Building Opportunities for Resilience in the Horn of Africa (BORESHA) Impact Study - 2023

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Dr Mohamed M Yussuf, Mohamed Gure and Issack Maalim

Kenbridge Consulting Limited, P.O Box 67906 00200 Nairobi

Kenbridgeconsulting.ltd@gmail.com

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ACRONYMS AND ABBREVIATIONS

BORESHA	Building Opportunities for Resilience in the Horn of Africa
BDCs	Business Development Centres
BWG	Borderlands working group
CAHWs	Community animal health workers
CDRs	Community Disease Reporters
cDRRM	Community Disaster Risk Reduction and Management
CAAPs	Community Adaptation Action Plans
CIDP(s)	County Integrated Development Plan(s)
CDVS	County Director of Veterinary Services
CfW	Cash for work
CoVACA	Community Vulnerability and Capacity Assessment
CSI	Coping Strategy Index
r_CSI	Reduced Coping Strategy Index
DRIVE	De-risking, Inclusion and Value Enhancement project
DRR	Disaster Risk Reduction
DRRM	Disaster Risk Reduction and Management
ETB	Ethiopian Birr
EUTF	The European Union Trust Fund for Africa
FAO	Food and Agriculture Organization of the United Nations
FCS	Food Consumption Score
HDDS	Household Dietary Diversity Score
IBLI	Index-Based Livestock Insurance
ICBT	Informal Cross-Border Trade
ICPALD	IGAD Centre for Pastoral Areas and Livestock Development
IGAD	Inter-governmental Authority for Development
KES	Kenya Shilling
KLIP	Kenya Livestock Insurance Programme
LCIGs	Livestock Common Interest Groups
NGOs	Non-governmental organisations
NRM	Natural Resource Management
PMU	Project Management Unit
PRM	Participatory Rangelands Management
RASMI	Regional Approaches for Sustainable Conflict Management and Integration
SC	Steering committee
SDL	State Department for Livestock
SECCI	Support for Effective Cooperation and Coordination of Cross-border Initiatives
TBCs	Tri-border Business Committee
TIA	Takaful Insurance Africa
TIG	Technical Implementation Group
TVET	Technical and Vocational Education Training
TWG	Technical working group
UCT	Unconditional cash transfer
WASH	Water, Sanitation and Hygiene
VSLAs	Village Saving and Loans Association

EXECUTIVE SUMMARY

This report details the analysis of the impact study of the Building Opportunities for Resilience in the Horn of Africa (BORESHA) project, which was carried out in the Mandera Triangle (the area where Ethiopia, Kenya, and Somalia meet) in November and December 2022. The scope of the impact study covered the period between December 2017 and December 2022. The study sought to find out, analyse and document the impacts of the three BORESHA project phases through the lens of specific thematic intervention areas, showing what worked and/or didn't work and why, and make recommendations for future resilience programming/work that would provide future strategic direction on cross border resilience building, thinking, and planning, for DRC, consortium partners, donors and other stakeholders. The study focussed on six key areas of enquiry:

1. The extent and depth of resilience achieved by project interventions - comparing resilience outcomes (in targeted groups, communities or individual entities) as a result of project-supported interventions, and also those not supported by project interventions.
2. Outcomes and development results from the three phases of BORESHA that demonstrate improved economic resilience at the individual, household and community levels.
3. Progress made to improve/develop market systems and key value chains to provide vulnerable persons and communities with a means to participate in economic activity.
4. The impact of unexpected shocks/external factors, such as COVID-19, drought etc.
5. Adaptive programming that occurred in cross-border work, and the evidence thereof are in line with context complexity.
6. The value (social and economic) of interventions and how they contribute to peaceful interactions and co-existence between communities.

To answer the above areas of inquiry, the study utilised a mixed methods approach integrating primary and secondary data from multiple sources. The main methods comprised a thorough desk review of secondary data sources, and primary qualitative and quantitative data collection, including household surveys (of the intervention and non-intervention matched groups), key informant interviews, focus group discussions, and field observations. Triangulation of findings was used to corroborate and check the reliability of evidence by comparing data/information across the respondents, as well as between the respondents and project documents. Collectively, 400 household surveys, 25 focus group discussions, 45 experts and community-level key informant interviews, and 23 field observations and desk reviews were conducted.

BORESHA invested over 22 million euros in promoting economic development and greater resilience, particularly among vulnerable populations, and those with disabilities. This work started in 2017 and continues till the end of March 2023 and has since reached 350,000 men, women, children, and youths. These investments went to interventions targeting 3 outcomes: 1) communities in the Mandera Triangle are more resilient and better prepared to withstand and respond more effectively to shocks; 2) individuals and communities become more self-reliant through increased skills and opportunities for cross-border employment, diversified enterprise and livelihoods; and 3) cross-border rangeland and other shared natural resources are more equitably and sustainably managed. A baseline study for the project was conducted in 2018.

The impact study findings indicate that compared to their baseline situation and to comparison households from villages where the project was not implemented, project beneficiaries had higher average monthly incomes and a lower percentage of households that used negative coping strategies to deal with stressors. The intervention group recorded growth of household incomes from USD 35.15 per month at baseline to USD 87.01 per month by

the end of the project. In contrast, the average income among households from comparison villages only reached USD 67.87 per month during the same period. The project villages also had an enhanced reduced coping strategy index of 11.1, a greater household dietary diversity score (HDDS) of 8.5, and a higher food consumption score of 54.3%, in contrast to the comparison villages that had r_CSI of 20.8, HDDS of 5.7 and average food consumption score of 36.4%. Compared to a baseline situation, the surveyed households had a diminished reduced coping strategy index (r CSI of 21.9), with 37% of them having a poor FCS, roughly 28% having a borderline FCS, and 35% having an acceptable FCS.

The project households fared better than the comparison villages, which remained in Integrated Food Security Phase Classification 3 (Crisis), while the project households moved from IPC 3 to IPC 2 (Stressed) within the project period. Even during project implementation, beneficiary households reported fewer negative effects of shocks (76.7%) than comparison households (84%). In addition to being the result of having greater incomes, the reason for this could be, because these individuals also had stronger savings, better access to BORESHA support, and less income drop in the face of shocks. These improvements are still fragile, however, given the cyclical nature and frequency of droughts, notably the fact that the region is currently experiencing the worst drought in recent memory. Other factors contributing to the fragility of such gains include conflicts and insecurity, the ongoing knock-on effects of Covid 19 and rising food and fuel prices worldwide.

According to a key informant, "each thematic area has its own story," and an assessment of the thematic interventions delivered under each result revealed that these investments were relevant, timely and appropriate. Under Outcome 1, the community-level disaster risk reduction investments resulted in the identification of community vulnerabilities and risks, the development of community adaptation action plans, and the implementation of some priorities in these plans (including water points, animal health, education and health) and their integration of the plans into government planning processes. Beneficiary communities thus reported fewer negative effects of the shocks, felt more knowledgeable about the shocks, had faith in their ability to respond, and claimed to have better knowledge and decision-making abilities when shocks happened. The project encouraged the adoption of IBLI, although actual sales only occurred in Kenya. By the time the product was available in its sixth window, over 2,230 households had purchased insurance coverage. The insurers were also able to increase the uptake of other insurance products. The agents selling the product were also engaged in small business, earning a commission or salary for the work and insuring their animals.

Under Outcome 2, according to the County Director of Veterinary Services, as a result of the animal health interventions, a crisis was avoided and livestock assets were protected. 22 Mass vaccination and treatment initiatives for animals reached a total of 2.839 million animals and beneficiaries attributed improved animal health and disease resilience to the vaccinations and treatments, and they credited CAHWs/CDRs with improved rural outreach and service quality. The LCIGs were said to be instrumental in promoting better livestock husbandry and increasing fodder production. The VSLAs supported under this outcome helped them develop better-saving practices and has given them access to financing when they need it. For instance, in the household survey, 52.4% of respondents reported borrowing money from the group in the previous two years. Other benefits of the VSLAs reported included families' increased access to financial services or loans, higher household incomes, business expansion or improvement, and closer engagement with financial services. Also, over 800 jobs were created and businesses were able to stay afloat thanks to the 78 start-up or business growth grants, worth a total of 608,000 Euros. The beneficiaries reported successful business expansion, business diversification, access to new markets, and other beneficial outcomes. The TVET skills training was said to be crucial for beneficiaries to diversify their incomes, and of the 985 TVET graduates 83.5% said they were already applying their new skills, earning an income averaging KES 800 per day.

Under Outcome 3, 82 rangeland sites that were restored through reseeding, check dams, and other sustainable land management approaches are now sources of dry season fodder, and there has been a gradual recovery of vegetation. In addition, according to the key informants and FGDs participants, the NRM, VSLAs, TBC and WUCs have increased bonding social capital with the communities within countries and between cross-border communities. The overall findings suggest that the NRM interventions had beneficial effects on resilience by resulting in harmonious management of natural resources. The establishment and strengthening of NRM Committees and Water User Committees (WUCs), as well as the training of government officials and communities in NRM, have improved resource governance and enhanced land productivity, according to key informants and FGD participants. Restoring degraded rangelands, introducing practices for conserving soil and water, and undertaking initiatives to reseed grasses, restore indigenous trees, and develop dry-season pasture conservation all helped to increase productivity.

The project established functional water points that improved water supplies and had positive benefits and were essential in enabling households to withstand the effects of the droughts, with 95.7% of the surveyed households having access to water from these water projects. The County Government no longer needed to truck water from far boreholes to these areas during the dry season thanks to the solarization of boreholes, which also reduced the expenses of operating the pumps by lowering the demand for fuel to run the generators. The County government stated that no BORESHA-targeted communities have been included in its emergency water trucking operation for 197 locations because none of them showed significant water stress. Also, a total of 28 schools were supplied with water harvesting and storage schemes, reaching 13,706 beneficiaries. The use of water harvesting technology, according to key informants, increased the availability of water for the schools, had a beneficial effect on the communities, and notably helped to increase their resilience.

By creating and strengthening networks like tri-border business committees, facilitating community dialogues, and improving access to financing through business grant facilities, among other interventions, the project made significant progress in supporting value chains and market systems. The lack of a regulatory framework, the early stage of markets and the sparse presence of private sector actors with the ability, scale, and incentives to support systemic market changes have all contributed to the slow progress of some of the market interventions. Future investments should explore incentivising private sector players to participate more in these markets, designing a more cohesive strategy for promoting various commercial solutions for the necessary goods and services, and collaborating with the national governments and IGAD in the implementation of existing cross-border policies and agreements between the 3 countries.

BORESHA and its beneficiaries experienced various shocks during implementation. The drought led to severe pasture and water shortages, forcing pastoralist communities to migrate across the borders. The Covid pandemic caused Mandera Town, the area's largest market, to be placed under lockdown, impeding cross-border trade movements of people and animals as well as household income derived from both, which put an increased burden primarily on low-income households. The locust invasion destroyed thousands of hectares of grazing areas and crops, and insecurity and conflicts also contributed to the displacement of communities. The Consortium prioritized and expanded the breadth of humanitarian assistance to vulnerable communities in the project area in response to these shocks, as well as emergency drought response actions. However, because the project lacked a built-in crisis modifier to facilitate a quicker early response to the shock, they had to navigate a lot of administrative procedures and mobilize external resources. According to the PMU team, “Even while the absence of a crisis modifier or rapid response fund made it more difficult for us to respond to shocks quickly, an agreement with the EU allowed BORESHA to scale up some drought-related interventions

Due to the complexity of cross-border work, a comprehensive system, structures, and adaptive programming were needed for the project for it to function well at all levels across the three countries. The project was carried out in collaboration with a consortium led by the Danish Refugee Council, World Vision, CARE, and WYG/Tetra Tech (in BORESHA I). The Project Management Unit (PMU) was in charge of overall project management supported by several coordination structures including the Technical Working Group (TWG) which provides technical program support for the implementation of the program, the Technical Implementation Groups (TIG), and the Steering Committee (SC), which is made up of the Country and Regional Directors of the various consortium partners and ensures that partner-specific challenges are discussed. An efficient project management unit and other governance structures were successful in ensuring the proper engagement of all partners in the various processes of the intervention. It was evident from key informants that collaboration with local partners (NGOs and CBOs) in the project implementation would have resulted in additional benefits, such as greater impacts and sustainability of project interventions. Concerning adaptability and flexibility, the project worked with both formal and informal private sector actors in the Mandera Triangle, layered and leveraged interventions to promote sustainability, and drew on the successes and information obtained in various phases. Additionally, it coordinated with regional, national and local level coordination groups like the County Steering Group (CSG) in Kenya and other consortiums like RASMI, SECCI, and the Omo Delta initiative.

In addition to having an impact on households and market systems, the project promoted peaceful interactions and intercommunal coexistence. Relationship-building and the avoidance of any conflict when these resources were depleted were made possible by facilitating community dialogues to exchange and discuss reciprocal grazing arrangements. At an institutional level, the streamlined collaboration with the livestock ministries of the 3 countries facilitated disease control and surveillance. Similar systems for information sharing and coordination were promoted by the tri-border committees. The project worked closely with the national government to ease security fears and concerns associated with informal cross-border trade, hence allowing seamless trade. It also mainstreamed conflict sensitivity, gender and social inclusion. These structures have formed strong mutually beneficial relationships and established close communication.

