the costs of various items led to re-adjustment of various budget lines to ensure that costs for essential interventions were covered.

4.3.3 SWOT Analysis

The review undertook an appraisal of the project using SWOT analysis to leverage on the strengths and embrace the emerging opportunities. Furthermore, the analysis reviewed the current weaknesses and threats with an intention of converting them or reducing their impact.

Table 5: SWOT Analysis of the Programme

Internal SWOT factors	
Strengths	Weaknesses
<ul style="list-style-type: none"> • Well-resourced funding sources • Existence of IGAD Policy for guidance to cross border and country commitments • Technical capacity of the implementers, including specific comparative capabilities • Capability of the Programme implementers to generate strategic information for evidence based programming decisions 	<ul style="list-style-type: none"> • High turnover of program counterparts in government offices – Kenya and inconsistent representation from the Somalia side • Differential capacities of partner institutions in Kenya and Somalia • Inability to undertake routine monitoring of the project in Somalia (Remote monitoring)

<ul style="list-style-type: none"> • Appropriate water development technologies as a good selling point to communities in the uptake of interventions 	<ul style="list-style-type: none"> • Fragmented implementation approach with several task based partners
External SWOT factors	
Threats	Opportunities
<ul style="list-style-type: none"> • Prolonged drought and negative impact on implementation of field based interventions • Insecurity – Limiting cross border component and overall targeting • Conflicts pitting – Human- Wildlife and Human – Human conflicts between farming and pastoral communities (threats to project infrastructure and value chains • Demotivation of communities due to continued environmental degradation through some of harmful practices that programme is addressing • Continued destruction of biodiversity has potential to demotivate communities from conservation by perceiving the beneficiaries of degradation as having undue advantages from harmful degradation of ecosystems • The settlement structure and encroaching protected areas and population boom in Lamu exposes ecosystems to degradation as a result of livelihood demands from communities • New road developments and upcoming LAPPSET infrastructure and resultant land use changes with potential implications on ecological balance and conservation efforts 	<ul style="list-style-type: none"> • Learning opportunities for informed current and future programming • Receptive partners and communities who are witnessing the effects of climate change and environmental degradation • Emerging interest from other development partners such as Equity Bank, Techno Serve, Sun Culture • Opportunities for water and Education development courtesy of the CDMP supported through NRT and the project

4.3.4 Partnership and Coordination

The review assessed the status of the current relationships with partners in the joint efforts of conservation of biodiversity. Furthermore, an appraisal of effectiveness in various coordination structures in delivering results was undertaken. Notably, the Programme has retained all the partners enrolled in the Programme with good success in completion of work and continuity.

So far, the Programme has maintained good relationships with partners and delivered joint results in various intervention areas. There has been effective coordination spearheaded by ICRAF working closely with government representatives, implementing partners and number of collaborators. From the results, it is clear that appropriate partners with skill sets for various interventions were selected.

On Somalia side, insecurity hampered ICRAF's ability to provide direct field coordination but implementation was made possible by use of effective local partners and contractors who included; IRDO, SAVANA, and RAAS. Similarly, coordination meetings and effective communication applied with reasonable success. For routine monitoring, remote sensing was innovatively used to validate some of the project establishments which had limitations of physical verification.

The Kenya side has enjoyed self -sustaining coordination, borne from existing mechanisms and project efforts. Some stakeholders raised concerns of mandate in the selection of partners, indicating the need for inclusion and further consultations in future partnerships. For development of community development management plans (CDMP), Kenya Wildlife Service and Community Wildlife compensation committee (CCWC) recommended the need for more involvement on the basis of

their legal mandate. The validation and launch of the products of such processes also needed the approval of these institutions, thus future partnerships should consider having them on board. The multiple layers of coordination among government partners were noted. There partner's offices at the field implementation sites have limited authorities to make decisions on behalf of their agencies. With key decision coming from headquarters and communicated to ICRAF Nairobi, it took longer time to take action on key implementation issues. The Programme had to adjust to government working mechanisms to comply with the working style and long turnaround time.

Partners largely complained about bureaucracy manifested in long processes at ICRAF. The delays in disbursements for expenses incurred were noted. The fact that ICRAF has only one staff providing project implementation support, contact with stakeholders and communities supported with BBVC is not fully adequate. Despite the activity based partnership model adopted by the Programme, BBVC showed the need for more direct hands on support until value chains stand on their own. Some of the groups implementing the value chain component required some coordination support so as to enhance their continued commitment to BBVC activities and contribute to conservation of biodiversity in the long run.

Cross border coordination was not as effective as expected. There were no inter-country exchanges at cross border sites due to security challenges. There were concerns of representation from the Somalia side, challenging the coordination consistence of the meetings and cross learning. The cross border meetings and exposure as alternatives to field based meetings serve the purpose, but are overly expensive and lacking in contextual interaction and regularity that a proper cross border meeting could have.

The procurement and distribution of value chain equipment faced some delays. Getting the equipment to the beneficiaries took longer as a result of long logistical procedures. Similar delays were experienced on the Somalia side exacerbated by insecurity situation.

4.3.5 Monitoring and Evaluation

The M&E system was appraised as part of the review for the purpose of improvement in the remaining phase. The assessment focused on the design, routine monitoring, supportive supervision, data collection, data analysis, reporting and data / information dissemination.

Appropriateness of the System

The programme has a tracking sheet which is more suitable for monitoring process or activities. The project has a tracking sheet in place of a comprehensive M&E framework and lacks standard components such as; human capacity, M&E costed work plan and some elements of data capture, analysis, database and dissemination. However, the current M&E tool has been able to track various interventions the flow of data from sources has not been systematic. The M&E tracking sheet, did not define indicators, no specification on frequencies of data collection, targets and no allocation of responsibilities. Due to the above limitation, M&E functions as individual components and not a complete system.

Routine monitoring has been effective on the Kenyan side, but hampered by insecurity and lack of access on the Somalia side of the project. There was on site verification of the activities from all targeted sites on the Kenyan side, however, on the Somalia sites the project had to rely on reports and some remote sensing to verify progress on physical activities. There are questions of accuracy of the approaches thus the need to deploy third party monitors has been floated for consideration. This is particularly important in entrenching accountability at all stages of project implementation.

Data Capture and Management

The project has not developed standardized tools for data collection. In each of the data source points, partners have been using their own formats. The standardization of data collection forms especially for the partners is important for one harmonized system. Periodic analysis of data to establish progress has not been integrated in the M&E system, thus data is generally collected for reporting. Before the mid-term review, no analysis of available data was undertaken to determine progress in some indicators such as number of trees planted and survival rates in areas targeted for ecosystems restoration. In the remaining phase, the analysis of data for periodic information on progress needs to be encouraged.

Spatial data is well organized, all the layers uploaded on the ICRAF landscape portal. <http://91.225.62.74/>.

Reporting

Overall, reporting has been effectively done at all levels. However, some slight delays have been observed from a number of partners. For the partners, a standard reporting format is not available.. Feedback to the partners, and the facilitating groups and individuals in the community were important entry points for performance improvement and ensuring that alternatives to programme obstacles are sorted early enough.

Strategic Information

The project has generated sufficient baseline information to guide programming and for facilitation of performance measurement. Studies on various aspects of biodiversity have been conducted by various consultants and dissemination has been done appropriately. So far, the target areas have solid studies on biodiversity which will constitute important references for some time. This information will also find use in programme development and a resource for developing concepts and proposals in the sustainability plans for the programme.

Efficiency Monitoring

Monitoring has been more focused on the implementation processes with a little attention on efficiency monitoring. However, financial reporting by partners and ICRAF has been clear on utilization of funds and revealed potential disbursement delays. There is also no inbuilt system to determine value for money and return on investment. T

Evaluation

The project has evaluation plans and timelines are in place. There were delays in conducting the mid-term review thus impending timely recommendations that may have changed the course of the project. Notably, the final evaluation is scheduled to take place at end of the project and will be informed by the findings of the MTR. With the MTR completed, all the envisioned evaluative activities are on course.

4.3.6 Sustainability and Stakeholder Perceptions

The design of the project envisioned the need for financial, institutional, Policy and Sustainability. So far the project has made progress in various elements of sustainability. For financial and institutional sustainability, the programme has been supporting operational costs and equipping planning units and management plans for protected areas to prepare them for self- reliance. So far, the CDMP supported by this programme has secured Ksh 3 Million for education bursaries and generated significant interest. Policy sustainability is supported from the regional level and will support all programme development

initiatives as justified ventures for any willing organization. For environmental sustainability, the project has been directly contributing to it.

For programme level sustainability, key aspects of continuity observed are noted below:

Knowledge and skills: There are sufficient skills borne from knowledge and technology transfer in the project. Beneficiaries reported acquisition of valuable skills in honey value chains, horticultural value chains and the practice of agroforestry. Similarly, stakeholders also acquired knowledge from exposure in various interactions and visits. The knowledge and skills acquired by few has been cross shared between community counterparts with potential for up-scaling the value chains in various sectors. This will contribute to the growth of sustainable value chains.

Alternative water sources: The original plan to develop rain water harvesting systems to support value chains and agroforestry is challenged by rain shortages. Recognizing, the need, ICRAF has been supporting communities to establish shallow wells to draw water from more permanent sources. So far, the alternative sources have been taken up by individuals and communities to support the water needs of various value chains. The combination of rain water and ground water sources will go a long way in securing the gains made by the project so far, and in-turn provide options for expansion of the current value chains and establishment of new initiatives. It is also worth noting that the community is learning from various technologies and demonstrations implying the possibilities of expanding biodiversity based value chains.

Selection of appropriate value chains: The project settled on suitable horticultural value chains with self-sustaining potential such as; various vegetables that are in market demand. The bee keeping value chains are also promising returns as the demand for honey is high and fetches good prices. Farmers demonstrated interest in the value chains and will continue to propel the value chains forward hence, contribute to household income livelihoods and divert communities from activities that contribute to destruction of biodiversity.

Learning from prolonged drought and climate change manifestations: The project coincided with a period of prolonged drought which has opened up farmers to the dangers of environmental degradation and climate change. This realization has made communities more responsive to conservation interventions. This consistent support will be continuously built into sustainability of various interventions and conservation in general.

Emerging Support for value chains: The horticultural value chains have generated interest from other private sector and civil society partners. So far, Equity and Technoserve are supporting the horticultural value chains which promises up- scaling and sustainability of the initiatives. The combined efforts of the project, the partners and the beneficiaries will potentially sustain the value chains beyond the life of the programme. More sustainable value chains will lead to better outcomes in conservation of biodiversity.

Continued supplementation from the current stakeholders and collaborators: The choice of relevant project partners will sustain project interventions as some were supplements to their routine work. NRT and KWS will continue their work with wildlife conservation, while KFS work on forestry and agroforestry will be continued. Other stakeholders and collaborators with mandate to some aspects of conservation of biodiversity will promote the project components as they play the respective roles even after end of the programme.

Community implementer's networks: The project approach to support community groups is key to continuity and sustainability. The community tree nurseries group, the Kumekucha Bee keepers, the Witu- Nyongoro and other farmer associations retained a collective community focus on the value chains that contribute to conservation of biodiversity in the long-run.

Sustainability Draw-Backs

Prolonged Drought: Despite the investment and implementation arrangements made by the project so far, drought remains the biggest threat to sustainability. The project has made necessary the alternative approaches in response to the water situation; the quantity needed to drive the interventions to scale and sustainability requires recharge from the rain. After long absence of three seasons, the rains are finally expected to feed into structures and support the sustainability plans.

Human–Wildlife Conflict: Due to the drought situation, wild animals have been leaving their natural habitat to seek for water and forage closer to the households. Similarly, the drought has pushed pastoralists to original grazing lands to communities in which various value chains are supported. So far, wild animals have damaged crops, water sources and apiaries. The pastoralists were also found seeking forage in farm lands causing damage to crops and resisted bee keeping for fear that the bees posed a risk to their grazing livestock. Wildlife and livestock raised concerns of their damage to water harvesting infrastructure which is a draw- back to sustainability.

Group dynamics: Since groups are integral to the implementation of this project, their continued existence is a key to sustainability. So far the groups are holding together, but their future will be determined by conventional group dynamics and shared interest, largely if the project is able to secure some gains. The stability of the groups is a key to ensuring that the envisioned scale and gains of various interventions are collectively sustained.

High Levels of Poverty: The lack of immediate benefits from the project has pushed some beneficiaries to abandon their homes to seek casual labour for livelihoods subsistence. This interrupts the abandoned programme interventions or slows them down. Some of the beneficiaries of the project have no consistent sources of livelihoods, thus they are prone to temporary relocation to areas where they can secure casual labour to secure their livelihoods. The combined effect of drought and poverty may potentially affect sustainability negatively. The project is for more stable farming households by design, thus unforeseen migration has negative effects on results and sustainability in general.

4.3.7 Environmental Impact Implications

In assessing the implications of the project infrastructure on environment, some observations on the value chains and water harvesting systems were made. Since the project did not invest in massive infrastructure, slight micro-scale effects in few sites and the provided supplies were observed.

Attraction of Wildlife to the water points: The establishment of water harvesting systems and shallow wells opened households and institutions to wildlife seeking water. This has been exacerbated by drought which exhausted the traditional wildlife watering points. Buffaloes were largely seen around shallow wells while baboons were encountered in roof water harvesting systems. This escalated human wildlife conflict as drought induced water shortage pushed wildlife to any water sources in the community.

Positioning Hives and Apiaries: Some of the positions selected for apiaries / hives were used as livestock grazing areas whereby livestock and bees were exposed to potential conflict. For this reason, the hives elicited some discomfort from the pastoralist but since most of the pastoralists emanated from the other regions, the reactions did not build any momentum for conflict.

Mosquito Breeding: The introduction of water harvesting systems introduced stagnant water in households and institutions with more predispositions for malaria breeding. With new breeding grounds in settlement areas, there is a likelihood of changes in malaria transmission with potential effect on humans.

5. Assessment of the Programme in Standard Evaluation Criteria

The review took some insight analysis of the Programme using standard OECD/DAC criteria for more targeted recommendations and comparative analysis. In brief, the relevance, effectiveness, impact and sustainability of the Programme were assessed.

Relevance

This Programme came at a time when coastal land seascapes were exposed to various forms of natural resource degradation as result of insecurity across the border and lawlessness in Somalia. Due to lack of alternative livelihoods, biodiversity has been threatened by charcoal burning, mangrove destruction, game hunting and encroachment in protected areas. This Programme is therefore appropriate as it directly addresses the fundamental causes of biodiversity destruction at the community level by providing livelihood alternatives accompanied with awareness and capacity building.

The implementation sites were appropriately selected initially, but adjusted in line with deterioration of security. Joint inter-country response in the conservation of biodiversity and the resultant buy in championed by this Programme is an appropriate approach in committing various players to own conservation from policy stand points. Cross –border cooperation has not been fully cemented, but ensures harmonized approach in both countries that leaves no space to be utilized for destruction from either side. The recognition of the shared responsibilities for conservation by the two countries reinforces the fact that ecosystems knows no borders and need concerted response from all.

The impact of destruction of biodiversity in the targeted communities is enormous. The area is rich in invaluable flora such as mangroves, and some other endangered trees species and fauna and the coral reefs. Notably, conservation of these species needs a holistic response that this Programme has been providing. The prolonged drought has exposed the community to impact of desertification, climate change through manifestations such as; resource based conflicts, livelihoods challenges, lack of water and effect on dry lakes and ecosystems. Thus, this was an appropriate intervention in the geographical area and community at the right time.

In selection of the beneficiaries, the right members of the communities were targeted in the horticultural, bee-keeping and agro-forestry. Majority of the beneficiaries are from poor households that will not only draw economic benefits from the project, but are also averted from engaging in activities that destroy biodiversity now and in the future. The Programme recognized and promoted women participation in all the activities ensuring that they were part and parcel of conservation as important consumers of natural resources.

The partners enrolled in the programme further contributed to the relevance of the intervention. The engagement of key conservation players such as KFS, KWS, NRT, RAAS, Savanna and others built on their inherent capacities and infrastructure to advance conservation interests. The cross border cooperation in research and trainings on biodiversity and benefits of supporting protected area management supplemented the efforts made in targeted cross border areas.

The Programme provides new technologies for solving the perennial water shortages that have been experienced in the communities for a long time. The technologies are user friendly, affordable and appropriate for addressing water shortages maximizing on rain water harvesting and extraction of ground water. This intervention originally tailored to support value chains also makes it possible for households to access water for households and livestock use at no cost.

Effectiveness

The Programme has so far registered mixed results in as far as effectiveness is concerned. Notably, the Programme has implemented sizeable proportion of interventions expected to be complete at the time MTR. However, due to contextual challenges such as prolonged drought and insecurity, some of the outputs have not translated into outcomes so far. In respect to two main results areas, the first expected result is to have cross border biodiversity conservation in land and sea scape strengthened. In total, the achievement of the first result is determined by 9 indicators out of which 6 had end of 2014-2016 timeline, while 3 were to be achieved by quarter 3 of 2017. Out the six indicators, the first two focus on cross border cooperation. It is clear that programme made all the required effort but insecurity affected the effectiveness of the cross-border interventions in terms of changes in location and representation. However, the platform was developed and meetings developed with key collaboration initiatives. The next indicator centered on developing natural resource value chains. Results show that right value chains were selected and supported with knowledge and means but water challenges limited their full potential. Alternative sources of water were explored and used to support value chains in response to water shortages. The training and adoption of rain water harvesting was also extended to shallow wells and generated interest from various other farmers. There was effectiveness in the establishment and support to the value chains but, favorable results were negated by prolonged drought in the context. The Programme also targeted expansion of community agroforestry while restoring ecosystems. On this, ICRAF worked effectively with KFS in providing seedlings and support to farmers for agroforestry and more for reforestation. The gains made in this activity were reversed by prolonged drought that scorched most of the seedlings, leaving less than 10 % surviving in protected areas. Community agro-forestry was also effectively supported with observed survival rate of 21 % of seedlings distributed to households. Considering the ravaging drought, the observed survival rate is half of the targeted survival of 40 percent. Notably, the program had an effective communication approach and messaging with impact on perceptions of conservation of biodiversity in the targeted communities.

The second expected result was to have improved institutional capacities for management improved. Most of interventions were envisioned to be complete by 2016. Up to 6 indicators out of 7 were supposed to have been achieved by the time of the review. The first indicator regarding information for biodiversity action plans was fully achieved with an array of studies. The Land Use Planning (LUP) process for Lamu is at advanced stage and only awaits a chapter on biodiversity information for completion and endorsement. Some progress has been made in the set-up of the LUP unit in Lamu including acquisition of space, and provision equipment. However, due to delays, the activity was not complete by end of 2016 as originally envisioned. The Somalia side has no LUP no relevant government agency to oversee the LUP process, thus there was no focus on this activity.

Equally the development of community Management Development plan for protected areas was one sided. The intervention was implemented for Hanshak – Nyangoro and not Awer as originally planned. The Hanshak –Nyongoro plan is finalized and only awaits endorsement. The Laga- Badana vision for the protected area was also completed to guide interventions for PA management.

Before deterioration of security, one cross border meeting was conducted in Lamu. Thereafter, the meetings were relocated to Nairobi but conducted in full. Cross border exchange visits in biodiversity conservation areas were met as key programme stakeholders visited sites outside Nairobi.

Overall, the Programme has achieved the envisioned result in the training component of capacity building. Stakeholders, communities and implementing partners were effectively trained and largely applied the acquired knowledge in various aspects of their work. Knowledge and skills were also enhanced through supervisory support in all the targeted value chains.

Efficiency

Cost cutting measures were applied in all possible expenses without compromise on quantities and quality of the interventions. A model such as organizing beneficiaries of value chains for capacity building in groups was more cost-effective than targeting individual beneficiaries. The programme also provided technical support to groups and supplies from where individuals learnt and went on to implement interventions such as; ground water on their own contributing to lower costs. Further costs were reduced by bulk procurement of the value chain materials such as hives, honey processing equipment and harvesting gear. Despite the effort to cut costs, the relocation of cross-border meetings from sites to Nairobi was costly and above the budget estimate. In pursuing cross-border cooperation, there was limited efficiency.

The sub-granting model adopted by the programme raised some questions on efficiency. Notably, majority of the partners were engaged on single activity in area of expertise instead of a package. The task based engagement resulted to many partners with more operational cost and supervision and monitoring demands. Less costs and monitoring demanding could have resulted with fewer partners undertaking more inter-related activities.

There were delays in implementing a number of activities surpassing the stipulated timelines. Time variations in some of the activities related to logistical complexities were observed. Similar delays were experienced in payments, disbursements and associated feedback. Notably, the approval of payments followed a lengthy process of scrutiny to avoid risk of fraud, considering challenges of routine monitoring. Overall, operational and programmatic delays had a negative effect on efficiency. The delivery of the programme on the two sides was also hampered by security challenges which led to adjustment of targeting from Lamu East to West. Similarly, there was limited routine monitoring and supportive supervision on the Somalia side thus affecting efficiency in the delivery of results.

While the approach may be counterproductive, ICRAF has made cost cutting measures at the field level. Only one staff is permanently deployed to provide technical liaison support, and programme Manager providing oversight. By using this model for coordination and support, the programme has cut costs that could have been spent in additional staff, bigger office and resultant logistics.

Impact

The review was not intended or fully tailored to generate information on impact at this time. The upcoming final evaluation is envisioned to assess impact from a more in-depth perspective. However, there are already promising impact signs that were encountered in the review process worth documenting.