While the project has had a significant impact on the resilience of households in the Mandera Triangle, the results of the study also suggest that additional investments are needed to have a greater impact, protect, and sustain the gains made during the three phases of BORESHA. For instance, the nascent cross-border institutions and practices need support, and the resilience gains made thus far need to be protected. Furthermore, projects like BORESHA should commit to longer program cycles of at least five to ten years to create sustainable impacts and be cost-efficient and effective given the complexity of the environment in which they operate. Going forward, the focus should therefore be on strengthening the intervention areas that have the potential to be scaled up including disaster risk reduction, assistance for animal health, VSLAs, TVETs and scholarships, business skills training and cross-border support, natural resource management, and WASH. In scaling up these interventions, it is recommended that the project should continue to operate through a Consortium since the benefits derived from experience and competencies have been demonstrated.

Some of these interventions tend to have a lasting effect and will need the assistance of private actors, the majority of whom work in the Mandera Triangle on a modest scale and informally. Therefore, it is crucial to keep strengthening the nascent institution in charge of overseeing these system-level thematic areas while also attempting to incentivise larger private sector actors to enter the ecosystem. Additionally, considering that in Somalia the governance mechanisms are inadequate, there is a need to connect with the UNDP-facilitated District Council formation process to anchor critical institutions and plans such as the DRR and NRM committees and rangeland councils. UNDP is assisting district administrations with bottom-up planning and decentralised service delivery as part of the Joint Program on Local Governance. This is carried out by ensuring that there are systems

in place for reconciliation and dispute resolution, actively supporting the formation of district councils through a participatory process (ensuring broad representation, including IDPs and women where appropriate), and strengthening the capacity of district councils to provide local services.

As a result of several climatic and human-induced factors and their interaction with social, economic, environmental, political, security, and seasonal environment, some pastoral and agro-pastoral households are getting displaced into urban centres such as Mandera, Belet Hawa and Dollo Ado to better access basic services, livelihoods opportunities, and humanitarian assistance. However, these populations face severe challenges. It is therefore important to pay attention to the increasing inequality in pastoral societies in the peri-urban areas that are expanding and where poor and stockless pastoralists are the majority, and look into employment and labour market trends to come up with effective strategies to support new, alternative livelihoods.

BACKGROUND AND CONTEXT

Summary of the Action and its objectives

Funded by the European Union Trust Fund for Africa (EUTF), Building Opportunities for Resilience in the Horn of Africa (BORESHA) is a 5-year cross-border project (December 2017- March 2023) whose overall objective is to promote economic development and greater resilience, particularly among vulnerable groups, in the Mandera Triangle (a geographical region where the countries of Ethiopia, Kenya and Somalia meet). The project is implemented in this cross-border area and focuses on the communities that cross the borders for transhumant pastoralism, access to services, trade and maintaining socio-cultural relationships. It follows a community-driven approach to address the shared nature of the risks and opportunities facing vulnerable persons and communities in the Mandera Triangle border area.

It is part of the EU's programme for Collaboration in the Cross-Border areas of the Horn of Africa, providing close to 70 million euros of investment to prevent and mitigate the impact of local conflict and to promote economic development and greater resilience in four different cross-border regions. The consortium was led by DRC and in the initial phase (BORESHA I) was implemented in partnership with WYG/Tetra Tech, World Vision and CARE International. BORESHA II and BORESHA III have three partners, namely DRC (the lead partner), CARE International and World Vision (Table 1).

Table 1: Duration, partners and budget for the three phases of BORESHA

Phases of BORESHA	BUDGET (EURO)	TIMELINES	PARTNERS
BORESHA I	14,000,000	December 2017 - February 2021	DRC, WYG/Tetra Tech, World Vision and CARE International
BORESHA II	3,157,896	March - December 2021	DRC, World Vision and CARE International
BORESHA III	5,052,631	January 2022 – March 2023	DRC, World Vision and CARE International

Overall objectives, expected results and target beneficiaries of BORESHA

The overall goal of the project was to promote economic development and greater resilience, particularly among vulnerable groups, including youth, women, displaced persons and persons living with disabilities. This contributes to the overall EUTF objective to address the root causes of instability, forced displacement and irregular migration and to contribute to better migration management.

The project expected results were:

1. Result 1: Communities in Mandera Triangle are more resilient and better prepared to withstand and respond more effectively to shocks. The result focuses on facilitating community disaster risk reduction and management (cDRRM), integrating DRR plans into the government plans, facilitating index-based livestock insurance (IBLI), studies/events at borderlands, and integration of gender-responsive programming.

2. Result 2: Individuals and communities become more self-reliant through increased skills and opportunities for cross-border employment, diversified enterprise and livelihoods. The result will improve access to animal health, vaccination and livestock production, facilitating village saving and loans associations (VSLAs) and linking them with financial services, technical and vocational education training (TVET), business skills training and cross-border trade support, cross-border learning, infrastructure development through cash for work (CfW), and unconditional cash transfer support to the drought-affected population.
3. Result 3: Cross-border rangeland and other shared natural resources are more equitably and sustainably managed. The implementation of this result prioritises natural resource management, rangelands rehabilitation, rehabilitation/construction of WASH facilities, and support for COVID-19 interventions.

Overall, the project targeted 350, 000 individual beneficiaries. The programme sought to work with local and national government authorities, community leaders, young people, women, youth groups, women's associations, local communities, the private sector and local business leadership in Mandera, Gedo and Dollo Ado. Specifically, the project targeted vulnerable communities and individuals, or those at risk of migration or displacement.

BORESHA Theory of Change

As documented in the terms of reference, BORESHA's theory of change is as follows:

IF we strengthen cross-border communities' capacities to identify their priorities, plan and advocate for measures to help them withstand shocks; IF we promote the development of an inclusive cross-border environment for livestock and non-livestock trade and business, and foster private sector opportunities for women and young people; IF we support the equitable and common management of natural resources in the cross-border area; THEN communities will become more resilient and self-reliant; individuals, including women and young men, will have the skills and opportunity to take up a more diverse range of employment and livelihoods options; natural resources will be used more rationally, and with less conflict; local governments will be more accountable to their constituencies (outcomes); and fewer people will be displaced within, or migrate out from, the cross-border region (impact).

About the impact study

The objectives and scope of the impact study

This study sought to establish, analyse and document the impacts of the three BORESHA project phases through the lens of specific thematic intervention areas, showing what worked and/or didn't work and why, and make recommendations for future resilience programming/work that will provide future strategic direction on cross border resilience building, thinking, and planning, for DRC, consortium partners, donors and other stakeholders. The study also interrogated and challenged assumptions - what changed (in terms of context (internal and external factors) and project design - in the course of project implementation and how it impacted the project), and contextualise project outcomes and results for all to understand.

Impact study methods

The impact study used a theory-based approach, based on the project's theory of change. Primary data collection included both qualitative and quantitative data. Secondary data collection and analysis were also undertaken, consulting project documents from the BORESHA consortium.

Impact study areas of enquiry

As noted below (Box 1), the impact study sought to measure the extent and depth of resilience achieved by the project interventions compared to the baseline study.

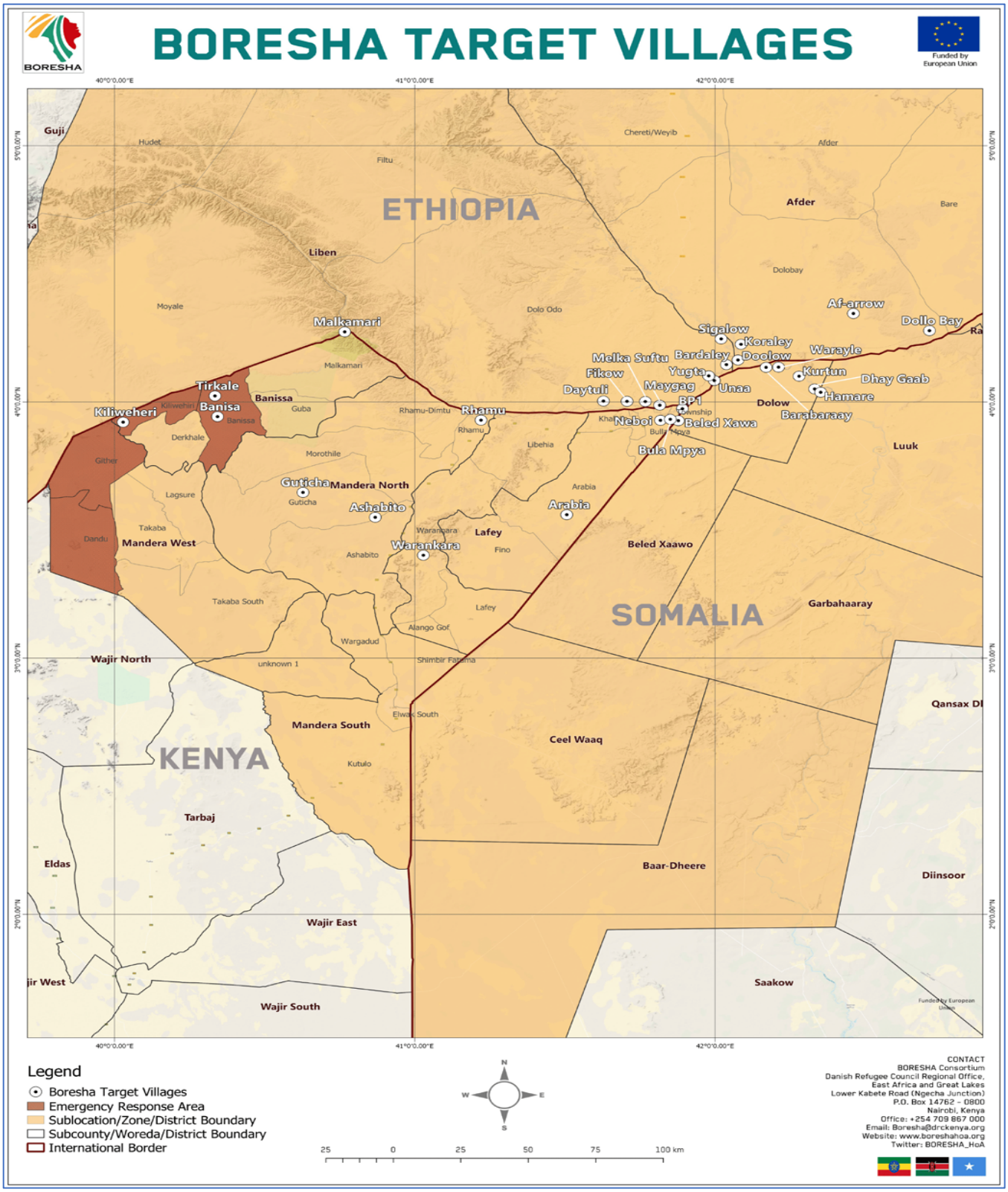
Box 1: Scope and areas of enquiry of the impact study

The scope of the impact study included BORESHA I, II and III and covered:

- The extent and depth of resilience achieved by project interventions - comparing resilience outcomes (in targeted groups, communities or individual entities) as a result of project-supported interventions, and also those not supported by project interventions, focusing on:
  - Climate resilience, including successes and failures related to project interventions.
  - Conflict and resilience relationships.
  - Economic resilience, including successes and failures related to project interventions.
- Capturing outcomes and development results from the three phases of BORESHA that demonstrate improved economic resilience at the individual, household and community levels including
  - The benefits and sustainability of project interventions that targeted rural communities and the agriculture sector (crops and livestock); and,
  - The sustainability of project interventions intended to strengthen market systems.
  - Impacts resulting from project interventions, and progress made with the development of cross-border restrictions on trade and resilience building.
- Progress made to improve/develop market systems and key value chains to provide vulnerable persons and communities with a means to participate in economic activity.
- The impact of unexpected shocks/external factors, such as COVID-19, drought etc.
- Adaptive programming that occurred in cross-border work, and the evidence thereof in line with context complexity. How flexible were donors in response to this? Any challenges with budgeting and/or length of projects?
- The value (social and economic) of interventions and how they contribute to peaceful interactions and co-existence between communities
  - Community structures
  - Infrastructure development etc

As shown in Figure 1, the scope of the impact study covers the period between December 2017 and December 2022 and focuses on Mandera County (Kenya), Belet Hawa and Dollow (Somalia) and Dollo Ado and Dollo Bay (Ethiopia). With an estimated population of 350,000, the livelihood strategies in the study area are primarily pastoralist and agro-pastoralist. However, the livelihoods in the area are under threat from disasters and shocks, with drought being the major threat to the Mandera Triangle. The rise of the insurgent group Al-Shabaab, the increase in political tensions between the three countries, and inter-communal conflicts have also affected humanitarian access in some parts of the project area such as the Lafey sub-county in Mandera County.

Figure 1. BORESHA target villages in the Mandera Triangle



Data sources

To answer the impact study questions, the study utilised a mixed methods approach to integrate primary and secondary data from multiple sources. The main methods comprised a thorough desk review of secondary data and sources, and primary qualitative and quantitative data collection, including household surveys (of the treatment and control groups), key informant interviews, focus group discussions, and field observations. Triangulation of findings was used to corroborate and check the reliability of evidence by comparing data/information across the respondents, as well as between the respondents and project documents. Multi-stage random sampling, purposive sampling, and snowballing sampling techniques were applied in the selection of the study samples.

The fieldwork took place in December 2022 and a total of 400 households, 25 focus group discussions, 45 experts and community-level key informant interviews, and 23 field observations and desk reviews were conducted. This sample was in line with the sample frame agreed upon in the inception report. Table 2 provides a summary of the stakeholders consulted during the study.

Table 2. The sample size of the impact study

Actors	Type of actors	Mandera (Kenya)	Dollo/Belet Hawa (Somalia)	Dollo Ado/Bay (Ethiopia)	Total
Household survey	Households – treatment	100	100	100	300
	Households – control	34	33	33	100
Key informant interviews	Regional, county and local administration representatives	6	4	4	14
	Community level interviews	6	8	9	23
	Nairobi level interviews	8			
Focus group discussions	Livestock Common Interest Groups (LCIG) members, VSLAs members, NRM, DRR and peace committees, Tri-border business committees, cash transfer committees and beneficiaries (UCT and CfW), TVETs trainees, CAHWs and beneficiaries of livestock vaccination and treatment	11	7	7	25
Field visits and observations	WASH structures, fodder farms, irrigation canals, fodder stores, other equipment and rehabilitated rangelands.	13	6	4	23

Secondary data sources: The impact study team conducted a thorough analysis of project documentation and reports to become familiar with the project design and progress to date before the primary data collection and in preparation for the inception report. To understand the context in which BORESHA has been implemented, the desk review included:

- Project proposal, project document, logical framework and/or theory of change, publications and relevant monitoring and donor reports and data;
- Project studies; and
- Reports from evaluations conducted (BORESHA I and BORESHA II as key evidence of the history and implementation of recommendations from previous phases) on similar or related projects.

Annex 1 provides a summary of the documents reviewed.

Household survey: The impact study involved carrying out a household survey, comparing outcomes for project beneficiaries to non-beneficiaries with similar pre-project characteristics. A team of enumerators administered household questionnaires to gather data on the ability of households to absorb or manage shocks in the short term through food-based coping strategies, cash savings, migration, and social capital. In addition, questions explored whether and how households adapted their behaviour to minimise risk or mitigate the impact through access to and use of information, livelihood diversification, asset ownership, disaster risk reduction strategies, and use of financial services. Table 3 details the surveyed project and comparison locations.

Table 3. The surveyed project and control villages

Country	Actors	Project (Intervention) villages	Control (non-intervention) villages
Kenya	Mandera County	Mandera East - Neboi and Border Point 1	Mandera South – Wargadud
		Mandera North - Girisa, Dodai, Yabicho and Shangal	
		Banisa - Banisa, Tarama and Duke	
Ethiopia	Dollo Ado	Dollo Ado town, Fiqow, Daituli, Suftu, and Sigalow	Washaqbar
	Dollo Bay	Dollo Bay town, Koraley, and	
Somalia	Dollow	Dollow town, Una, Barabaray, Qorda'a, Qalbi Allan, Warayle, and Hamare	Rama Garoore
	Belet Hawa	Belet Hawa town, Odaa and Gawido	

Key informant interviews: Through phone and other remote media, the team conducted 45 interviews with the key informants from the European Union, Program Management Unit, technical leads from the Consortium partners, and members of the technical working group, technical implementation group and borderland working group members. An interview guide was developed to assist discussions and ensure key information was collected. The interviews covered all the thematic intervention areas including resilience, Disaster Risk Reduction (DRR), Index Based Livestock Insurance (IBLI), Livelihoods, the private sector, TVET, VSLA, natural resources management, drought, conflict/peace-building, cross-border, gender, cash for work and unconditional cash transfer, WASH, and COVID 19. Village-level interviews were conducted with purposively selected respondents from the different categories of the population including the community leaders, CAHWs/CDRs, the leadership of committees such as DRR, VSLAs, livestock common interest groups, TBCs, DRR, and business development centres among others.

Community field-level engagement through focus group discussions: The impact study team conducted 25 focus group discussions (FGDs)[1] with community members during field visits to validate reports and explore perceptions of whether and how these projects have made a difference in the lives of the population. The consultants selected the participants in the FGDs with the support of the project team, focusing on actors such as Livestock Common Interest Groups (LCIGs) members, VSLAs members, NRM, DRR and peace committees, Tri-border business committees, cash transfer committees and beneficiaries, TVETs trainees, CAHWs and beneficiaries of livestock vaccination and treatment, as well as some non-beneficiaries of the intervention.

Field observation: The impact study observed the management and conditions of the developed infrastructure using an evaluation checklist. The facilities comprised berkads, shallow wells, elevated water tanks, and other types of water storage and infrastructure. The anticipated outcomes are revealed by information gathered through field observation and images (which include geographical details for ease of reference). The team evaluated and observed 23 developed/rehabilitated infrastructures in total.

[1] The number of beneficiaries per FGD varied from 6 to 8 persons and separate FGDs was done for men and women for gender, religious consideration as well as ease of sharing of information.

Compiling the data to finalise the impact study report

The impact study team compiled all the data and information into an initial draft impact study report after finishing the secondary data review and gathering primary field data. The report was then shared with and presented to the BORESHA team for feedback and additional input. Revisions were made, and whenever necessary, follow-up contact was used to clarify any information, if necessary.

The study's limitations and challenges

Although the study went according to plan, there were some contextual challenges and limitations. To start with, the main challenge in determining the impact of any project is to determine how to compare the outcomes attained, with what would have happened had the project not been implemented. It, therefore, means that the impact study will involve comparing the villages/households that participated in the project to non-beneficiary villages/households with similar characteristics (comparison villages). There is also the need for consistent baseline data for both the project villages and the comparison villages/households. While the project conducted a baseline study, it mainly focused on the project villages and did not adequately incorporate non-project areas, forcing the impact study team to rely on general secondary data on the project area.

BORESHA implements activities targeting both systems-level (rangelands, informal cross-border trade), and household resilience (IBLI, VSLAs, animal treatments and vaccinations). Defining several concepts and terms such as resilience, disaster risk reduction, shocks, stresses, and vulnerability covered in the study was problematic for the communities. As the concept of resilience might be considered as an intermediate outcome or as a long-term goal or end, some of these concepts and terminology were not universally perceived in the same manner by the study respondents. Additionally attributing particular impacts of these interventions was difficult as even the comparison village may benefit from the system-level investments in resilience. Also, given that the project tailors its activities for each village and that no one activity or set of activities was adopted throughout all the project villages, it is difficult to isolate the exact causal effect of specific activities. This causal effect was mitigated by doing a careful triangulation of multiple sources of data.

In addition to the aforementioned methodological constraints, there were a few access constraints caused by the timing of the impact study and security issues in the region. The ongoing drought and the end-of-year holidays hindered some of the stakeholders' availability as the impact research was carried out during those times. The drought, being the worst in recent memory and impacting even the most resilient communities' ability to cope and affecting the study findings by reducing response rates, biasing of response in anticipation of drought response, and recall bias as the respondents may accurately remember or omit details of the project support. The senior program team and important stakeholders did, however, continue to be available throughout the study, and the utilization of local and national researchers with a strong grasp of the context helped alleviate some of these issues. To complement the face-to-face interviews, the team utilised skype, phone and other virtual media.

As the project is multisectoral and integrated, the study focussed on determining whether the entire package of interventions as a whole was sufficient to enable households to be more resilient and better prepared to cope with any shocks and stresses. Given these constraints, the team tried to reduce the data collection burden on the households. During the inception meeting, it was agreed that though the study would conduct some household surveys to generate quantitative data, it was to be more qualitative – biased towards the collection of primary data through FGDs, KIIs and deep dive into literature review (to compensate for few HH interviews) while trying to contextualize the findings.

SYNTHESIS AND FINDINGS OF THE IMPACT STUDY

This section of the report will present the key findings from the impact study presented against the numbered impact study focus areas. Before presenting these findings, several demographic characteristics of the study population are highlighted.

Demographic profile of the surveyed households

The study was conducted in the project and comparison villages in Kenya (Mandera County), Somalia (Gedo region) and the Somali region of Ethiopia. A total of 400 households, including 134 from Kenya, 133 from Ethiopia, and 133 from Somalia, were surveyed, with 300 households coming from the project villages and 100 from the comparison villages. The primary survey data on household characteristics of the project target households and comparison groups appeared to be broadly comparable, with only minor differences between the groups in terms of household demography, livelihoods and exposure to shocks. Additionally, these households shared characteristics with the households surveyed for the project baseline in July 2018.

Both in the project and comparison villages, the survey primarily interviewed the head of the household (78.8%), with those surveyed from the project locations being largely men (54%), married (85.3%), and under the age of 70. Similarly, those from the comparison villages were mostly men (55%), married (90%), and under the age of 70. Most of these respondents (85.3%) were married, compared to 83.7% in the project villages and 90% in the comparison villages, when it came to marital status. The respondents' educational levels were low, with most attending informal education such as Qur'anic schools as confirmed by 44.3% and 55% of households in project and comparison villages, respectively.

As also shown in the baseline, the impact households across the three regions have a high number of persons per household (both members and dependents), with most of the households in both groups (57.8%) having household sizes of 6 to 10 individuals. In terms of household category, 96.7% of respondents from project villages claimed to have been born and raised in their current location, with 98% of them belonging to the host community. Though not surveyed in Kenya, 5.3% and 0.8% of the families from Ethiopia and Somalia, respectively identified themselves as internally displaced people (IDPs), and only a few returnee households (2.3% in Ethiopia) were interviewed. In the comparison villages, all of the respondents (100%) came from the host community. Table 4 compares the demographic and social characteristics of the households assessed in the project and comparison villages.

Table 4: Demographic and social characteristics of households from project and comparison villages

Characteristics		Project villages	Comparison villages	Total
		Percentage	Percentage	Percentage
Sex of interviewee	Female	46.0	45.0	45.8
	Male	54.0	55.0	54.2
Respondent is the head of household		81.0	72.0	78.8
Marital status of head of household	Divorced	9.0	7.0	8.5
	Married	83.7	90.0	85.3
	Never married	1.3	1.0	1.3
	Widow or widower	6.0	2.0	5.0
	18 – 35	26.7	49.0	32.3
	36-55	58.0	43.0	54.3

Respondent's age	56 -70	14.3	8.0	12.8
	Over 70	0.7	0.0	0.7
	Below 18	0.3	0.0	0.3
Respondent's educational level	None	28.0	25.0	27.3
	Informal	44.3	55.0	47
	Primary	20.0	12.0	18.0
	Secondary	5.7	8.0	6.3
	Tertiary	2.0	0.0	1.5
Household size	1 – 5	21.7	24.0	22.2
	6 – 10	60.7	49.0	57.8
	Over 10	17.7	27.0	20.0
Household category	Host community	97.3	100.0	98.0
	IDPs	2.7	0.0	2.0
Household migration status	Never migrated	96.7	100.0	97.5
	IDPs	2.3	0.0	1.8
	Returnee	1.0	0.0	0.8

The extent and depth of resilience achieved by project interventions

The project's logical framework includes two overarching indicators of economic development and greater resilience: the mean monthly household income, and the percentage increase in the number of households applying negative coping strategies to deal with stressors in the target communities. Based on these two indicators, the impact study was constructed around two hypotheses: at the outcome level, 1) BORESHA beneficiaries will be expected to have a higher mean monthly income, and 2) a lower percentage of the beneficiary households will be applying negative coping strategies to deal with stressors compared to comparison groups.

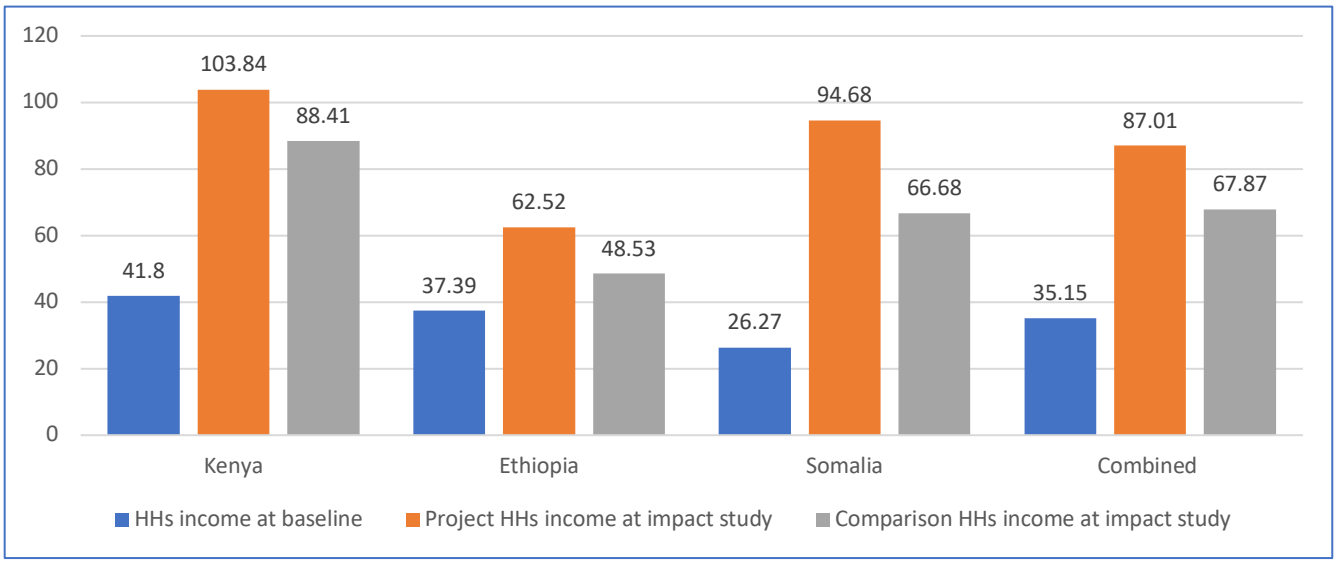
Indicator 1: Mean household income

The impact study team calculated the average household income for the project and comparison villages and compared it to the starting point of BORESHA I as a major measure of economic growth and increased resilience. The increase in average household income from a baseline of USD 35.15 (USD 41.8 for Kenya, USD 37.39 for Ethiopia and USD 26.27 for Somalia) compared to USD 87.01 (USD 103.84 for Kenya, USD 62.52 for Ethiopia and USD 94.68 for Somalia), at the time of the impact study was notable (Figure 2). However, the increase was less significant for the comparison villages which recorded an average household income of USD 67.87 (USD 88.41 for Kenya, USD 48.53 for Ethiopia and USD 66.68 for Somalia). Additionally, a higher percentage of these households (84%) reported that the shocks that occurred in the last 24 months had impacted their income sources when compared to households in the project villages (76.7%), which may be the cause of the comparison households' lower increase in household income.