- Community value chain groups and individuals have experienced transformation resulting from capacity building and become more focused to BBVCs making them custodians of conservation.
- The communication and messages under the Programme has changed the perceptions of conservation and enlightened them on coexistence with wildlife and the benefits of protected areas
- The capacity building, material support for wildlife CoMMS motivated rangers who have been more effective in monitoring hence, deterring poaching, hunting and other harmful practices in the protected area of Hanshak -Nyangoro.
- The community Development Management plan awaiting endorsement has generated funding interest secured money for bursaries for students in the communities and for water development

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- This Programme has increased access of clean drinking and irrigation water and expanded land under small scale irrigation. The transfer of ground water technologies and communities has contributed to all value chains, agroforestry and ecosystems overall.
 - Partnerships, collaborations and networks on conservation have grown, while others have been enhanced by the programme. The targeted communities now engage with KFS, KWS, CWCC and others as partners in conservation bringing the collective responsibility to conservation.

6. Challenges and Lessons Learnt

At the design stage, the project had envisioned a few potential challenges manifested in the critical assumptions. There were a number of unforeseen challenges and change in scale of some of the design assumptions, hence impeding the project in a big way. The challenges had implications on the programmatic and operational aspects of the project.

6.1 Challenges

The effects of drought and insecurity on the programme have featured prominently in the foregoing sections. Some other challenges related to this and other observed limitations include;

Ecological conflict between humans, wildlife and pastoralists: Water and pasture shortages pushed wildlife from their natural habitats to households and institutions with water sources. Similarly, pastoralists, moved from their conventional grazing areas in pursuit of water and pastures thereby igniting conflicts with communities engaged in agroforestry, horticultural and bee keeping value chains. However, the conflicts were largely associated with water and forage which will be easily reversed at the onset of rain.

High community expectations: Like any other project, the communities were prepared for a development based approach with significant support for infrastructure and livelihood. The immediate benefits of the programme did not match expectations as a result of challenges beyond the control of the project. As weather becomes favourable, the immediate expectations of the communities will be met in the short term.

Pests and fire: The honey value chain faced production challenges which include Hive infestation by ants and honey badgers. In one of the sites fire destroyed a complete apiary shed, thereby delaying the set-up and colonization of the hives. Since most of the apiary sites are surrounded by protected areas close to natural habitats, honey badgers and ants are common, implying the need for their control for better performance of the value chain.

Demotivation from continued destruction of biodiversity: The continued destruction of biodiversity in the face of the communities that the project is targeting for conservation negates the programme objectives. There still exist vested interests in charcoal burning and encroaching on protected areas even as the Programme builds the momentum for collective conservation. Hunting for bush meat and poaching of turtles has also been widely reported. The gains made in sensitizing communities on conservation of biodiversity are negatively affected by observed vices with potential influence on communities.

Comparatively lower capacity of institutions from the Somalia side: The project partners and collaborators from the Kenya side have better technical and management capacity than their Somalia counterparts. Due to protracted years of instability, Somalia lacks strong government entities to oversee the issues of biodiversity. The support of stronger institutions from the Kenyan side has been instrumental in implementation arrangements and led to comparatively better performance.

Inconsistent representation in cross border meetings: Cross border meeting is critical element of this project. Consistent representation in key meetings has been missing from the Somalia side. With largely new representatives in every meeting, it has been difficult to make follow up on

actions points borne from deliberations. The Somalia side needed to harmonize representation to maximize on the benefits of decisions for cross border conservation and exchange. The coordination bottlenecks associated with the two levels of governments contributed to the observed inconsistencies in the meeting and need to be streamlined in their support to this Programme.

Devolution and changes in governance structures: The project had to adjust to the devolved system of government, and continue working with key parastatals that are mandated to oversee conservation. Some of the devolved functions such as land use in Lamu were envisioned to be supported by the National Museum, but since the function was devolved, the County Government took it up with little programme support. It is not clear whether all considerations for conservation will be fully reflected in the biodiversity conservation chapter of the LUP in the final stages of completion.

Higher costs of cross border meetings: The diversion of cross border meetings from the project sites to Nairobi had significant cost implications. The meetings and exchanges that were originally intended to be conducted in proximate areas across the border and budgeted for that costed significantly much more. The flight, per diem and accommodation costs for bringing participants to Nairobi periodically were unforeseen. Apart from costs, the relevance of cross border meetings may have been enhanced.

6.2 Lessons Learnt

The implementation of this Programme has generated useful lessons for consideration in programme improvement and development.

Project design and critical assumptions: The realities of climate change and prolonged drought should have been given more prominence in the design of the Programme. It is clear that RWVH technologies can improve the development of value chains but need to be supplemented with ground water sources at times of prolonged drought and poor precipitation. The provisions of water to support value chains, is an appropriate step that provides sustainable alternatives to the destruction of ecosystems in search of livelihoods.

Receptive Communities: The implementation of this project has revealed that the local communities are receptive to technology interventions that contribute to their livelihoods and conservation of biodiversity. Communities have practically seen the impact of climate change on ecosystems and water sources and willing to be part of mitigation efforts. The good uptake of agroforestry and bee keeping value chains is a proof that communities are receptive and responsive to conservation of biodiversity.

Integrating Wildlife in Conservation and Value chain plans: The provision of watering points in protected areas for wildlife consumption has potential to reduce human wildlife conflicts. Majority of wildlife that left their usual habitats were found around the water points in households and the community. This implies providing alternative sources of water in protected areas at times of drought would restrict them to their habitats thereby reducing the conflict.

7. Conclusion and Recommendations

7.1 Conclusions

From the foregoing analysis, conclusions on expected results and actual progress have been made.

It is clear that the Programme has made a milestone in bringing together key stakeholders, collaborators, partners and communities in a harmonized response to conservation of biodiversity. The collective commitment has been instrumental in the gains that the Programme has made so far. This will continue to propel various facets of conservation going forward. Placing the community at the centre of conservation of biodiversity through engagement and extended support to value chains also indicates promising results. This mobilization and laid down structures has focused all players to the goal of conservation of biodiversity.

The Programme has created sufficient awareness on the conservation of biodiversity at the community level. The Key messages developed and delivered by the Programme have been internalized by the communities and significantly changed their perceptions on conservation in a positive way. The community responsiveness to conservation has also been enhanced by prolonged drought which has opened up communities to visible dangers of climate change, desertification and degradation of the environment. The communication strategy and integration of messaging interventions positively changed community's views on conservation biodiversity.

The selected value chain appears to be appropriate to the targeted communities. Communities supported in each of the value chains have exhibited interest to utilize the opportunities to improve their incomes and livelihoods. By placing and matching value chains to appropriate locations and communities, the programme empowered communities to benefit from ecosystem devoid of destruction. Apart from droughts that reduced survival of newly planted trees, the integration of agroforestry in value chains made commendable progress. As weather becomes favourable, the lost gains will be reversed.

Cross-border cooperation has so far registered mixed results. The government agencies from the two countries have supported the initiative and raised its importance to implementing counterparts. The original plan to have cross-border meetings and exchanges at the project site was impeded by protracted insecurity on the Somalia side and resultant ongoing security operations. The changes in the targeted geographical areas in Lamu East had more cross border exchange relevance. The outputs of cross border cooperation have been achieved but at a reasonably higher costs. Despite this, the depth of cooperation has not been fully realized as insecurity hampered the original plans for cross border exchange. Furthermore, one-sided cross border exchanges indicate the need to integrate security considerations with less restrictions on movement so as, to strengthen cross border cooperation.

In a nutshell, all the interventions targeted at restoring ecosystems, through replanting, natural regeneration and community agro-forestry were effectively supported. By working closely with KFS and communities, the processes targeted in establishing nurseries, seedlings acquisition and ecosystems restoration through reforestation and natural regeneration was achieved. This programme has made important steps in the restoration of ecosystems and expansion of community agroforestry. In absence of drought and consequent destruction by pastoralists, the impact of the programme interventions in ecosystems restoration may have been felt in the medium term. The review however raised a fundamental question of contingent water sources or a supplement to RVF technologies to

sustain forestry and agroforestry interventions. Notably, the lower survival rates of trees point to the need for replanting to reach targets by the end of the programme.

The rain water harvesting technology was chosen to support value chains without anticipating any changes in the normal rain patterns. The infrastructural establishments in schools and homes were completed as envisioned. Through cross learning the RWF technologies expanded to households. Due to limited rainfall discharge, negligible water resulted, but the project effectively by providing technical and material support to extraction of ground water. Most of the interventions at the community were water dependent thus supplementation was key to improving performance.

The generation of strategic information on biodiversity is one of the significant programmes achievements. Notably, outputs of objective studies relevant to the targeted ecosystems and sea scapes have been put in place. In some of the focus areas, the Programme has generated pertinent information for the first time. The programme will leave the biodiversity conservation stakeholders and other interested parties more informed than never before. Information generated from various publications has enhanced biodiversity conservation into mainstream planning.

The project made significant strides in support to land use planning on the Kenya side as the same process does not exist in Somalia. Some mandate issues emerged in the development of the land use plan but the review found that everything is on course. The support to planning units has been delayed but the acquisition of space and equipment are important milestones. Closer coordination with the County Government concentrating on technical support in the remaining phase will revitalize the planning component of the programme.

There is significant progress in development of management plans for the protected areas. The original plan to target Awer Conservancy which had more cross border relevance was hindered by insecurity and resultant security operations. The management plan for Hanshak–Nyongoro conservancy which was later targeted is awaiting endorsement after a successful participatory process of development. A few questions were raised on the inclusivity and mandate of NRT in guiding the process which will be considered in future engagements. The development of the plan was accompanied by a successful capacity building programme. This intervention has provided Hanshak–Nyongoro conservancy with better wildlife monitoring equipment, wildlife monitoring system to be feeding into a database, trained and proficient staff in wildlife CoMMS and shelter for the rangers which was lacking before. The Somalia has lagged behind in this activity but has a complete vision for Laga Badana Protected area. Overall, the progress made so far in this intervention is one sided and more skewed to the Kenya side. The programme has supported protected areas in Kenya as indicated and stimulated response leading to initiation of a road map for support of the same on the Somalia side.

Remarkable progress has been made in building capacity of the community in various facets of the Programme. All the beneficiaries of biodiversity based value chains including, bee- keeping, horticulture and agro-forestry were trained and able to apply the acquired knowledge in actual practice. The communities have also learnt the skill of rain water harvesting and establishment of ground water extraction systems. Other stakeholders from CSOs and government and NGOs have also been reached with various trainings and capacity building hence contributing to better understanding of various elements of biodiversity conservation and their applications. The acquired capacity will sustain efforts

7.2 Recommendations for Performance Improvement

Based on the findings, conclusions and lessons learnt discussed above, the mid-term review of the TKLBB- BMP programme has made a number of recommendations that ICRAF and the implementing partners can take forward for programme improvement. The recommendations have been divided into programmatic and operations to enhance synergy in the remaining implementation phase of the programme.

7.2.1 Recommendations for Programmes

- There is need to promote drought resilience water infrastructure such as shallow wells to supplement rain water harvesting to avoid value chains absolute dependence on rains whose patterns are dynamic. This will support horticultural value chains, honey value chain and community agro-forestry
- Alternative water supplies for wildlife in strategic points are required at the times of drought to alleviate water driven human wildlife conflict. Shallow wells are particularly recommended for Hanshak-Nyongoro and other protected areas.
- The programme to consider supporting champion farmers to disseminate information on targeted Biodiversity Based Value chains (BBVC) instead of direct ICRAF support for sustainability. Champions already standing out in various value chains can be engaged
- Individual farmers centred support need to be embraced to improve performance of value chains but the groups need to be retained for the interest of collective scalable interventions
- Cross-border cooperation needs to be strengthened by integrating security considerations in future planning so to allow effective exchanges at the cross-border sites.
- A venue for future cross border meetings can be considered in Somalia to ensure that they are not sided in Nairobi as currently constituted.
- After the first four years' phase, the programme need to consider reverting to the previously targeted locations in Lamu East for more cross border relevance, inclusion and conservation needs. Innovative implementation approaches need to be embraced considering the prevailing security situation in the context
- Inclusion of market focused fruit trees with more immediate benefits to farmers to enhance community Agroforestry is recommended. The mix of ordinary tree and commercial based one such as fruit trees will serve as sources of livelihood and contribute to conservation of biodiversity as well.
- To realize the objectives of the ecosystems restoration, there is need to integrate water in ecosystems restoration effort to ensure supply of water either through ground water or water trucking to ensure that the newly planted seedling do not dry off at times of drought
- There is need to review and streamline collaboration and partnership in spatial planning to enhance structured engagements for integration of biodiversity in land use planning. This will entail sharing all information from all stakeholders; KFS, KWS, Conservancies, NGOs and various other source from a centralized data base in the planning unit
- There is need to initiate support to LUP on the Somalia side and complete the pending activities for the full functioning of the unit in Lamu on the Kenya side
- There is need to support/ facilitate the endorsement of community development Management plan by the government authorities and share it widely for any funding from interested partner.

7.2.2 Recommendations for Operations

- Improve efficiency in logistics to minimize payment delays to hasten the implementation of the pending activities in the limited remaining period
- In next phase, the programme will need to consider the mandate of various partners for inclusion in sub-granting to take advantage of their comparative strengths and legitimacy
- To increase efficiency and increase cost effectiveness, the task based sub-granting model needs to be replaced with a more expanded package for a partners to reduce their numbers and improve efficiency.
- Strengthened M&E system is required to ensure that there is systematic data capture for analysis, reporting, feedback and decision making. For the Somalia side, third party monitoring is recommended to address the security impediments to direct routine monitoring
- Coordination at the field level in the field is good. However, there's need for additional higher management presence and interaction with the Local county departments where certain management decisions are made without delay.
- For better performance now and future, ICRAF to consider pre-project grantees orientation and training in finance and technical reporting. This will harmonize reporting, financial management and other partner roles to standard programme expectations.

ANNEXES:

Annex A Terms of reference of the MTR study

Annex B Selected Reference resources

Annex C: List of Key beneficiaries /stakeholders met /interviewed

Annex D: List of Focused Group Discussion participants

Annex E: List of ICRAF staff interviewed

Annex F: ICRAF-BMP Individual Beneficiaries Questionnaire

Annex G: Analysis of progress by Logical Framework at MTR

ANNEX A: Terms of Reference for Project Mid-Term Review

I.0. Summary of the Project

Name of Coordinator of the grant contract:	World Agroforestry Centre (ICRAF)
Beneficiaries and affiliated entities in the project	Local communities and institutions, NGOs, local government, biodiversity managers and experts
Title of the Project	Biodiversity Management Programme in the Horn of Africa - The Tana-Kipini-LagaBadana Bush Land and Seascape
Target countries or region:	Kenya and Somalia: Programme in Tana-Kipini-Laga Badana Bush Land and Seascape.
Final beneficiaries	National government, policy makers, civil society, biodiversity managers and experts, NGO, educators and local communities in intervention sites
Countries in which activities take place	Kenya and Somalia Programme in the Tana-Kipini-Laga Badana Bush Land and Seascape
Total duration of the project	48 Months: November, 2013-November, 2017
Action Financing:	1.7 million Euro
Objectives of the project	<p>The action will contribute to the overall objective of the IGAD Biodiversity Management Program: <i>“to contribute to poverty reduction by improving the social and economic wellbeing of the populations in the IGAD region through better regional integration in the environmental sector”</i>,</p> <p>Specific objective: <i>Conservation and sustainable management of ecosystems in the IGAD region in order to contribute to lasting ecosystem goods and services”.</i></p>
The expected results of the Action	<p>Result 1: Conservation of cross-border biodiversity land/seascapes strengthened and institutional capacities for management improved</p> <p>Result 2: Institutional capacities for management improved</p>
Main Activities	<ol style="list-style-type: none">1. Establish baseline and assess development priorities2. Review biodiversity and develop an action plan3. Develop holistic and integrated land and seascape use planning4. Support improved protected area (PA) management5. Strengthen cross border collaboration6. Develop benefits from ecosystem goods and services7. Develop agro-forestry and reforestation programs8. Develop communication materials9. Support fund raising for long term PA management10. Support cross-border cooperation in research and training11. Assess need & implement biodiversity capacity building12. Develop and implement a dedicated M&E program

2.0. Introduction

The Biodiversity Management Programme (BMP) is an IGAD initiative with the financial support of the European Union (EU) aiming to *contribute to poverty reduction by improving the social and economic wellbeing of the populations in IGAD region, through a better regional integration in the environmental sector.* Its purpose is *the conservation and sustainable management of the ecosystems in the IGAD region, in order to contribute to lasting ecosystem goods and services.* ICRAF is one of the BMP Implementing Partners and is managing one of the three projects financed through the IGAD Biodiversity Management Programme in the Horn of Africa to develop collaborative management in three cross-boundaries land and seascapes sites; targeting 3 cross border land and seascapes;

- The Boma - Gambella Landscape (South East South Sudan and South West Ethiopia)
- The Lower Awash-Lake Abbe Landscape (North East Ethiopia and South West Djibouti)
- The Tana-Kipini-Laga Badana Bush Bushle Land and Seascape (North East Kenya and South East Somalia)

ICRAF is managing the Tana-Kipini Laga Badana Bush Bushle (TKLBBB) Land and Seascapes project. The IGAD EU project budget is 1.7 million Euro for four years implemented between November, 2013 and November, 2017.

2.1. The TKLBBB Project expected results

Result 1: **Conservation of cross-border biodiversity land/seascapes strengthened and institutional capacities for management improved**

Specifically, result 1 involves;

- i Cross-Border Stakeholder Dialogue Platform establishment and regular meetings,
- ii Development of a cross-border network/vision of biodiversity conservation areas,
- iii Cross border exchange between research and training institutions of Kenya and Somalia to build capacity for biodiversity conservation and natural resource management,
- iv Assessment of biodiversity loss and its drivers in the demonstration site,
- v Training and support for local communities in developing / improving natural resource value chains in target sites,
- vi Training and support on tree planting and management, and rainwater harvesting techniques to communities living adjacent to protected areas,
- vii Tree planting and management on agricultural farms,
- viii Rehabilitating degraded sites in protected areas through enriched or naturally regenerated with seedlings of indigenous tree species, and
- ix Development and implementation of project communication strategy aligned with project objectives

Result 2: **Policies for sustainable ecosystem management and biodiversity conservation at both the national and regional level improved.**

Result 2 focuses on;

- i. Compiling of Biodiversity and socio-economic information about the cross-border ecosystems for mainstreaming in cross border planning processes,
- ii. Supporting local planning units (Lamu & Badhaadhe)⁶ with equipment and training by Q2-2015,
- iii. Technically supporting ongoing Spatial Planning process (LUP) for Lamu County to be more participatory and supportive of biodiversity integration in spatial plan,
- iv. Facilitating cross border exchange visits to strengthen the skills of stakeholders from the selected demonstration sites in collaborative biodiversity management
- v. Development of visionary plan for re-establishment of a management system for Laga Badana Bush Bushle National Reserve in Somalia,

⁶ There's no Land use planning (LUP) process in Somalia, and focus will be in Lamu County-Kenya

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- vi. Supporting development of Management Plan for the Hanshak Nyongoro Conservancy in Kenya, and
 - vii. Facilitating training sessions on integrating biodiversity conservation & use at landscape scale into Land Use Planning-LUP for local governments, communities, CSOs, NGOs & PA managers.

The TKLBBB is implemented through associate and consultants' partnership coordinated by ICRAF.

The main partners include;

- Kenya government
 - National Museums of Kenya (NMK)
 - Lamu District Administration
 - KWS, KARI, KFS, NEMA
- Somali government
 - MNR
 - Bhadhadhe District Administration
- Civil society and consultants
 - International Union for Conservation of Nature (IUCN)
 - Coastal Oceans Research and Development Indian Ocean (CORDIO)
 - North Coast Conservation Ltd.
 - Rainwater Harvesting Association of Somalia (RAAS)
 - Conservation Solutions Afrika (CSA)-Dr. Mordecai Ogada
 - Imaan Relief and Development Organization (IRDO)
 - Savana Consultancy and Research Services-Dr. Mohamed Ibrahim
 - Somali Wildlife and Natural History Society (SWNHS)-Dr. Osman Gedow

2.2. Justification for Mid-term review

The mid-term review-MTR activity will be facilitated to take place after half of the project period (3 years) given that the project delayed for one year and was put back on implementation track in 2015. The MTR report will provide information on project milestones and determine the level to which the project results have been achieved. The lessons learnt and recommendation will be important for internal project management, review and planning future actions to improve on implementation performance. The MTR report will also provide information to feed into the final project evaluation by independent body through IGAD EU support. Compiled report will therefore support project management and steering committee in informed decision making on project planning and implementation.

2.3. Purpose of the Mid-term review and envisioned users

The main purpose of the MTR is to assess and measure project achievements in perspective of the expected 2 result area indicators. The MTR report will be generated for internal ICRAF-IGAD BMP use. However, it is envisaged that the report will be shared with project stakeholders including IGAD EU, partners/beneficiaries. The report will be disseminated by the consultant(s) to project stakeholders during meeting planned (Tentatively April 18-19, 2017) back-back with annual cross border and trans-boundary project steering meetings. ICRAF will publish the endorsed MTR report. The main users of the MTR report will include;

- i. World Agroforestry Centre-ICRAF
- ii. Biodiversity Management Programme (BMP); Intergovernmental Authority on Development (IGAD) and European Union (EU)
- iii. Project trans-boundary steering committee
- iv. Project partners including governments of Kenya and Somalia

3.0. Objective and scope of the Consultancy

The main objective of the consultancy is to conduct Mid-Term progress review to determine the level to which results have been achieved and compile report for the Tana-Kipini-LagaBadana Bush Land and Seascape project.

The consultant will assess project impact and compile report on current performance since inception to date. Compile key lessons learnt and recommendations.