The BORESHA I and II final reports all noted an increase in the mean incomes of households in the project areas, albeit without providing any specific figures. In addition to having higher incomes, more households in project areas (37%) than in the comparison villages (5%) reported generating some income-related savings in the previous month. Most of the savings for both groups (16.8%) were less than USD 50, with less than that saving between USD 51 and USD 100 (8.3%) and between USD 51 and USD 200 (2%). Although the greater monthly wages of the beneficiary households may have contributed to the increased saving, the study found that households in the project villages received remittances from family, friends, and relatives at a higher rate (15.7%) than in the comparison villages (5%). The increase in the proportion of households from a baseline of 2.4% may have allowed

households to either save or invest what is left over after paying for food and other expenses, enabling them to improve their livelihoods and increase their resilience.

Figure 2. The average household incomes



Indicator 2: Percentage of the beneficiary households applying negative coping strategies

It is expected that households with greater resilience will be less prone to employ negative coping mechanisms to deal with shocks and stressors. Although some households in the project regions had access to productive land and livestock ownership, the baseline survey found that the average household income in the project areas was low, averaging USD 1 per household per day, which was considered to be at the extreme poverty threshold. Due to their poor productivity, these households relied heavily on their output (62.2%) and market purchases (57%) and were thus exposed to potential inflation and significant weather shocks. Low household incomes further increased the households' susceptibility to these shocks.

The Food and Agriculture Organization (FAO) of the United Nations defines food security as: "All people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life.[2] In the impact study, food security was measured using some key indicators, including the food consumption score (FCS), household dietary diversity score (HDDS), and reduced coping strategy score (r_CSI), as discussed below, to understand the impact of project interventions on the household's food security.

Reduced Coping Strategy Index Score (r_CSI)

The coping strategy index measures the frequency and severity of the food consumption behaviours that households were forced to engage in as a result of food shortage in the seven days before the survey. The higher the r_CSI, the worse the level of food security. Data reveal that food security conditions have improved since the baseline, particularly for the communities that make up the project's target villages, when comparing the baseline

[2] FAO. 2002. The State of Food Insecurity in the World 2001.

and the time of the impact study. For instance, the results of the household survey analysis indicated that the comparison villages' households had a higher r_CSI score of 20.8 than the project villages' households, who had a r_CSI score of 11.1; this suggests that the comparison villages' households were resorting more frequently to harmful food-coping strategies (Figure 3).

As a result of receiving several forms of assistance, such as agricultural and livestock assistance, which increased their access to a wider variety of healthy foods, the households from the project villages had a lower level of r CSI compared to the comparison villages. The project villages demonstrated significant improvements in comparison to the baseline conditions across the three regions, where the surveyed household has a r_CSI of 21.9 (r_CSI of 21.8 for Kenya, 21.9 for Ethiopia, and 21.9 for Somalia), indicating that the project households have improved from Integrated Food Security Phase Classification (IPC) 3 to IPC 2, as opposed to the comparison villages, who have remained in IPC 3.

Participants in the FGDs observed that pastoralists and agro-pastoralists used distinct short-term and long-term coping strategies. The primary short-term strategies included herd splitting, herd building and loaning, family splitting, temporary relative custody of children, livestock migration, rural mobility and displacement, relying on humanitarian assistance, and using social safety nets from relatives. The main long-term strategies included herd diversification, wet-dry grazing system, breed improvement, and sale of the household productive asset.

Figure 3. Average r_CSI for households from project and comparison villages, and baseline situation

Household Dietary Diversity Score (HDDS)

The Household Dietary Diversity Score (HDDS) is a qualitative measure of food consumption that reflects households' access to a variety of foods and serves as a proxy for a person's diet's nutrient adequacy. The HDDS is intended to indicate the financial ability to obtain a range of foods. The average HHDS for the project's beneficiaries at the time of the impact study was determined from the household level intervals to be 8.5, while it was 5.7 for the comparison group, as shown in Table 5.

Although at the baseline the HDDS was not measured, the seven-day food consumption patterns showed that, as in the baseline, the most popular sources of protein were beans and milk/dairy products, while the most popular sources of cereals were maize, rice, and wheat for project and comparison villages. However, as was mentioned, relative to the comparison group, households from the project villages had more access to a variety of foods such as proteins, vegetables, and fruits.

Table 5. Household Dietary Diversity Score (HDDS) for project and comparison villages

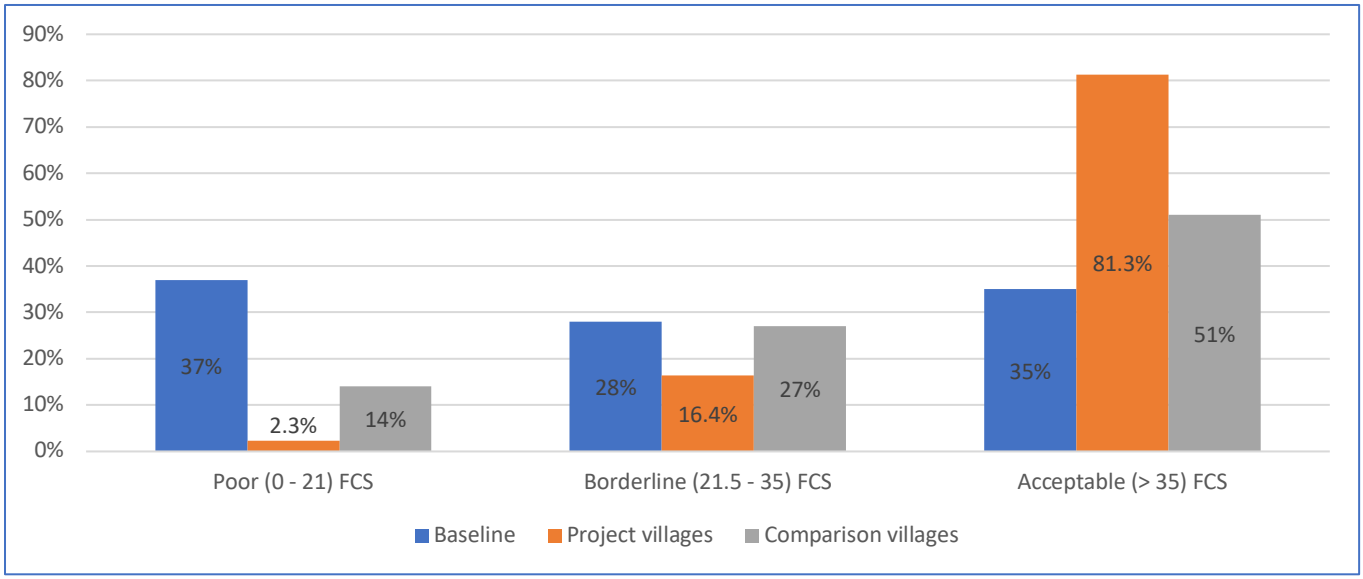
No	Food Groups	Project (treatment) villages	Comparison villages
1	Cereal	299	95
2	Roots, tubers and plantains	138	22
3	Vegetables	253	48
4	Fruits	268	39
5	Meat	216	38
6	Eggs	103	20
7	Fish and sea foods	93	22
8	Pulses, legumes and nuts	217	43
9	Milk and milk products	270	52
10	Oils and fats	264	75
11	Sugar and sugar products	269	70
12	Spices, condiments and beverages	171	45
	TOTAL	**2,561**	**569**
	Average HDDS = total/sample	**8.5**	**5.7**

Food Consumption Score (FCS)

Based on a seven-day recall of food consumed at the household level, the FCS is a composite indicator that assesses dietary diversity, food frequency, and the relative nutritional value of food groups. The value of FCS can range from 0 (lowest level of food security) to 112 (highest level of food security). Thresholds for FCS have been established by the World Food Program (WFP), with the poor defined as less than or equal to 21, borderline as 21.5 to 35, and acceptable as above 35.

The study's two main food security proxy variables, FCS and HDDS, were found to have positive correlations with livelihood capacity and negative correlations with livelihood loss. As shown in Figure 4, at baseline, 37% of the households had a poor FCS, with about 28% having borderline FCS and 35% having acceptable FCS. At the time of the impact study, the average FCS of the households in the project villages was higher (54.3) than that of the comparison villages (36.4), and the majority of the families targeted by the project (81.3%) had acceptable FCS, 16.4% having borderline FCS, with just a tiny percentage (2.4% of them) having poor FCS. The percentage of households with poor consumption profiles was significantly higher in the comparison villages (14%) than it was for the project beneficiaries (2.3%) even though a large proportion of both groups of households had acceptable FCS, with a higher percentage of project beneficiaries having one (81.3%) than the comparison villages (51%).

Figure 4. Baseline FCS and FCS of households from the project and comparison villages



Outcomes and development results from the three phases of BORESHA

There are several activities implemented under the project that supports economic development and greater household resilience. These activities are aimed to contribute to the project's objective of promoting economic development and resilience, particularly among the vulnerable groups in the Mandera Triangle and are delivered under three outcomes:

1. Communities in the Mandera Triangle are more resilient and better prepared to withstand and respond more effectively to shocks.
2. Individuals and communities become more self-reliant through increased skills and opportunities for cross-border employment, diversified enterprise and livelihoods.
3. Cross-border rangeland and other shared natural resources are more equitably and sustainably managed.

The descriptions that follow highlight the extent and depth of resilience achieved under the different project outcomes.

Outcome 1: Communities in the Mandera Triangle are more resilient and better prepared to withstand and respond more effectively to shocks

This outcome considered enhanced community-led disaster risk reduction through community engagements in creating disaster preparedness plans; increased community awareness of community-based early warning & early response; engaging various stakeholders to support community DRR plans; and protecting the most important source of livelihood (livestock) through the promotion of livestock insurance products. Progress achieved toward achieving outcome 1 was assessed using a set of output and outcome indicators as discussed below:

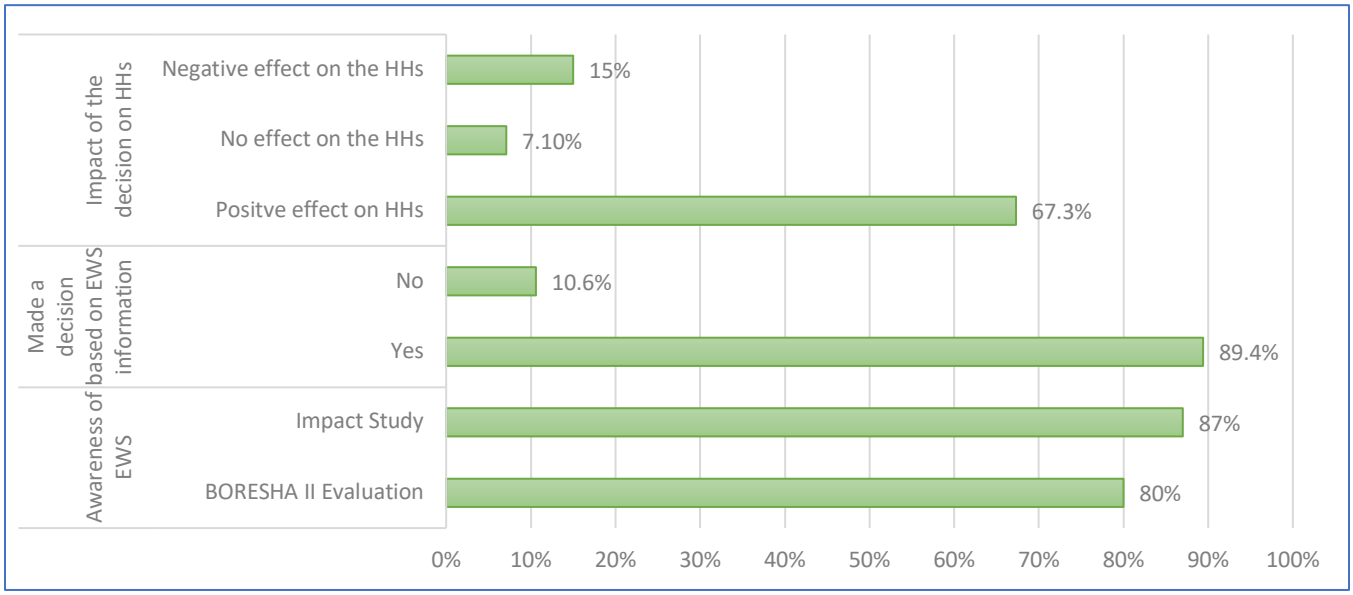
Outcome indicator 1.1: # of community associations that know the early warning signs and know what to do in case of an emergency or disaster

The project conducted community-owned vulnerability and capacity assessments (COVACA), an appreciative enquiry approach to identify the different vulnerabilities, and risks and to identify capacity including traditional coping mechanisms of the target communities. To be prepared for the risks, the communities and key stakeholders were trained and supported in the development of disaster risk reduction (DRR) plans, supporting the communities in implementing some of the key priorities in the plans (training of cDRR committees, dissemination of early warning messages and rehabilitation/construction of DRR infrastructure), and the plans integrated into the government development plans.

About 43% of the households interviewed (29.9% in Kenya, 68.4% in Ethiopia and 30.8% in Somalia) had benefited from the DRR interventions. The project facilitated the assessment of communities' vulnerability using the Community-owned Vulnerability and Capacity Assessment (CoVACA) tool and Disaster Risk Reduction (DRR) Action Planning. A thorough risk analysis was produced as a result of the COVACA assessment to guide decisions regarding resilience objectives. Communities were able to identify and rank common shocks thanks to the exercise (based on their frequency of occurrence and the magnitude of their impact).

At the time of baseline, BORESHA I and II evaluation and impact study, households and informants across all project areas reported being better informed about the shocks. The number of households that claimed to be aware of risk and hazard early warning indicators increased slightly (from 80% at the time of BORESHA II evaluation to 87%), according to the impact study, even though it was not assessed at the baseline (Figure 5). Also, 18.1% of the families highly agreed, 32.9% agreed, 25% were neutral, 19.1% opposed, and 5.1% strongly disagreed with the assertion that they were more informed by shocks and stressors as a result of contact with the project. Furthermore, 89.4% of the households surveyed stated that they made a decision based on the early warning information, with 67.3% of these households reporting that the decision had a positive effect on their households, 7.1% reporting that the decision had no effect, and 15% reporting a negative effect as a result of the decision. As a result, nearly all (96.3%) of the households interviewed reported being satisfied with the DRR interventions.

Figure 5. Knowledge of EWS, decision making and impact of decision making on household



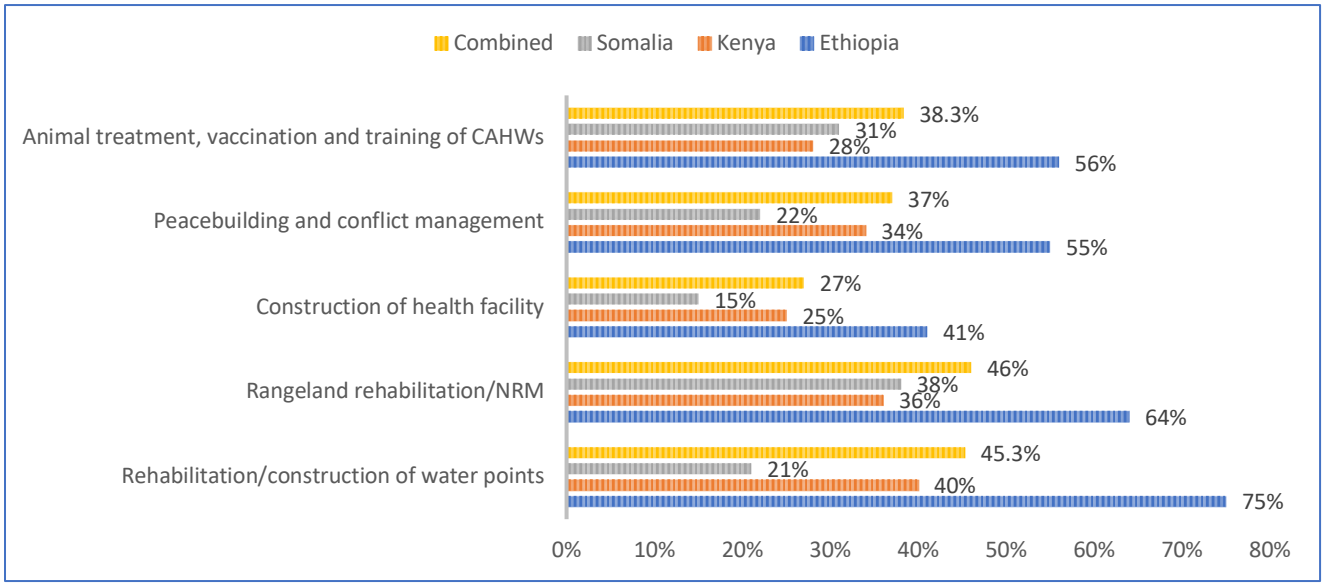
In the FGDs, the project villages felt better prepared and expressed some confidence in the capacity of the cDRR committees to help the community in difficult times. Asked subjectively how well they felt prepared in case of a disaster on a scale of 1 (not prepared at all) to 10 (completely prepared), the three comparison villages in Kenya, Somalia, and Ethiopia consistently reported being in the lower three levels (1-3) compared to project beneficiary villages who rated their preparedness at level 3-5. While all the project villages affirmed the existence of DRR plans and early warning systems, none of the comparison villages was aware of the same.

> *"Before BORESHA, we did not have a strategy to cope with the shocks. Now we have a DRR plan and an agreement with the neighbouring areas on sharing the rangelands. The rehabilitated water points are functioning and managed well and have been helpful during the dry seasons."*
>
> 👨‍🦲 DRR Committee member, Girisa, Mandera North.

Outcome indicator 1.2: # of DRRM plans funded or integrated into local development plans

The project trained almost 2,000 individuals in the CoVACA process, involved communities in the DRR planning process, and developed 38 community adaptation action plans (CAAPs). While at the baseline only 26.5% reported that the community had DRR plans, at the time of the impact study, 87% of the households surveyed (70.7% in Kenya, 80% in Ethiopia, and 61.9% in Somalia) said they had participated in the creation of community DRR plans, and 87% of them (74.4% in Kenya, 97.7% in Ethiopia, and 86.9% in Somalia) said they had received DRR training in the previous two years preceding the study. It was clear from the fieldwork that the project had increased participation in DRR planning, with project households participating in training, awareness creation sessions and planning process for DRR plans development. In Kenya, 22 CoVACA assessments were conducted and a total of 7 ward-level DRR plans were developed under 3 phases of BORESHA. The key priorities identified in the DRR plans included: rehabilitation and construction of water points, animal health, treatment and vaccination, the construction of health and educational facilities, natural resource management and rangeland rehabilitation, and peacebuilding and conflict management among others (Figure 6).

Figure 6. The key priority areas in the DRR plans



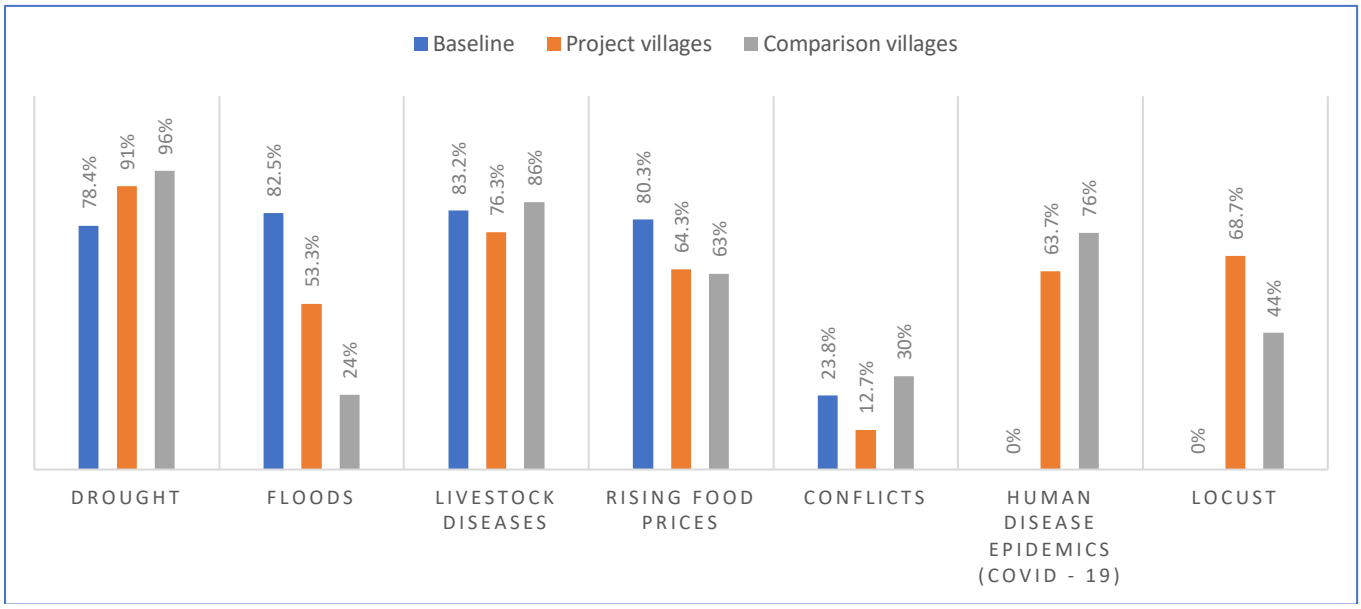
A key impact reported was the actualisation of the CAAPs developed during the DRR planning processes. The project village highlighted that some priorities in their DRR plans were implemented, the most beneficial being the DRR infrastructure, livestock health and rangelands management. In Kenya, the committees highlighted that some of the priorities identified in the DRR plans were integrated into the County Integrated Development Plan (CIDP). A review of the two Mandera CIDPs showed that several priorities identified in the DRR plans were incorporated into the CIDPs. For instance, as rehabilitation and development of water points were identified as key priorities in most of the DRR plans, the Mandera CIDPs invested in these infrastructures easing access to water for populations. Due to the absence of such participatory processes in Somalia and Ethiopia, there were no opportunities for integrating these proposals into government plans.

Some key areas of improvement that can increase the integration of the DRR plan are to align the timing of the DRR planning process with the government plans to enable feeding their priorities to these plans. The project should aim to link the DRR plans to sectoral planning in Ethiopia and the formulation of the district development framework which is part of the district council formation process in Somalia that is being facilitated by the Joint UN Program on local governance (JLGP) because Somalia and Ethiopia do not have a participatory development process like that used in the CIDPs. Early warning systems should also be deployed through other community structures including VSLAs, CAHW/CDRs, NRM committees, and TBCs to improve their institutionalization.

Outcome indicator 1.3: Proportion of shocks "well managed" by the target communities during the project

The population in the Mandera Triangle experiences significant levels of shocks and stressors, which hinder their ability to support themselves and build resilience. Data from the baseline and impact study suggests a similar "shock/stress profile" between the two groups as well as at the baseline, with droughts, flooding, epidemics (affecting humans and animals), recent locust invasion, and insecurity due to induced competition over resources being the shocks and stressors that the population experienced most frequently. The surveyed households were asked about the shocks they experienced in the last 2 years, as depicted in Figure 7.

Figure 7. Hazards and shocks experienced in last 2 years



Although the "shock/stress profiles" of the project and comparison villages were similar, there were few changes in the trends for each shock during the course of the project's implementation. For instance, the percentage of households in the project village and the comparison village who reported experiencing drought at the time of the impact study increased from the baseline due to the protracted drought. Similarly, the comparison villages that were farther from the river experienced a greater decline in flooding complaints. Particularly in the project villages, there was a decrease in the percentage of families reporting having livestock diseases, which may be related to the work done by the CAHWs/CDRs and the treatment and vaccination of animals. Surprisingly, the percentage of households reporting experiencing higher food prices relative to the time of the impact study decreased from the baseline both among the project and comparison villages.