3.1. Overall program Objectives are to;

- i. Assess the extent of contribution of BMP project intervention sites in improving wellbeing of IGAD populations through a better regional integration in the environmental sector,
- ii. Evaluate if ecosystems goods and services and protected areas are being recognised as viable sustainable development options by stakeholders in the project sites,

4.0. Scope of Work

The MTR will cover all the project activities at ICRAF headquarter and in the field both in Kenya and Somalia. Field work/visits however will be confined in intervention sites located in Lamu Kenya due to insecurity and related logistical challenges in Somalia (consultant may use her initiative to collect data from Somalia in consultation with ICRAF and partners in Somalia)).

Specifically, the consultancy will focus on the following;

- i. Level of support to stakeholders to attract investments in protected area management,
- ii. Level of growth for community assets/livelihoods of BMP target sites
- iii. The project's current achievements relative to the project's objectives and expected results in the Log frame,
- iv. Evaluate expected results sustainability after end of the project and document on key stakeholder's perception about the project,

4.1. General Activities

1. Assess project implementation achievements under expected two (2) results indicators,
2. Relative to (i) above, review and document achievement on all expected indicators in relation to the project's objective,
3. Evaluate the project financial status in terms of grant disbursement and utilization,
4. Evaluate project risk register and assess the extent to which the risks have impacted on the project and mitigation measures,
5. Identify current strength, weakness, opportunities and threats that have had or will have positive and negative impact on future implementation,
6. Assess partnership engagement in project implementation and suggest areas to improve to enhance future performance,
7. Review ICRAF internal existing monitoring system (M&E) tool to evaluate its robustness in documenting project performance against results indicators,
8. Document on lessons and experiences based on achieved results in relation to project objective,
9. Outline recommendations including; [a] how to support project mitigate risks in (iv) above, [b] review actions that will improve performance and planning of future activity implementation to realize results not achieved,
10. Present the report to the project trans-boundary steering committee, and
11. Finalize reviewed report and submit to ICRAF.

5.0. Methodology

The consultants will employ an inter-mix of methods to collect and collate both quantitative and qualitative data. The consultant will develop methodology and timeframe schedule for activities to

achieve consultancy objective. It is expected the selected consultant will develop data collection tools. However, specifically the consultant will conduct desk study to review secondary information relevant to the MTR assignment and collect primary information by applying combination of participatory based approaches that include but not limited to; field work (including focus group discussion, key informants interviews) targeting relevant government agencies, project stakeholder including ICRAF staff, associate partners/commissioned consultants and community beneficiaries involved in the project implementation. The consultant will undertake field transect walk to verify and assess the established demonstration sites/activity progress and audit⁷ water harvesting and related conservation structures. The data collected will be analyzed using relevant and reliable data analysis techniques. The consultant will closely work with ICRAF project staff during the assignment. A list of informants and their contacts will be compiled and annexed to the report. The consultant will also provide captioned pictorial in the report. Compiled report will be drafted and submitted to ICRAF for input. The consultant will present concisely outlined report to the project stakeholders for further comments, finalize and submit to ICRAF for publication. The duty station will be ICRAF Nairobi with field visit to Lamu sites in Kenya

6.0. Deliverables

- i Inception report including detailed MTR consultancy approaches, methodology, work plan, data collection/evaluation tools, report outline, deliverables and budget by March 27, 2017,
 - ii First draft MTR report well-structured covering but not limited to;
 - Executive summary,
 - Introduction,
 - Purpose and objectives of the MTR/consultancy,
 - Methodology,
 - Findings/results on progress/achievement clearly reported against log frame expected results/indicators and sources of verification,
 - Lessons learnt,
 - Conclusion and
 - RecommendationsSubmitted to ICRAF earlier or by April 17, 2017
 - iii MTR report covering outline under (ii) above and in addition covering findings on all listed general activities, project relevance, project sustainability and audit brief on conservation structures submitted to ICRAF earlier or by April 18, 2017,
 - iv Report Power Presentation⁸ slides prepared and submitted to ICRAF by April 18, 2017, and
 - v Submit MTR report including ICRAF and stakeholders' comments incorporated to ICRAF by May 5, 2017.
 - vi Submit succinct final reviewed and endorsed MTR report presented to stakeholder, including all expected deliverables. Not more than 40 pages (exclusive of the annexes) with attached project log frame indicating achievements for each indicator submitted to ICRAF by May 31, 2017
- All reports **(i-vi)** shall be submitted in electronic/soft copy and in un-protected word format. Power point will be in electronic/soft editable copy.

7.0. Qualifications and relevant areas of experience of the consultant

⁷ This will be brief audit (not EIA) to determine the environmental consequences of water harvesting structures

⁸ The consultant will present report to project stakeholders in a dissemination meeting organized by ICRAF back-back with annual project cross border stakeholder dialogue and trans-boundary steering committee meetings in April, 18-19.

The internal MTR will be conducted by external consultant that is not ICRAF staff, independent and without conflicting interest in project implementation framework and/or other related ICRAF work. The following qualifications will be required;

- A professional with Minimum master's degree in relevant areas i.e. agricultural economics, Resource economics, agriculture, social sciences, rural development, Natural Resource management, forestry or related combination fields,
- Minimum 10 years of experience in research, Biodiversity conservation, agriculture and rural development programs,
- Proven Knowledge, understanding and experience in evaluation including MTR preferably projects related to Biodiversity, value chain analysis and conservation, agriculture, rain water harvesting, rural development projects and agro-forestry,
- Experience in facilitating discussion sessions through adult learning participatory methodologies with different stakeholders including rural communities,
- Proven experience with the logical framework approach, Monitoring and Evaluation techniques, quantitative and qualitative data, socio-economic surveys,
- Experience in conducting feasibility studies and environmental audit,
- Understanding of gender mainstreaming in rural development,
- Computer skills and competence in data collection, analyses and report writing in English, skilled using analytical statistical tools including SPSS, STATA, LiMdep etc,
- Fluent communicator in English and Swahili Languages (spoken and written),
- Experience (optional) working in Lamu mainly on Island and Witu areas preferred,

8.0. Reporting requirements

The consultancy will take **fourty five (45)** working days. The consultant will work under guidance of Project Principle Investigator although functionally he/she will be under direct supervision and report to the Project Manager Mr. Nyongesa Josephat or his delegated person.

9.0. Contacts

Consultant Contacts

Monica Njeri Nyang P.O. Box 5784-00100
Email: njeri.nyang@gmail.com
Telephone: +254 722 716 489, +254 734 434 912

ICRAF Contacts:

NYONGESA Josephat; Project Manager, IGAD BMP
P. O. Box 30677 – 00100 Nairobi, Kenya.
Phone : +254 722 990670/+254 722 4468
Email: J.Nyongesa@cgiar.org / nyongesajm@yahoo.coM

Malesu Maimbo - Principle Investigator,
P. O. Box 30677 – 00100 Nairobi, Kenya
Phone; +254 20 722 4421/+254 953217
Email: M.MALESU@CGIAR.ORG

HR Officer –ESAf Region Justine Busili; P. O. Box 30677–00100 Nairobi; Phone +254 700299060; Email: J.Busili@cgiar.org

Financial Officer: Felix Hongo, Finance Officer, P. O. Box 30677 – 00100 Nairobi, Kenya, Phone: +254 700 299159; Email: f.hongo@cgiar.org

Administrative Officer: Eunice Wamwangi, P. O. Box 30677–00100 Nairobi, Kenya, Phone +254 708 515155
Email: e.wamwangi@cgiar.org

Project Research Assistant: Grace Koech, IGAD BMP Project Assistant, P. O. Box 30677–00100 Nairobi; Phone +254 712 085372, Email: G.Koech@cgiar.org

10.0. Expression of Interest/Proposal Submission

Consultant will submit at most 10 pages' proposal, letter of expression of interest and CV. The Proposal should contain the following:

- Approach/ methodology
- The work plan that includes tentative time frame
- Tentative MTR outline
- Cost for undertaking the assignment
- Curriculum Vitae including past recent consultancy work relevant to the MTR

11.0. Tentative Tasked time frame: Start date March 27, 2017 to May 31, 2017.

Consultancy assignment is scheduled tentatively for **fourty five (45) working days, starting March 27, 2017- May 31st 2017**. This will be however reviewed by the consultant and discussed with ICRAF-IGAD BMP management.

Activity	Time-frame, 2017								
		March	March-April		April-May			May	May
	No. Of days	27	22-28	29-7	10-17	18-19	20-5	15-26	31 st
Inception report: Proposal submission	1								
Contract acceptance, Contract signing,									
Meeting with ICRAF finance team / officer									
Briefing and desk study	5								
Field travel / Field work in Lamu County	8								
Prepare and submit first Draft Report and submit power point report presentation	6								
Present Findings to stakeholder workshop	2								
Submit MTR report including ICRAF and stakeholders' comments incorporated	12								
Prepare final endorsed MTR report including all expected deliverables	10								
Submit Final Endorsed MTR and all expected deliverables	1								
Total working days	45								

List of suggested informants

The Consultant will meet and/or hold discussion with some of the following stakeholders (to be discussed with consultant)

i ICRAF

- a. Project Principle Investigator – ICRAF-IGAD BMP Project- ICRAF-ESAF Nairobi,
- b. Project Manager- ICRAF-IGAD BMP Project- ESAF-ICRAF Nairobi,
- c. Finance Officer –ESAF-ICRAF Nairobi,
- d. Project Research Assistant- ICRAF-IGAD BMP Project- ICRAF Nairobi,

-
- e. Communication officer-ICRAF-ESAF Nairobi
 - f. Project Officer- ICRAF-IGAD BMP Project- ICRAF Lamu.
 - ii Community-project beneficiaries in Witu⁹; In all demonstration sites
 - iii Selected associate partners/Consultants; KENYA: KFS, NRT, CORDIO, NMK, KWS, Lamu County spatial planning unit, Ministry of Agriculture, Livestock and Fisheries, Lamu County administration/commissioner's office SOMALIA¹⁰: RAAS, IRDO and Savana Ltd.