Two additional shocks (Covid -19 and locust invasion) were also reported during the impact study, despite there being a slight variation in the number of households reporting shocks like drought, floods, livestock diseases, and conflicts at baseline and at the time of the impact study. A further inquiry into the shocks' frequency was made in the impact study. The majority of households (24%) experienced one of these shocks twice in the past 24 months, followed by four times (23.5%), three times (22.3%), five times (10%), or once (3.5%), indicating the high prevalence of these shocks in the Mandera Triangle. Nearly all of the households reported having faced one of these shocks at least once in the past 24 months. As outlined in the timelines of shocks that occurred during the implementation of BORESHA, the project areas experienced the worst droughts in decades (Table 6)

Table 6. Timelines of shocks that occurred during the project implementation

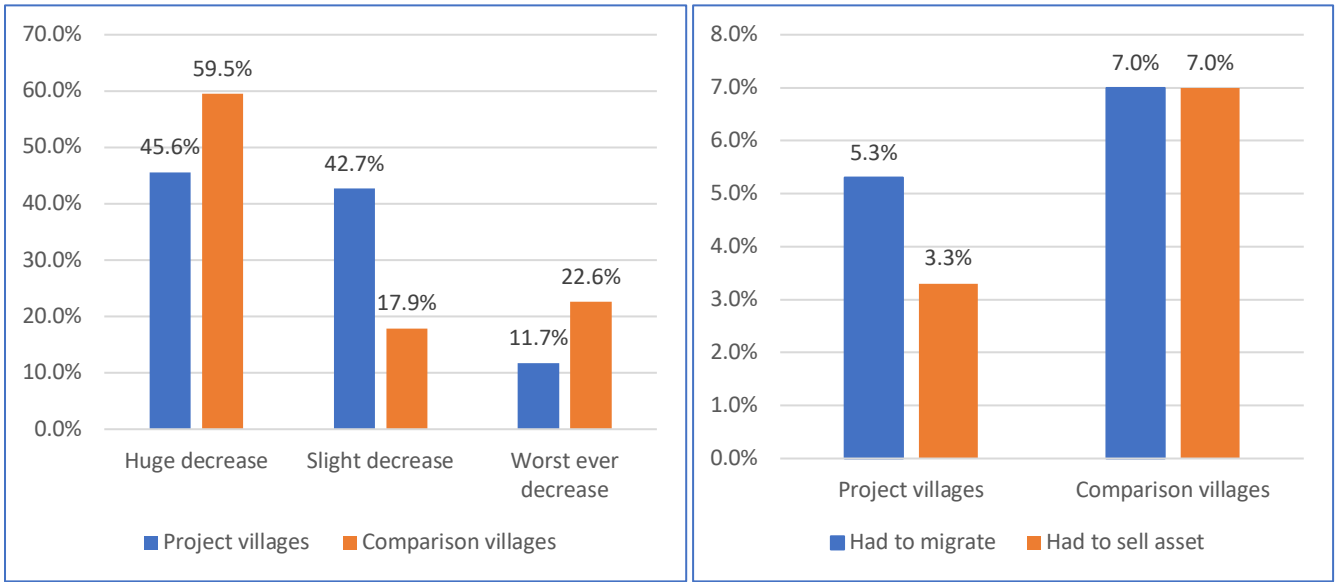
Event	Timelines
Covid – 19	The World Health Organization (WHO) first discovered an epidemic of a new coronavirus strain in Wuhan, Hubei, China, in **December 2019**. On **March 11, 2020**, the WHO declared the outbreak to be a pandemic.
	On **12th March 2020**, the Ministry of Health confirmed the first case of Coronavirus disease (COVID-19) case in Nairobi.
	Following the confirmation of two cases in Mandera on **Thursday, April 9**, a 30-day lockdown was declared on the County to stop the coronavirus's (COVID-19) spread.
Locust invasion	The worst locust outbreak in Kenya in 70 years as well as the worst in Ethiopia, Somalia, and India in the past 25 years began in **June 2019**. As of November 2020, swarms were primarily reported in Yemen and the Horn of Africa.
	The desert locusts were first reported in Mandera in **December 2019**, triggering the worst locust outbreak the country has experienced in 70 years.
Drought	The Mandera Triangle had a severe drought that significantly impaired pasture and water supplies in rural regions of Kenya, Somalia, and Ethiopia. As a result, pastoralist groups were forced to cross international borders in search of pasture and water.
Conflicts	Competition for resources has historically fuelled high and low points in inter-clan warfare in Mandera. More recent wars have been worsened by additional trigger factors such as rivalry between clans for political influence, land disputes, and attacks by al-Shabaab.
Others	In four counties in Kenya, including Mandera, 32 human cases of RVF—14 of which were proven positive—led to 11 fatalities (CFR 34%) as of **February 2021**, according to the World Health Organization.

These shocks had a considerable impact on livelihoods, resilience, and programming, according to the vast majority of the surveyed households and key informants. The comparison households (84%) reported more detrimental effects than the project target villages (76.7%). For example, the majority of the project and comparison villages (78.5%) claimed that the shocks affected their incomes. In comparison, 59.5% of the

comparison villages reported a significant decrease in household income, 17.9% reported a slight decrease, and 22.6% reported the worst-ever decrease in income, as opposed to 45.6%, 42.7%, and 11.7% of the project households who reported a huge decrease in income, a slight decrease, and an extreme decrease in income, respectively.

With 5.8% of households (5.3% of the project and 7% of the comparison villages) and 4.3% of households (3.3% of the project and 7% of the comparison villages) experiencing these shock-related distresses, respectively, migration and asset sales also happened as a result of shocks. The project interventions were crucial in assisting communities in recovering from the shocks, according to key informants and FGD participants. For instance, compared to the comparison villages, a higher percentage of the project households receiving BORESHA help reported recovering from the shocks (Figure 8).

Figure 8. Households experiencing different shock-related distress (income, migration and sale of assets)



Both the baseline and impact study examined how communities responded to shocks, particularly the sale of assets, while the impact study also gathered information on how households adopted negative strategies to cope and their access to remittance and savings that may protect them from these shocks. Although there was no baseline information on the proportion of households using negative coping strategies, the impact study revealed that more households from the comparison villages (65%) than the project villages (59.3%) were using at least one negative coping strategy. The sale of assets was a classic strategy to cope with shocks both at the baseline and during the impact study. However, the proportion of households selling assets including livestock, farming assets, transportation, and household items to deal with shocks decreased, especially so among project households. For instance, whereas 58.5% of households reported selling livestock assets at the baseline, this figure dropped to 30.7% for project households and 42% for the comparison villages at the time of the impact study.

Households were also questioned about the strategies or forms of assistance that helped them deal with the shocks. Households identified several strategies, which are highlighted in Table 7. It is important to note that more comparison households adopted some negative strategies, such as selling off assets, consuming less food, migrating, receiving remittances, and utilizing other forms of support. This might be because, in addition to having

higher incomes, they also had less income decline in the face of the shocks, had stronger savings, had better access to BORESHA support, and received more remittances than the comparison villages.

Table 7. Type of support or strategies that helped households cope with shocks

Asset sold by the household	Project villages	Comparison villages	Baseline
Sent livestock in search of distant pasture	32.3%	28%	-
Took children out of school	14.3%	17%	-
Early child marriage	9.7%	11%	-
Reduced food consumption	30.7%	35%	44.8%
Sold livestock	30.7%	42%	51.3%
Leased out land	5.0%	1%	-
Migrated	5.3%	7%	24.4%
Sent some family members to stay with relatives	7.3%	8%	-
Took up new/additional work (casual wage labour)	13.0%	14%	35.1%
Sold household items	3.3%	7%	34.8%
Took a loan from friends and relatives	2.3%	5%	55.9%
Received an unconditional gift	2.3%	0%	-
Sent children to work for money	1.7%	1%	-
Received emergency food aid from gov't or NGO	12.0%	14%	-
Received cash transfer from BORESHA project	25.0%	11%	-
Received cash transfer from gov't/another project	5.3%	9%	-
Relied on remittance from a relative that migrated	0.7%	2%	-

Outcome indicator 1.4: Number of livestock-dependent households protected by insurance

To give livestock keepers safety nets against climate change and other shocks, the project encouraged the adoption of IBLI. Studies indicate that IBLI can help stem the collapse of vulnerable but presently non-poor households into poverty following drought due to irreversible losses from which they don't recover.[3] The product covered camels, cattle, sheep and goats standardised into Tropical Livestock Units. [4] The actual sales only occurred in Kenya, although sensitization on IBLI was conducted across the regions, and in Kenya, the policies were purchased in two sales windows (preceding the semi-annual rainy season) every year (January – February, and August – September) and provided coverage for 12 months so that policies may overlap or accumulate. The contract triggers payment once it crosses the agreed trigger point, which can happen potentially twice in a year, in March and October, at the end of the long and short dry seasons, respectively.

Most of the beneficiaries rated the IBLI as an important product, with 91.5% ranking it as such, 7.1% rating it as somewhat important, and only 2.4% rating it as not significant. Among these households, 72.5% said they were sensitised on the product and 60.9% of them had purchased the product at least in one window. As a result, the level of awareness of IBLI among respondents across the three regions grew from a baseline of 30.7% to 69% at the time of the impact study. In terms of affordability, 9.1% of those surveyed indicated that the premiums were affordable, while 91.9% indicated that it was medium priced. The majority of these families (92.9%) had insurance for goats, reflecting the prevalence of these species in the region and their ownership by poorer households. Other insured animals included 73.8% cattle, 71.4% camels, and 69% sheep.

[3] Mude et al., 2009. Insuring against drought related mortality: Piloting Index Based Livestock Insurance.
[4] 1 Tropical Livestock Unit equals 0.7 camels, 1 cattle and 10 sheep and goats.

In addition to the premiums worth nearly KES 12,291,600 that they collected since the product launch, the insurers were able also to increase the uptake of other insurance products. 52.4% of respondents in the household survey reported having insurance and receiving a payout. Of them, 81.8% stated the payout surpassed their expectations, and 95.5% said they would keep insuring their animals. The clients could access other insurance products such as motor vehicles and life insurance. The agents selling the product were also engaged in small business, earning a commission or salary for the work and insuring their animals. In addition, the agents benefitted from the capacity-building initiatives by the insurers and partners.

An important difference between the project locations and comparison villages is related to the uptake of risk management strategies such as IBLI. Although IBLI was available across the county, in the project locations the product was available in its sixth window and over 2,230 households had bought it providing a cover for 5,367 animals (Table 8), while no policies were sold in the comparison village. However, it must be noted that the uptake of IBLI was cautious even in the project locations, mostly related to a decrease in the confidence of the livestock keepers in the product due to limited awareness of IBLI among the communities and delayed payouts. It must be noted that insurance products are hard to sell and the uptake of even conventional products in Kenya remains slow.[5] The IBLI is not any different; in fact, it operates in areas where insurance is unknown.

Table 8. Aggregate data for IBLI[6]

Result Area	Achievements
Sales windows	6
Policyholders	2,230
No. of Policyholders Paid	396
Radio awareness meetings	350,000
No of Village Agents Trained	440

Through radio, 350,000 people were sensitised on IBLI, 2,230 farmers had their livestock insured, and 226 had received compensation. The majority of the surveyed households who purchased the insurance (78.6%) said they were satisfied with the product; 4.8% said they were extremely satisfied with it; 7.1% were neutral; and 9.5% were not satisfied, which was encouraging to note. Of these groups, 88.1% of them said that they will recommend the product to other livestock keepers. Participants in informant interviews and FGDs did, however, express some challenges with IBLI. The ease and convenience of purchasing the insurance product; responsiveness and feedback from the insurers and insurers agents; perceptions about the accuracy of the index in predicting weather conditions; payment of the indemnity including awareness of the trigger, timing, period of risk coverage, and type of risk covered; and shariah-compliance were among the IBLI aspects that the respondents said they were "not satisfied with."

Outcome 2: Individuals and communities become more self-reliant through increased skills and opportunities for cross-border employment, diversified enterprise and livelihoods.

BORESHA works with communities to diversify their incomes, providing skills and scholarships, business skills, grants and cross-border support and facilitating village saving and loans associations (VSLAs). The provision of these interventions was meant to enable the community members to pursue income-generating activities and strategies outside of pastoralism and agro-pastoralism, to diversify their livelihoods. By expanding access to feed, fodder and animal health services, the project is strengthening the livestock sector, a key value chain in the

[5] The uptake of conventional insurance is estimated to be in the ranges of 3 and 4%.
[6] BORESHA. 2022. Technical Brief. Promoting Index-Based Livestock Insurance in Kenya

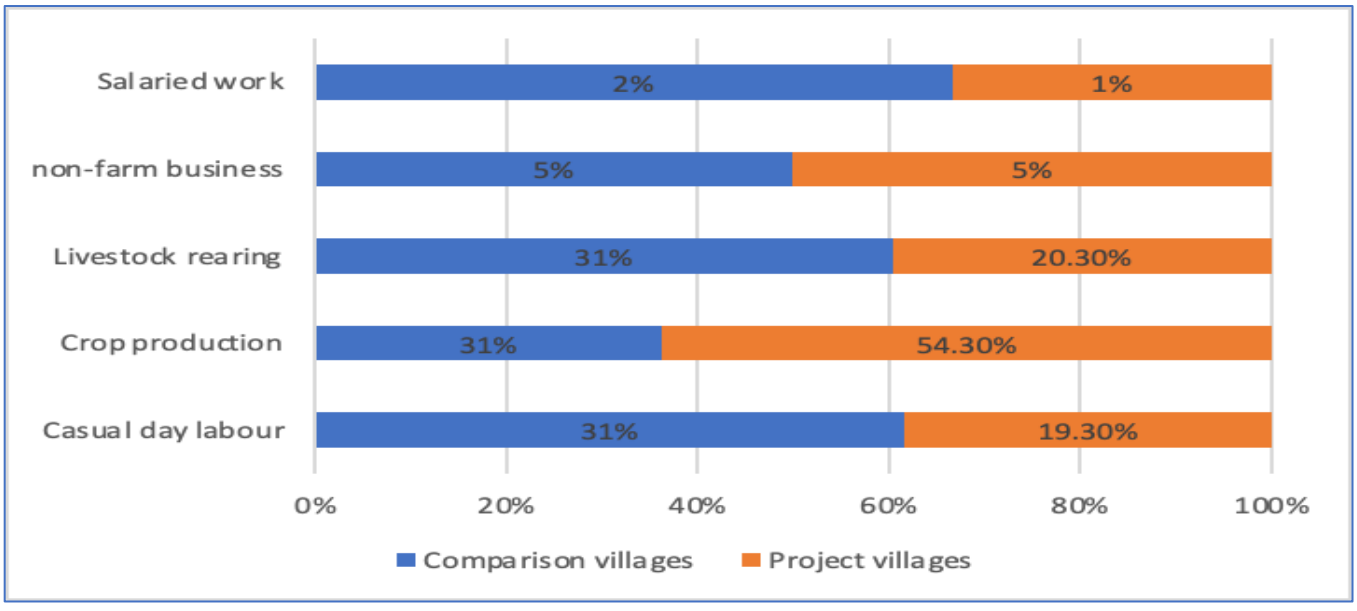
Mandera Triangle. The informants interviewed were very generous in their assessment of the quality, timeliness and impacts of the livelihoods and private sector engagements across the three phases of the project. As one key informant noted, “each thematic area has its own story”. Progress achieved toward achieving outcome 2 was assessed using a set of output and outcome indicators as discussed below:

Outcome indicator 2.1: % Increase in the number of livelihood resources being used by households

Livestock, rangelands, water supplies, and agricultural land are crucial resources supporting subsistence pastoralism and agro-pastoralism, as previously mentioned and found in the baseline study. The project made critical investments to support these livelihoods and enable them to cope with shocks while supporting households to diversify their livelihood activities. As a result, compared to the baseline situation in which most of the households (65.7%) reported utilizing a single livelihood resource, the households were able to strengthen their existing livelihoods and diversify them. For instance, the average household income from existing activities rose from a baseline of USD 35.15 per month to USD 87.01 per month.

The households were questioned regarding their livelihood activities to understand what was driving the changes in the average household income. At the time of the baseline and impact study, the majority of the households cited pastoralism and agro-pastoralism as the main economic activity. For instance, at baseline, crop and livestock production dominated the livelihood activity, with 44.8% and 33.8% of the households, respectively depending on them, while in the impact study, 20.3% and 31%, and 54.3% and 31% of households in the project and comparison villages were dependent on these livelihoods, respectively. Notably, more households from the comparison villages (31% compared to 19.3%) were dependent on casual labour, while a comparable share of households (2% and 5%, respectively) were salaried or based on non-farm enterprise (Figure 9). However, there was a trend to diversify away from these sources. For instance, over half of the households (52.7%) in the project villages reported having an alternative source of income in case their major source of income was lost during the impact study, compared to 36% in the comparison villages. In contrast, households in the baseline scenario reported being overly dependent on livelihoods related to crop agriculture and livestock.

Figure 9. Sources of livelihoods of the surveyed households



Outcome indicator 2.2: % increase in revenues of the target households

In addition to being able to increase their incomes, households were also able to diversify the types of livelihood activities they engaged in, as seen under outcome indicator 2.1. The project implemented several livelihood diversification strategies, particularly those that revolved around the livestock/crop agriculture value chains. Other potential strategies include the use of invasive species for the production of charcoal briquettes and animal feeds, the development of skills (vocational skills and business/trade), and the strengthening of livelihood sources, as recommended by the baseline study. These initiatives allowed more households in the project villages than in the comparison villages to diversify their sources of income. These households were able to diversify their income sources, but the impact study team found that these sources are nonetheless vulnerable to the same shocks.

Outcome indicator 2.3: % of individuals describing better health and lower rates of attrition amongst their herds

The activities supported under this component included the training of CAHWs/CDRs, construction of animal health posts, distribution of animal health vouchers, urea blocks and farm inputs, formation and support of livestock common interest groups (LCIGs) and support to fodder and tree-based enterprises all of which helped protect livestock assets.

Most of the households surveyed (82%) had benefited from animal health, vaccination and production interventions. 22 Mass vaccination and treatment initiatives for animals reached a total of 2.839 million animals. Vaccination increased resistance and decreased animal death. Dr Ali, the Veterinary Director for Mandera County, claimed the current drought situation is worse than it was in 2019, and it is predicted to get worse, but if initiatives continue, a crisis can be avoided. The respondents regarded the quality of livestock extension services as low at the baseline, with 39.8% rating them as least favourable, 30.8% rating it slightly favourable (rank 1), and 16.9% rating it somewhat favourable (rank 2) 7.8% rated it 3, 3.6% gave it a 4, and only 1% thought it was the best.

In all FGDs, participants attributed improved animal health and disease resilience to vaccinations and treatments for animals, and they credited CAHWs/CDRs with improved rural outreach and service quality. The CAHWs/CDR played a significant role in the improvement of animal health, as they were the link between the project, government stakeholders and the community. The beneficiaries were questioned regarding the state of the livestock during the previous two years. 64.2% of them said the livestock condition was "fairly good," 16.7% thought it was "good," 16.7% thought it was "bad," and the remaining 2.4% thought it was "very poor." Although the number of animals reached by the intervention was fewer than the millions of livestock in the Mandera Triangle, the project had reached 2.839 million animals in Kenya, Ethiopia and Somalia and additional livestock were reached by the 114 CAHWs and CDRs.

The project supported the establishment of livestock common interest groups (LCIGs) to promote best practices in livestock management, facilitate the exchange of information and knowledge, provide support and assistance to members, represent the interests of members to policymakers and stakeholders, and support and enhance the livelihoods and well-being of its members through the sustainable management of livestock resources. A total of 19 LCIGs were trained and supported in fodder production, and 8 fodder storages, an agricultural market and 2 animal posts were constructed. 63% of the households surveyed were aware of the existence of the LCIGs in their locality. These LCIGs were said to be instrumental in promoting better livestock husbandry and increasing fodder production. Farmers in Dollo Ado, Dollo Bay, and Mandera reported growing fodder for their animals as well as for sale as a source of income after receiving seeds, other inputs, and training on fodder cultivation from the project. In 2021, for example, farmers in Border Point 1, Aresa, Tarama, and Girisa produced enough fodder that they even sold to the DRC's emergency drought intervention.

Even during the dry seasons, those who have received training in fodder production report having more options for their livestock. Members of the LCIG who received training in the production of fodder also reported higher profits from the sale of fodder. Beekeeping groups received technical and business training, as well as modern beehives and harvesting kits, as well as training in contemporary beekeeping techniques. The introduction of modern beehives, according to feedback from the beneficiaries, improved honey output while also assisting in the reduction of deforestation in areas where beehive makers previously cut down large trees to make beehives.

"The harvests of fodder are now greater than those of maize and other crops, making it one of the most lucrative crops. We utilise the fodder for our animals and may store and sell it to the market thanks to the fodder store."

👷LCIG member and farmer in Fiqow, Dollo Ado, Ethiopia.

Despite being very beneficial, the majority of the improvements shown in the project's animal health component are short-term, addressing the demand for inputs immediately (e.g., through animal vaccination and treatments, and distribution of agricultural inputs and fodders). For farmers and livestock keepers to have access to agricultural inputs including seeds, irrigation technologies, fertilizer, and extension services, a competitive and self-sustaining market needs to be developed and strengthened.

It may be possible to strengthen the supply networks for these inputs by attracting larger input suppliers, working with them to understand the market, and supporting them to invest in the infrastructure of distribution networks to directly supply products to the few existing agrovets through more regular deliveries and regional sales hubs. For the CAHWs/CDRs to act as distribution agents in rural areas and make it easier for people to access high-quality, reasonably priced inputs, this will need to be done in conjunction with improving the business and management capabilities of current agrovets and service providers and strengthening the links between them. Through facilitating business-to-business linkage meetings between them, they can develop sales agent or distributorship agreements, sales agreements and terms, and organize joint marketing and field days. Agrovets, CAHWs/CDRs, and producers will experience much lower costs as a result of these better networks and capacities, which will increase the availability of inputs in rural areas.

Outcome indicator 2.4: % of HHs in targeted communities getting better results from their SMEs

During the baseline study, it was also noted that 64.9% of respondents said that most of the time, the goods they required were not typically available in the markets. A snapshot of cross-border traders by Tetra Tech during BORESHA I found that most small businesses at the border (68%) engage in trade as their primary source of income, but they face challenges in access to credit and information gaps. Among other interventions, the project provided business grants that facilitated local production through support to community structures such as livestock common interest groups (LCIGs) and NRM committees and councils and provision of inputs and services, supported cross-border trade and developed a short message (SMS) platform with Sauti Africa to ease sharing of market information and enable traders to access market prices. The mobile platform, which was introduced in July 2020, was intended to provide helpful business, weather, and health information to traders operating in the Mandera Triangle, but little use of it was made of it because no mobile service providers in Somalia and Ethiopia were willing to partner with the project.

The provision of a business grant facility alongside business skills training and cross-border support was seen as. A game changer in the informal cross-border trade. Over 800 jobs were created and businesses were able to stay afloat thanks to the 78 start-up or business growth grants, worth a total of 608,00 Euros. The 78 grantees of the Business Grant Facility (BGF) who took part in the survey and FGDs reported successful business expansion, business diversification, access to new markets, and other beneficial outcomes. The grants also came with training

that was useful for managing both the grants and businesses in general. These comprised, among other aspects, financial management, market research, record keeping, and customer acquisition.

"Eleven members, including five women and six men, founded our co-operative (Mustaqbal General Furniture Co-operative) in Dollo Ado town in 2011. Before the outbreak of the Ethiopian crisis and the subsequent decline in sales, the firm was not performing well. We received grants of $10,000 and training in business skills in 2020, which enabled us to invest in and grow our company, which now has $13,000 in operating working capital. Every six months, we were able to save $500 in dividends and hire 7 more employees for our enterprises, which have since expanded to include Malkadida and an additional shop in the town of Dollo Ado".

Mohamed, Co-operative member and grants beneficiary in Dollo Ado

In light of the difficulty in locating an appropriate service provider in Somalia and Ethiopia, the usability of the mobile-based trade information and social accountability platform continues to be low and with limited coverage. Traders often had little understanding of the platform, believed prices to be inaccurate, and preferred to communicate with other traders directly. Although the prospect of its use may increase with the use of mobile networks by different service providers across borders and Safaricom's arrival into the Ethiopian market, the likelihood of the intervention lasting is slim. A better option for disseminating market information should be radio, which has a wider audience.

Outcome Indicator 2.5: % of VSLAs self-reporting an increase in household income

The VSLAs can and do contribute to household-level resilience, especially when combined with training and awareness creation and as a result even at the baseline 39.1% of the households surveyed had reported having at least one member of the household in the VSLAs. A total of 195 VSLA groups with 4853 members were formed, trained, and supported to save money and disperse loans. A handful of these groups were also linked to banking institutions so that their members could access financial services. Compared to a baseline of 39%, 79% of those surveyed during the impact had one member of their household participating in the VSLAs, nearly all joining the VSLAs following mobilisation by the BORESHA project. The membership was predominantly female, with 51.2% of the household having a female member enrolled on the VSLAs, 24.8% were male members enrolled in the VSLAs, and 24% had both male and female household members enrolled.

More households who were mobilised by the project are now saving with the VSLAs, and some of them have borrowed from the group, according to FGDs participants. In the household survey, 52.4% of respondents reported borrowing money from the group in the previous two years. The most frequent justifications for taking out the loan included starting a business (31%), for household consumption (25.7%), purchasing livestock or livestock inputs (12.7%), paying school fees (15.3%), paying medical expenses (117%), purchase agricultural inputs, and repay debt (8.3%).

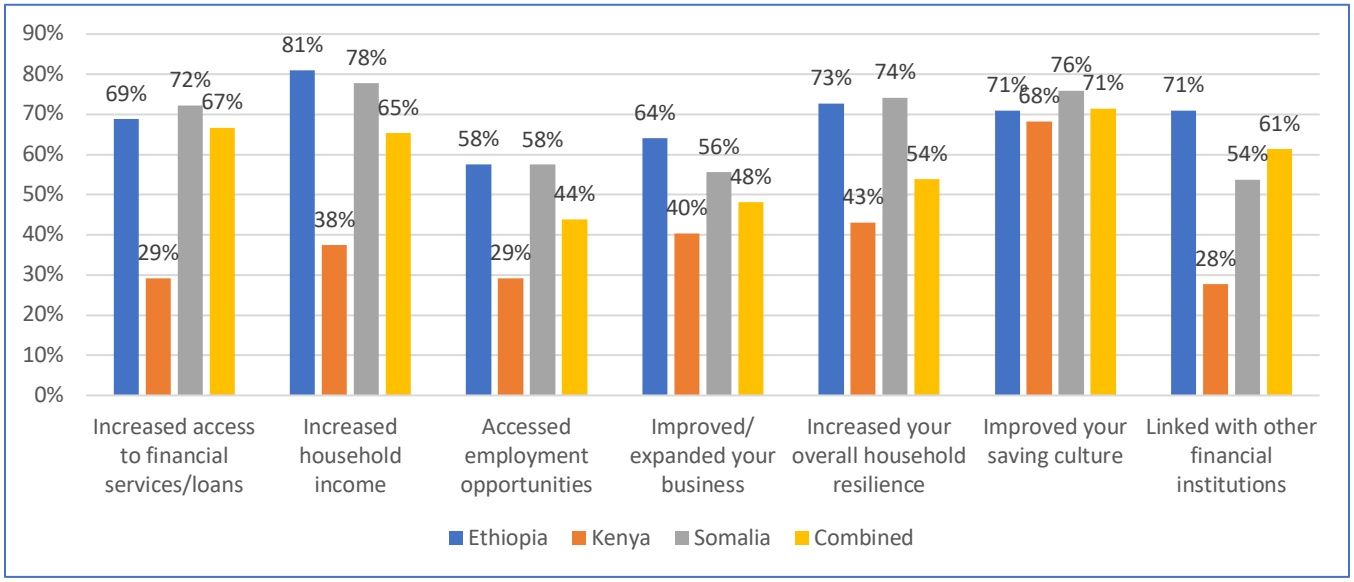
The project has had a significant impact on VSLA members since it has helped them develop better-saving practices and has given them access to financing when they need it. Some VSLAs have expanded and started new enterprises that they run and own, giving their members a means of economic empowerment. By hiring shopkeepers and other temporary workers, they have also given other community members jobs. Likewise, since joining the VSLAs, their overall household income situation had also improved.