⁹ Project suspended activities in Awer community due to insecurity reasons and currently focus field activities in within Witu area/community. Project officer will assess possibility of interviewing community representative from Awer if this will be logistically feasible

¹⁰ Optional, but will discuss with consultant and explore possibility of skyping

Annex B: Selected reference resources

Sno	Source	Resource Description	Hyperlink to report
1.	ICRAF-IGAD EU	Project Document	https://www.dropbox.com/s/wvk23uvfzlgqd1/Annex%20A%20-FINAL%20BMP%20Programme%20in%20the%20Horn%20of%20Africa-%20ICRAF%20August%2030th2-FINAL.pdf?dl=0
2.	ICRAF-IGAD EU	Project Log frame	https://www.dropbox.com/s/418jcyxgagzy2q2/REVISED%20LOG%20FRAME%20%20ICRAF_Final_version%20(2).pdf?dl=0
3.	ICRAF	Internal Project M&E tool	
4.	ICRAF	Year 1 Project technical Report	https://www.dropbox.com/s/fl12lmi0dwhx67zc/ICRAF%20BMP%20YR%201%20Interim%20Report%5B1%5D.pdf?dl=0
5.		Year 2 Project technical Report	https://www.dropbox.com/s/r5zsvxnivkc5qa7/ICRAF_BMP_Interim%20Report_YR%202%20Revised-FEB%202016.docx?dl=0
6.		Year 3 Project technical Report	https://www.dropbox.com/s/rpfng2ok1v73ey8/ICRAF_BMP_Interim%20Report_YR%203-November%202016.docx?dl=0
7.		Cross border stakeholder meetings report	https://www.dropbox.com/s/ehkb5woyeyxd93/Minutes%20of%20the%20second%20cross%20border%20stakeholder%20meetings%20April%2018-19%202016.pdf?dl=0
8.	ICRAF	Baseline report	https://www.dropbox.com/s/udqbsnhlwmm1nkf/baseline%20report%20bmp%20final.pdf?dl=0
9.	ICRAF, ANAFE	Cross Border Research and Training Exchange: Write shop and Excursion (17-27/11/2015)	https://www.dropbox.com/s/l43p3qsk41v15e4/Cross%20Border%20Research%20and%20Training%20Exchange%20Write%20shop.pdf?dl=0
10.	ICRAF, ANAFE	A review of best practice in the Horn of Africa with biodiversity based value chain development for pro-poor biodiversity conservation	https://www.dropbox.com/s/o19yb48vc0581cf/Book%20BBVC%20Draft%20submitted%20for%20external%20review.pdf?dl=0
11.	ICRAF	Trends, drivers of change and possible solutions to address deforestation and loss of forest habitat in the Kenya-Somalia cross border area	https://www.dropbox.com/s/agsgv9xocv16d6p/HABITAT%20LOSS%20Systematic%20aerial%20survey%20RS%20imagery%20to%20show%20change%20of%20land%20cover.pdf?dl=0
12.	ICRAF/KFS	Field Visit report to ICRAF BMP demonstration sites for Agroforestry and rainwater harvesting in Kenya	https://www.dropbox.com/s/yzljnbn59mhctfh/Official%20handing%20over%20of%20support%20material%20to%20beneficiaries%20and%20site%20visit.pdf?dl=0
13.	KFS	Tree planting 2016 progress report Witu site	https://www.dropbox.com/s/tho2uihjkqfepr0/TREE%20PLANTING%20%20%20REPORT%20ICRAF%20WITU-2016.pdf?dl=0
14.	KFS	Mapping of degraded sites in Witu Forest Ecosystem (WFE)	https://www.dropbox.com/s/sqq0hjmmss646cf/Mapping%20of%20sites%20for%20natural%20regeneration%20and%20enrichment%20planting.pdf?dl=0
15.	CORDIO	Marine habitats of the Lamu-Kiunga coast: an assessment of biodiversity value, threats and opportunities	https://www.dropbox.com/s/manaxjp3yzbkfv/Marine%20biodiversity%20assessment.pdf?dl=0
16.	Dr. Osman Amir Gedow: Somali Wildlife and Natural History Society (SWNHS)	Assessment of the biodiversity in terrestrial and marine landscapes of the proposed Laga Badana National Park and surrounding areas, Jubaland, Somalia	https://www.dropbox.com/s/q0fst5lo1n3whn/Biodiversity%20assessment%20Somalia.pdf?dl=0
17.	Dr. Mordecai Ogada (CSA)	Biodiversity assessment of Witu forest terrestrial landscape Lamu county, Kenya	https://www.dropbox.com/s/i31jyt2ebeudonx/Terrestrial%20biodiversity%20assessment-%20lamu%2C%20Kenya.pdf?dl=0
18.	Linda Mbeyu	An ecosystem service perspective on benefits that people derive from biodiversity of coastal forests in Lamu county, Kenya	https://www.dropbox.com/s/9o7bjs72r9qc3vf/ecosystem%20service%20perspective%20on%20benefits%20of%20biodiversity.pdf?dl=0
19.	Dr. Arne Witt (CABI)	Invasive species in Witu demonstration site, their environmental and social impacts on livelihoods and approaches to manage the invasive species	https://www.dropbox.com/s/fni9nnqkb26cm4g/invasive%20species%20assessment-final.pdf?dl=0

Sno	Source	Resource Description	Hyperlink to report
20.	ICRAF, ANAFE	Cross Border Exchange Visit to Strengthen Capacity of Stakeholders on Collaborative Biodiversity Management	https://www.dropbox.com/s/2sqfvg6aurdejbo/CROSS%20BORDER%20EXCHANGE%20VISIT%20TO%20STRENGTHEN%20CAPACITY%20ON%20CBM%2C%20NOV%2C%202015.pdf?dl=0
21.	ICRAF	Report of the cross border study tour to northern range lands trust conservancies –Isiolo- Kenya	https://www.dropbox.com/s/0qpyvbiz80of7p7/Cross%20Border%20exchange%20visit%20to%20strengthen%20capacity%20on%20cross%20border%20collaboration.pdf?dl=0
22.	Dr. Mohamed Ibrahim	Workshop report: Vision and Road Map for the Establishment of a Protected Area in the Lag Badana, Badhadhe, Lower Jubba, Jubbaland, Somalia	https://www.dropbox.com/s/f686tp7j4bggt0y/Somalia%20Workshop%20Report%2016-17%20Nov%202015.pdf?dl=0
23.	Dr. Mohamed Ibrahim	Vision and Road Map for the Establishment of a Protected Area in the Lag Badana, Badhadhe, Lower Jubba, Jubbaland, Somali	https://www.dropbox.com/s/v8f52z98qzgd9t1/Final%20Report%20Vision%20and%20road%20map%20for%20establishment%20of%20a%20protected%20area-%20somalia.pdf?dl=0
24.	NRT	CDMP progress report (August-Nov 2015)	https://www.dropbox.com/s/fd6i32g6cmlgao4/CDMP%20Progress%20Report.%202016.docx?dl=0
25.	NRT	CDMP Validation meeting report (27/07/ 2016)	https://www.dropbox.com/s/zsx6gos85d9j1wh/Hanshak%20CDMP%20validation%20meeting%20%20report.docx?dl=0
26.	KWS, ICRAF	Training and public sensitization meeting report (17-22/03/ 2016)	https://www.dropbox.com/s/auyr3oxi44znzms/Training%20of%20beneficiaries%20on%20the%20provision%20of%20the%20recent%20WCMA%20act%2C%202013.pdf?dl=0
27.	KWS, ICRAF, CWCCC	Opportunities for community based biodiversity conservation and management in Kenya	https://www.dropbox.com/s/e5abhyuoak41c6c/final%20doc%20OpportunitiesCBBiodiversityWCMA2013_14Sep2016.docx?dl=0

ANNEX C: List of Key beneficiaries and Key Stakeholders met / interviewed

The following people were met and interviewed during the MTR study in March and April 2017.

Sno.	Name	Tel no	Organization /Institution
1.	Silas Orembe	0700653370 / 0728625347	Witu Secondary School
2.	Ezekiel Oino	0723795882	Vice chairman - Back to Eden Community Group Tangeni
3.	Silvester Jefwa Kalu	078765024	New Kumekucha Beekeeping Self-help Group – Maisha Masha
4.	Hamisi Kaviha	0733390216 / 0711285061	Minister of Trade and Tourism Lamu County government
5.	Haji Mohamed Ali Mohammed Ali Mwenje	- 0721141900	National Museums of Kenya – P/ Curator Lamu county NMK – Lamu County
6.	Omar Ali	0708006441	Lamu Conservancy Trust (LCT) – Witu
7.	John Mbori	0721354264	KFS – Witu Forest reserve – Station Manager
8.	Mr Allen Vindonyi	0721949282	County Director of Agriculture and Irrigation, Lamu County
9.	Beth Maringa	0727782601	ASDSP Ministry of Agriculture, livestock and fisheries Lamu County
10.	Imanyara M'Nkanata	0737612291	Chairman Witu – Nyongoro beekeepers SHG
11.	Evans Maneno	0722473467	Ecosystems Conservator - Kenya Forest Services – Lamu county
12.	Jacob Orahle	0712134423	KWS Lamu
13.	Mr. J. Kanyiri	0720253813	Lamu county commissioner
14.	Dr. Mohamed Ibrahim	+254 707733071 +252 61952323	Savana consultancy and research services
15.	Abdulmaalik Abdullahi Bare	+252617374637 +254711980296	IRDO
16.	Hassan Yusuf	0714448533	NRT Hanshak Nyongoro Conservancy

ANNEX D: List of Focused Group Discussions Participants

The MTR team visited and interacted with a total of six (6) mixed groups where focused questions on the BMP project were asked. These groups were in the main pilot sites where the project is demonstrating various technologies. The groups and members met are listed below

1. Soroko Upendo Horticultural Production group - members have shallow wells

Sno.	Name	Gender	Telephone contact
1.	Jonathan Kadenge	M	0717431578
2.	Margaret Wanjiku	F	0711750064
3.	Esther Wanjiku	F	0703647682
4.	Joyce Muthoni	F	0716102746
5.	Ann Ngendo	F	0732597652
6.	Jane Wambui	F	0719795263

2. Hanshak Nyongoro Community Conservancy – Moa Village, Dide Waride – Witu

Sno.	Name	Gender	Telephone Number
7.	Madina Bocha	F	-
8.	Nuru Dube	F	-
9.	Hageyo Ahamparo	F	-
10.	Rukia Algi	F	-
11.	Habalafu Gutu	F	-
12.	Hadiba Kuro	F	-
13.	Alia Mohamed	F	-
14.	Zinab Dokota	F	-
15.	Maimuna Dokota	F	-
16.	Boba Barisa	M	0702023980
17.	Abdulla Abaro	M	0723692962
18.	Dokota Barisa	M – Village headman	07000424144
19.	Ibrahim Barisa	M - Ranger	0713004144

3. Back to Eden CBO – Tangeni village – Witu

Sno.	Name	Gender	contact
1.	Ezekiel Oino	M	0723795882
2.	Calleb Ogweri	M	070583171
3.	Veronicah Kerubo	F	0720024976
4.	Samuel Omote	M	0731612201
5.	Joseph Makori	M	0710560323
6.	Benard Kitheka	M	0700592824
7.	Samuel Ongesa	M	0719103379
8.	Agnes Riziki	F	0723042313
9.	Beatrice Kadzo	F	0729752117
10.	Daniel Makang'a	M	0727910804
11.	Stephen Katana	M	0725374279

4. Witu Nyongoro Beekeepers SHG – Dide Waride , Moa sub location, Kakate village

Sno.	Name	Gender	contact
1.	Mary Imanyara	F	0706222189
2.	Mary Mukami	F	0707900863
3.	Milka Ingando	F	0720496831
4.	Noel Indeché	F	0738034270
5.	Imanyara M’Nkanata	M – Group Chairman	0729246735
6.	Douglas Muriuki	M	0718350814

5. North Range Trust (NRT) Coast Region Office team

Sno.	Name	Gender	Title
1.	Umra Omar	F	NRT Coast Director
2.	Hassan Yusuf	M	Community development officer
3.	Adan Jarso	M	Community development officer
4.	Abdurahman ahmed	M	Finance / Admin Assistant Officer
5.	Juliet Kingi	F	NRT Technical Advisor

6. Hanshak Nyongoro Community Conservancy HQ team

Sno.	Name	Gender	Title
1.	Ali Shale	M	Deputy Warden
2.	Iddi Barisa	M	Warden
3.	Abdul Dara	M	Constable
4.	Hussein Hassan	M	Constable
5.	Ibrahim Barisa	M	Constable
6.	Suleiman Lokota	M	Constable
7.	Samson Kupata	M	Constable
8.	Hassan Elema	M	Constable

ANNEX E: ICRAF staff interviewed

The lead consultant met and interviewed the following ICRAF staff during the MTR study in the ESAF boardroom

1. Felix Hongo – Finance Officer
2. Albert Mwangi – Communication Officer
3. Grace Koech – Research Assistant ICRAF IGAD BMP
4. Josephat Nyongesa – Program Manager ICRAF IGAD BMP
5. Malesu Maimbo – Principal Investigator ICRAF IGAD BMP
6. Wilfred Muriithi – Project officer ICRAF IGAD BMP in Lamu County

ANNEX F: ICRAF-BMP Individual Beneficiaries Questionnaire
To be administered to Individual households- Beneficiary of the BMP Project 18 years and above.

Introduction and Consent for respondent My name is _____, ICRAF- BMP are conducting an assessment of work with communities in this area. The assessment will look into the work of the Biodiversity Management Program (BMP) and the difference it is making in conservation and livelihoods. All information collected is completely confidential and will only be used for the assessment purposes. Accurate information will improve the quality of any recommendations. Your time and assistance is greatly valued. Thank you very much.”		
Questionnaire Identification		Country 1. Kenya 2. Somalia
District	Village	Project Site:
Setting : 1 Rural 2. Peri – Urban ...	Start time: _____ End time: _____	
Date Interview: / / 2017	Enumerators Name	
	Demographic Questions and Filters	Responses
1	Name of the respondent <i>(Optional)</i>	
2	Sex of the respondent	1. Male 2. Female
3	Relationship of the respondent to the head of the household head?	1. Spouse 2. Child 3. Relative 4. Friend 5. No relationship
4	Who is the head of the household?	1. Father 2. Mother 3. Child
5	Age of the household head (years)	
6	If unsure of the exact age, age range of the household head?	1. 18-24 2. 25-34 3. 35-44 4. 45-54 5. 55 Plus
7	How many people live in this household?	Number _____
8	What is the completed Level of education of the household head?	1. No formal education 2. Primary incomplete 3. Primary complete 4. Secondary Incomplete 5. Secondary complete 6. College 7. University
9	What is the main source of livelihood for your household? <i>(Tick or circle one)</i>	1. Crop Production 2. Fishing 3. Tourism – beach work/trade 4. Formal Employment 5. Casual Labour 6. Skills, (Blacksmith, tailoring, carpentry etc 7. Small scale business 8. Charcoal burning/ Firewood vending 9. Other (Specify _____)

10	What is the alternative source of livelihood for this household? Indicate numbers in order of importance- more than one answer possible)	1. Crop Production 2. Fishing 3. Tourism – beach work/trade 4. Formal Employment 5. Casual Labour 6. Skills, (Blacksmith, tailoring, carpentry etc 7. Small scale business 8. Other (Specify _____)
11	Has the main source of livelihood changed since 2014?	1. Yes 2. No
12	What is the reason for the change in main source of livelihood?	
13	What is your assessment of food security in this area?	1. Poor 2. Fair 3. Good 4. Excellent _____
14	How many meals do you have in a typical day? (Tick all mentioned)	1. Breakfast 2. Lunch 3. Dinner/ Supper 4. Other _____
15	What are the main obstacles to your household well-being?	1. Food insecurity 2. Drought 3. Crop pests and diseases 4. Lack of inputs 5. Human diseases 6. Livestock diseases 7. Insecurity 8. Poverty 9. Lack of markets 10. Wildlife Conflicts 11. Limitations of Fuel 12. Insecurity 13. Others Specify _____
16	What is the main cooking fuel in this household?	1. Firewood 2. Charcoal 3. Gas 4. Electricity 5. Other specify _____
17	If firewood or charcoal, what is the source?	1. Own farm 2. Forest nearby (specify)..... 3. Purchased from vendors 4. Purchase from market 5. Other (specify).....
Project Engagement and Awareness (This section should be administered to the direct project Beneficiary)		
18	Are you aware of the ICRAF - Biodiversity Management Project (BMP) ? When did you become aware?	1. Yes 2. No - Check if not a beneficiary stop Year _____
19	Who was directly engaged in this project?	1. Husband 2. Wife 3. Son / daughter
20	When were you enrolled in the BMP project?	Month _____ Year _____
21	Who selected you to be part of the BMP project activities?	4. ICRAF staff 5. Representative of Kenya Forest Service/ 6. Relative 7. Local committee 8. Chief 9. Local leaders 10. Other specifies?
22	In what ways have you been engaged in the BMP project?	1. Tree planting 2. Tree nursery establishment 3. Bee Keeping 4. Crops value chain Development 5. Rain water harvesting

		6. Water harvesting												
23	In what ways have you benefited from the BMP project support?	1. No Benefit 2. More trees 3. Increased access to water 4. Increased income 5. Improved food security 6. Improved livelihood 7. Better Access to markets 8. Access to Fodder 9. Shade and Land scape 10. Other benefits 												
Group/Association Membership														
24	Do you or a member of your household belong to a group or association related to environment and biodiversity conservation?	1. Yes..... 2. No – Go to 28												
25	List the Name(s) of the groups or associations you belong to and what they do.	1. 2. 3.												
26	Are the groups related to the ICRAF – Biodiversity Management Project?	Yes.....No.....Don't Know.....												
27	Name 3 main benefits you get from these groups/associations	1. 2. 3												
Land Use														
28	For how long have you been living in this area?	_____ years												
29	How many parcels of land do you have?	_____												
30	What is the size of the combined in acres?	_____ Acres												
31	How much of this land do you farm or use?	_____ Acres												
32	What is the ownership status of the land?	1. Individual ownership 2. Joint ownership 3. Family land 4. Communal land 5. Rented /leased land 7. Other Specify _____												
33	What do you cultivate or use the land for?	1. Main Crops (specify)-a.....b.....c..... 2. Trees: Type of trees (specify)a.....b.....c..... 3. Pasture 4. Apiary (bee Keeping) 5. Others (specify).....												
34	What fraction of your land is under trees?													
Agroforestry: Tree Nurseries and Tree growing														
35	Do you plant trees in your farm?	1. Yes 2. No – Go to 45												
36	When was the last time you planted a tree?													
37	Were you part of the farmers who were provided tree seedlings for planting from the KFS nurseries?	1. Yes 2. No												
38	What type of tree seedlings were you given by the number?	<table border="1"> <thead> <tr> <th>Category / species/type</th><th>Number Received</th></tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	Category / species/type	Number Received										
Category / species/type	Number Received													

39	How many tree seedlings did you receive in total?	.
40	How many of these did you plant?	
41	How many of these trees are surviving?	
42	What happened to the ones that did not survive?	1. All Survived 2. Dried off due to drought 3. Destroyed by wild animals 4. Destroyed by roaming livestock 5. Destroyed by fire 6. Stolen 7. Other Specify _____
43	What other benefits did you receive from the tree nursery ?	1. Water 2. Money paid for labour 3. Training 4. Other specify _____
44	What are the three main reasons that you chose to plant trees? 1. _____ 2. _____ 3. _____	
45	Have you ever heard of agroforestry?	1. Yes 2. No- Go to 48
46	Since 2014, have you been sensitized about agroforestry and conservation?	1. Yes 2. No
47	Who sensitized or provided this information to you?	1. ICRAF 2. Kenya Forest Service 3. KWS 4. Other Specify _____
Farming activities in the Farm		
48	Do you cultivate crops?	1. Yes 2. No – Go to 54
49	List three (3) main challenges in farming that you experience	1. . 2. . 3. .
50	What area/ acreage are under the 3 most important crops you cultivate here?	
	Crop	Area cultivated in Acres
	Crop 1:	
	Crop 2:	
	Crop 3:	
51	Did you get any support from ICRAF on issues of cultivation?	1. Yes 2. No
52	What type of support did you receive? (Name the 3 key ones)	1 2 3
53	What benefits did you get from farming after support by ICRAF?	1. Better production 2. Increased income 3. New markets 4. Better product quality 5. Other Specify _____
Bee Keeping (Apiary)		
54	Do you practice bee keeping?	1. Yes 2. No- Go to 64
55	What type of Bee hives do you own	
55 a	Where are your hives placed?	1. Own land 2. Forest land 3. Public Land 4. Group Land 5. Other Specify _____

56	Do you belong to a bee keeping group? Which one?	1. Yes 2. No.Name
.	Did you receive any support from ICRAF for your bee keeping venture?	1. Yes 2. No
57	When and what kind of support did you receive?	1. 2. 3.
58	Which other organizations supported you in bee keeping?	1. 2.
59	How much honey and honey products have you harvested since 2015?	1. Honey – Kg..... 2. Bees wax...Kg..... 3. Others (specify)
60	How much money have you made /do you make	Ksh.(in ----months)
61	In what was is the income made from bee keeping beneficial to you and the household?	1. Purchase of food 2. Payment of School fees 3. Other household expenses s 4. Expansion of the bee farming 5. Other specify _____
Rain Water Harvesting		
	What is your main source of drinking water?	1. Borehole 2. River / Stream 3. Spring 4. Lake 5. Shallow well (Public) 6. Shallow well (private)
62	Do you practice any rain water harvesting?	1. Yes 2. No
63	What type of rain water harvesting do you practice	
64	Do you belong to water harvesting group? Which one?	
65	Did you receive any support from ICRAF for water harvesting or shallow wells?	1. Yes 2. No- Go to 67
66	What support did you receive?	1. Training 2. Materials 3. Technical support 4. Labour support
67	How do you use the harvested water?	1. 2. 3
68	What benefits have you got from the harvested water?	1. 2. 3
Environmental and Biodiversity conservation work		
69	Since 2014, did you received information about conservation of forests, wildlife, trees, water and others	1. Yes 2. No
70	Where did you receive this information from?	1. ICRAF 2. Kenya forest Services 3. County Government 4. National Government 5. Friends and relatives 6. Community leaders 7. Other NGOs specify _____
71	From which channels did you receive information on conservation?	1. Radio 2. TV 3. Posters 4. Banners 5. Pamphlets
72	What other environmental or biodiversity conservation work are you involved in?	1. 2. 3.

73	Who supports you? What support do you get?	1. 2. 3.
74	In your opinion, what are the benefits of Conservation?	1. 2. 3.

Any other comments

THANK YOU FOR YOUR TIME.

Annex G: Analysis of Progress by Logical Framework

Objective / Result	Indicator (IOV) Revised	Project Target	Achieved at MTR	Status of Progress	Remarks
Overall Objective To contribute to poverty reduction by improving the social and economic well-being of the populations in the IGAD region through a better regional integration in the environmental sector	Extent of contribution of BMP intervention in improving wellbeing of IGAD populations through a better regional integration in the environmental sector	IGAD regional indicator	I	To be Determined	This is a regional indicator. It's appropriate for country level reporting. It will be assessed in the final evaluation.
Specific Objective Conservation and sustainable management of ecosystems in the Tana- Kipini-laga-Badana bush land and Seascapes in order to contribute to lasting goods and services.	I - Ecosystems goods and services and protected areas are increasingly recognised as viable sustainable development options in the TKLBB land and seascapes by end of program (2017)	Ecosystems goods and services recognized as sustainable development options on target areas Qualitative	Described last column	Partly achieved	- In Lamu County, biodiversity conservation is being mainstreamed in the spatial plan that is in the final stages of completion -Community attitudes and perception on conservation of biodiversity have changed with communities linking conservation with climate change and desertification - Biodiversity Based value chains (BBVCs) including bee keeping, horticulture and Agroforestry have been adopted by communities in targeted areas in Kenya and Somalia -Full benefits of the interventions to the communities were limited by prolonged drought. Structures were put in place to draw the benefits of ecosystem in a sustainable manner.
	II -Stakeholders supported to attract investments in protected area management, with at least one donor around table organised by the end of the programme in 2017	County level investments	Investment reports not available	To be assessed by end of 2017	So far, the supported interventions have attracted some support by a number of donors. Hanshak- Nyongoro protected area has received commitments for school bursaries and water developed as part of the community management plan resource mobilization tools -Equity Bank, Technoserve and Sun-culture, have expressed interest to work with farmers supported by the programme by providing technical and financial support -The vision completed for the establishment of a PA in Laga Badana Bush Bushle is an important step in attracting investment through fundraising and marketing the areas as community resource
	III - Community assets of BMP target communities/groups increased in 2017 compared to 2014 baseline	Increased community assets	Various community assets infrastructure	Fully achieved at program level Limited by prolonged drought at community level	-Bee keepers organized and supported to establish apiaries through provision of Langstroth Hives, protective gear and extraction equipment. Over 199 farmers are directly involved in the honey value chain and committed to its success - RVH infrastructure established in schools and targeted households for support of agroforestry and BBVC value chains - Shallow wells established from programme material and technical support in communities for supporting bee keeping, horticulture and agroforestry

Objective / Result	Indicator (IOV) Revised	Project Target	Achieved at MTR	Status of Progress	Remarks
					<ul style="list-style-type: none"> - Central tree nursery was established with consistent water source serving the community with water and a variety of seedlings – Community nurseries also established - Demonstration sites for BBVC such as; bee keeping and horticulture are important community assets to be continuously used for capacity building - Many surviving trees planted in the community and forest constitute community assets with long-term value to the community - The products of horticultural and honey value chains generated food and income for the communities with potential for improvement with favourable weather conditions
Expected Result 1 Cross border biodiversity conservation in land/seascapes strengthened.	I.1 Cross border stakeholder dialogue platform for biodiversity management established for coastal zone by Q4 2015, and regular meetings thereafter.	1	1	Achieved in full	<ul style="list-style-type: none"> -The platform for dialogue was established and is currently functional. Exchange and sharing of information has been on-going. -Three annual cross border meetings held in – 2015, 2016 and 2017 as envisioned
	I.2 One proposal for establishment of a cross border network of biodiversity conservation areas prepared by the cross border stakeholders' platform and transmitted to the relevant national decision makers by Q4-2016	1	Concept ready	Achieved in part	The concept is complete but the proposal is awaiting finalization. Once complete, it will be transmitted to the relevant decision makers
	I.3 Fourteen people exchanged between at least two pairs of research and training institutions of Kenya and Somalia to build capacity for biodiversity conservation and natural resources management by Q4-2017	14	15	Achieved in full	<p>Universities in Kenya (3), Somalia (2); Finland (1) research institution in Kenya (1) including; NMK, KFS, KEFRI,</p> <p>ANAFE, Ministry of Environment Jubaland in Q4-2015. The publication of Biodiversity Based Value Chain handbook is on-going</p>
	I.4 Biodiversity loss and its drivers are better understood in the demonstration sites, better managed through targeted interventions supported by BMP/IPs and proposed solutions communicated to decision makers by Q4-2017	Report on loss generated and the findings shared with stakeholders	Aerial survey, and studies complete	Achieved in full.	-Aerial survey and studies on Biodiversity loss and drivers completed. The studies generated vital programming information. Findings shared with stakeholders in a workshop Q3-2016. Final report submitted to decision makers

Objective / Result	Indicator (IOV) Revised	Project Target	Achieved at MTR	Status of Progress	Remarks
	1.5 At least 200 individuals in selected pilot sites are trained and supported in developing / improving natural resources value chains by Q3 – 2017	200	199	Achieved in full 99.5 percent	-Members of the targeted communities in Kenya and Somalia were trained in honey value chains and provided with material and technical support to establish value chains. 199 were trained in Total-Kenya (99), Somalia (100)
	1.6a Training and support provided on tree planting and management and rainwater harvesting techniques to at least 1,000 community members by Q4 - 2015	1,000	1,234	Achieved in full 123%	The programme trained in excess of 234 but with some delays. This includes; 684 in Kenya and 550 in Somalia. There was a delay on the Somalia side with training and support provided in Q4n-2016 and Q1 - 2017. Delays had implications on implementation especially on Somalia side
	1.6b At least 500 farmers each plant and manage an average of 40 surviving trees on their farms by Q3-2017	500 farmers	176 farmers	Partly achieved 35.2 percent farmers Surviving trees slightly below the target	Average trees per farmer 170 and only 52 surviving out of the average. The average survival rate at the farm was 29% for a sample from the 176 farmers that planted trees.
	1.7 Degraded sites in protected areas are enriched or naturally regenerated with at least 60,000 seedlings of indigenous tree species with at least 40% survival by Q3 2017	60,000	37,500 assorted indigenous tree seedlings	Partly achieved -62.5% of the targeted numbers achieved	Enriched land – Witu PA -10Ha (15,000 seedlings), 2Ha natural regeneration Kipini Provisional Forest – 15Ha (22,500 seedlings), 1 Ha natural regeneration. Survival rate 10% compared to targeted 40%
	1.8 Communication strategy aligned with project objectives drafted by ICRAF by Q4-2014 At least five packages of communication, educational and advocacy materials distributed to relevant stakeholder by Q2 to Q4-2015	1 strategy 5 packages	1 5	100% , the indicators have been achieved in full	Strategy complete and into use. A website /information portal in place and active. Updated regularly. Has digitized reports/documents. 2 Technical brief, pamphlets, newsletter, banners prepared used in conveying key messages T shirts and caps distributed to beneficiaries in the project sites.
Expected Results 2 Institutional capacities for management improved	2.1 Biodiversity and socio economic information about the cross border ecosystems is collected, compiled and made accessible and understandable to stakeholders and decision makers by Q4 -2015 so that biodiversity is	Studies reports	8	Achieved in full	Reports by ICRAF and consultants have been completed and digitized copies uploaded in the BMP website/information portal. The information is accessible to all stakeholders.

Objective / Result	Indicator (IOV) Revised	Project Target	Achieved at MTR	Status of Progress	Remarks
	mainstreamed into on-going planning processes				
	2.2 Two local planning units (lamu and Badhaadhe) supported with equipment and training by Q2 – 2015	2	1	50% Partly achieved	Acquisition of space in the NMK and followed with equipping has been completed on the Kenyan side. The planning unit staff received training on Desk Geographical Information (QGIS). There is no land use planning on the Somali side nonetheless ICRAF trained two personnel staff from Somalia on QGIS to provide technical support to land use planning unit once put in place. Hanshak Nyongoro conservancy was supported with equipment and capacity building in wildlife monitoring and protection
	2.3 The on-going spatial planning processes (LUP) for Lamu County being led by the county government is technically supported by BMP to be more participatory and supportive of biodiversity, and draft spatial plan is transmitted to relevant authorities by Q3- 2016	1	1	Partly achieved	Draft spatial plan is under discussion at the time of the study (Q2-2017) by stakeholders to incorporate the biodiversity aspects in the final document. The process will be completed by the second quarter of 2017. NMK, the county government and ICRAF developed a chapter on mainstreaming biodiversity information. The document is under editorial by the lead experts.
	2.4 Two cross border exchange visits (240 person days) are organised to strengthen the skills of stakeholders from the selected pilot sites in collaborative biodiversity management by Q4 - 2015	240 Person days	2 exchange visits done	Achieved in full	Exchange visits were organized by for key stakeholders in both countries to the Kenyan coast and NRT supported conservancy in Isiolo and Mpala research Center. The visits exposed the participants to key elements of protected area management and the value of conservation of biodiversity as well as strengthened their knowledge on relevance of collaborative biodiversity management.
	2.5a One plan for re-establishment of a management system for Laga Badana Bush Bushle National reserve in Somalia prepared with all stakeholders and submitted to relevant Somali authorities for approval by Q3-2017	1 plan	1 vision and road map	Achieved in full	Vision and road map of Laga Badana Bush Bushle National reserve was completed through a stakeholder driven process guided by a consultant in Kismayo and Mogadishu. The vision has also been disseminated to key policy maker for any structured engagement. This is a vital step in the management of protected areas in the country and will extend conservation benefits across the border.
	2.5b One management plan for the Awer conservancy in Kenya prepared and submitted for approval to relevant government agencies by Q3-2016	1	1	Achieved in full change in location explained	The community Management Development Plan (CDMP) for Hanshak-Nyongoro Conservancy has been completed through a community led consultative process. The final document awaiting endorsement has been shared with CCWC, KWS and Lamu County Government. There

Objective / Result	Indicator (IOV) Revised	Project Target	Achieved at MTR	Status of Progress	Remarks
					was a change of targeted site from Awer to Hanshak- Nyongoro as a result of unfavourable security situation in Awer.
	2.6 Six training sessions on ¹¹ integrating biodiversity conservation and use at landscape scale into LUP for an average of 20 people /session from local governments, communities, CSOs, NGOs and PA managers carried out by Q2-2015	6 sessions	3 sessions in Kenya	Partly achieved 50%	Half of the targeted training sessions were completed. Participants included 36 and 2 representatives from Kenya and Somalia sides respectively. Three sessions targeted in Somalia were not implemented due to absence of land use planning.

¹¹ Requested for amendment to read, “Awareness raising organized on biodiversity conservation opportunities offered by Kenyan Wildlife act for community based conservancies for 120 people from communities, local governments, CSOs, NGOs & PA managers carried out by Q4_2015”. However, project is flexible to benefit more people where possible