"Although we had started our VSLA group in 2018, we were not active until we were contacted by BORESHA. Following mobilisation and training, we started a monthly contribution of KES 600 per month. A monthly saving of KES 100 goes to the social fund and the remainder is deposited in the group account. We currently run several businesses including a tea/coffee shop, a vegetable kiosk and a small shop. We have just withdrawn part of our savings (KES 240,000) and are in the process of livestock trade. The group cohesion has improved, we support each other in case of any problem and members have access to loans of up to KES 50,000."

👩‍🦱Toosi Waaberi VSLA Group in Bulla Dodai, Rhamu

The key improvements brought about by the VSLAs are depicted in Figure 10 and include families' increased access to financial services or loans, higher household incomes, business expansion or improvement, and closer engagement with financial services. For instance, at the time of the baseline survey, slightly more than four in ten (43.1%) of the households who said they had at least one person who belonged to a VSLA reported a rise in income. In the impact study, the combined percentage for the three regions rose to 65.4%. Even though most of the beneficiaries interviewed indicated satisfaction with the VSLAs—39% were extremely satisfied, 48.2% were satisfied, 15.3% were indifferent, and only 2.9% said they were dissatisfied—some critical areas of weakness were found. For instance, many groups expressed concern that their need for loans cannot be met by current levels of saving accumulation. These groups understood the value of having connections to financial service providers, but those in Kenya were apprehensive about the interest rates applied to loans taken out and made it plain that they preferred grants and revolving funds managed by them over bank loans. Connecting VSLAs with all possible and existing support structures is necessary. For instance, in Ethiopia, the cooperative office and VSLAs can be connected. The VSLAs can be connected to all available microfinance institutions in Kenya, Ethiopia, and Somalia so they can receive financial services for managing savings and finances.

Figure 10. The benefits of the VSLAs in the last 24 months



Outcome Indicator 2.6: Number of women and youth who can access jobs and/or business opportunities within 12 months of graduating

TVET skills are crucial for beneficiaries to diversify their incomes, but they can also offer skilled labour and job prospects to help them become more resilient. Additionally, the certifications equip young people, primarily from disadvantaged households, and increase their chances of finding work both during and after disasters. Particularly in the context of the Mandera Triangle where risks for youth to engage in violent extremism and criminal activity, inclusive access to marketable vocational skills was seen as a way of providing them with opportunities and contributing to their aspirations and mental well-being. The project, therefore, trained the youths in all three phases on practical, marketable skills, such as welding and metal fabrication, motorcycle repair, tailoring, salon & beauty therapy, electrical and electronics, and carpentry among other skills.

985 TVET graduates were trained during the course of the project's three phases in a variety of courses, provided business development skills, and given support in the form of appropriate start-up kits. In the household survey, 27% said that at least one member had taken part in TVET training, received a scholarship, or completed business skills training. They reported receiving work kits in addition to the training, and 83.5% said they were already applying the knowledge or skills they had learned, with 87.8% of them earning an income from it averaging KES 800 per day. The lack of equipment (particularly for BORESHA III beneficiaries), the absence of markets in villages and kebeles, and the inflationary impact of the local currencies' depreciation against the US dollar were cited as the main barriers to skill utilisation.

The respondents cited agro-enterprises, plumbing, electrical, auto-mechanical, tree-nursery enterprises, driver, and beauty salons as the occupations with the most marketable skill sets. The average daily wage from mechanical, plumbing, beauty salons, and drivers, respectively, was Ethiopian Birr (ETB) 2,000, ETB 1,200, ETB 1,000, and ETB 700 per day, according to discussions with TVET trainees in Dollo Ado. Also, 84.1% of those who were running small businesses claimed that the training, cross-border dialogue, and other assistance provided by BORESHA helped their business (SMEs) grow. Moreover, 97.6% of the respondents were either satisfied or very satisfied with the skills, business training and scholarships provided by the project.

The study's interviews with trainees revealed that they were extremely grateful for their training and the work kits distributed. Graduates from TVET institutions possess abilities that have enabled some to find significant sources of income. Some of the young people trained through both institutional and enterprise training have since started their businesses, some of which also employ others. Nearly all of them acknowledged using their skills to generate income but said they were having difficulty starting their own business. Yussuf Mohamed, a mobile motorbike repair technician reported an income of KES 600 per day for 15-20 work per month. The primary obstacles to beginning their own business were their inability to save enough money from their current jobs or to obtain credit or loans. Key informants commended the project's contribution to resilience in terms of enhancing youths' technical abilities, earning capacity, business management skills, and social standing. Similar results were also reported from the TVET trainees' BORESHA tracer study.

Outcome indicator 2.7: % Community members reporting improvements from the community infrastructure established/rehabilitated, supporting cross border employment / diversified enterprise and livelihoods

At the time of the baseline survey, just 15.6% of respondents said they were satisfied with the overall perception of these services' accessibility or general quality, and 64.7% said it was below satisfactory (reported by 64.7%. More than 30% of respondents gave water for irrigation, livestock extension, agricultural extension, and WASH services a score of zero, making them among the lowest-rated sectors (the lowest rank, on a scale of 0 to 5). As a

result, a key component of building communities' resilience was the development of some community infrastructure.

The impact assessment team noted that the project could only operationalize a small number of these priorities in each village due to the vast number of priorities specified by the various village DRR plans. Nevertheless, as previously mentioned, these community infrastructures were a crucial part of enhancing households' resilience to shocks. An example is the 400-metre irrigation canal that was built in Border Point 1, which significantly decreased water waste, saved fuel, and made more area available for cultivation under the irrigation scheme. The story of Habiba Abdi, who contrasted the circumstances before and after the construction of the irrigation canal, was recorded by the impact study team (Box 2).

Box 2: Construction of Border Point 1 irrigation canal

An acre of farmland owned by Habiba is located close to the BORESHA's recently built irrigation canal. She stands to gain a great deal from both increased income and savings. She would purchase 15 litres of fuel before the canal's construction and hire three labourers to work alongside the family. Traditional earth canals were terrible. Before getting any water to the farm, she explained, "you would have to water the canal." To keep an eye on the canal and stop canal breaking and floods, she had to hire more help. She employed three workers, paying them each KES 1,000 every watering cycle, to water the farm at least four times a month to adequately irrigate her acreage. The amount of fuel required every watering cycle was decreased from 15 to 7 litres after the construction of the new canal. The amount of labour needed was also lessened because she no longer needed to hire extra workers to keep an eye on the canal for breaks and flooding.

"We can produce more, more quickly, and more efficiently because of the canal, training, and agricultural inputs. More importantly, we can meet local market demand and generate cash. Farmers are more effective because they are taught the techniques, methods, and approaches to increase yield, including the supply and distribution of high-quality seeds, the identification and treatment of crop diseases, the use of conventional tools and materials to combat crop pests, and many other cutting-edge farming methods" she said.

The project used cash for work approach to construct or rehabilitate several community infrastructures and rangelands. These infrastructures were critical in enhancing agricultural production, contributing to disaster prevention and supporting communities' access to basic services. As indicated above, the construction of an irrigation canal through CfW at Border Point 1 improved access to water for irrigation, and reduced irrigation costs by minimising water losses and minimising seasonal flooding. Farmers reported that they could open up new areas for cropping as more water was available downstream. For instance, the farmers' organisation was able to reach and supply irrigated water to 40 farms thanks to the new irrigation canal and pumps. The new pumps are energy-efficient and run on 5 litres of fuel for 4 hours of watering over 4 "*Taacab*" local measurements of 10m by 5m square of land. Farmers pay KES 150 per watering season for maintenance.

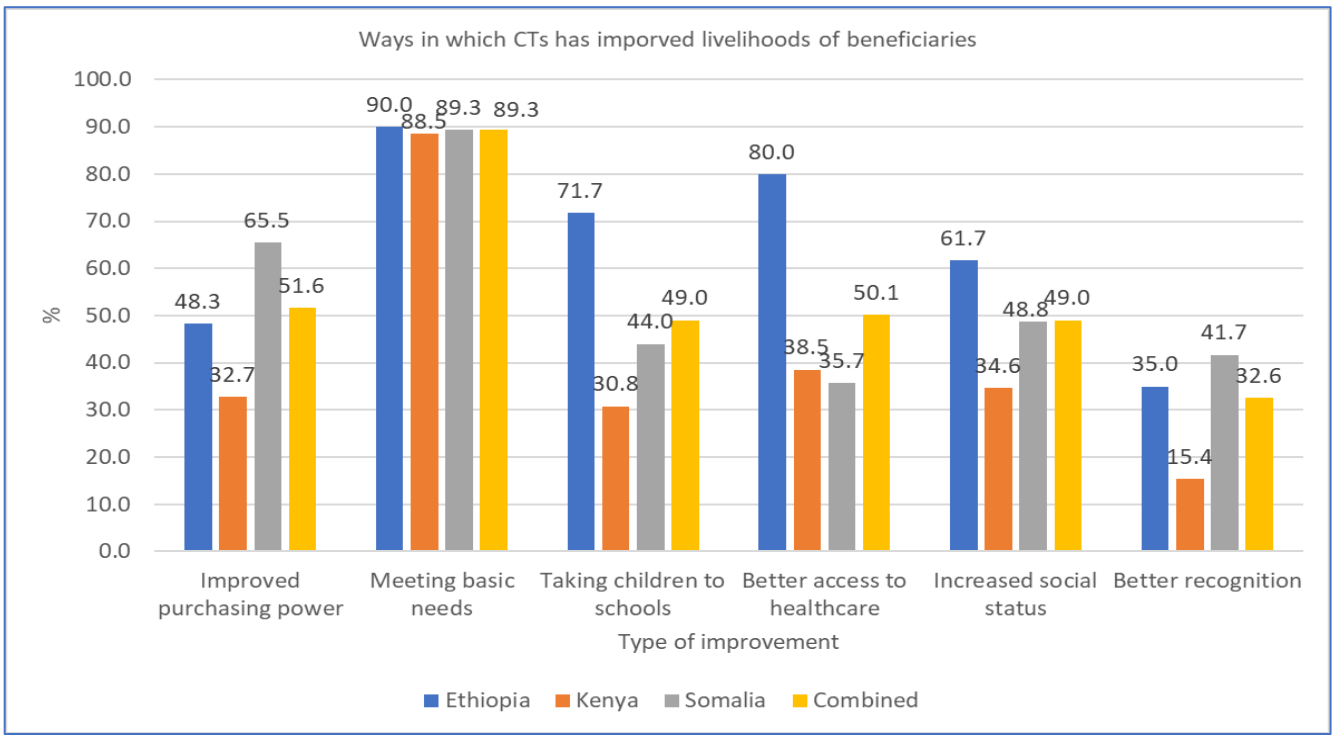
In the CfW initiatives 9,265 recipients benefited directly from the work at 265 sites participated, in addition to 55,590 indirect beneficiaries. 300 beneficiary households were surveyed, and of those, 79.9% had benefited from cash transfer initiatives, 76.7% had taken part in the CfW activities, and the remaining (11.3%) had received unconditional cash transfers. According to the FGDs, these households were chosen based on a set of mutually agreed-upon selection criteria. The CfW rate took into account the casual labour wages in the program areas in determining the number of working days per month. For instance, as agreed upon by the implementing partners, the CfW wage rates were established at KES 1,400 - 1,800 for skilled labour and KES 800 - 900 for unskilled labour in Kenya, USD 2-4 in Ethiopia, and USD 5-7 in Somalia.

"The selection process of the activities such as cash for work, input support, training and TVET skills was open and participatory involving local administration and elders. For example, we were involved in reviewing all the applications of the TVET trainees. While we can ensure equitable and fair selection, our involvement eased the management of any complaint that may arise after the beneficiaries are selected. Besides the vulnerability of the household, we considered gender, age and other criteria such as the representation of the different communities and categories of households (IDPs, host community and minority) in our selection and most people can attest that the process was fair and open."

👨‍💼Key informant, Dollow Local Administration, Somalia.

When asked how the cash transfer had improved their standard of living and income, all of the households stated that it had, citing among other things an increase in purchasing power, the ease with which they could meet their basic needs, the use of cash transfers to send children to school, gain access to better healthcare, and assist with other social issues (Figure 11). In the same way, respondents to the FGDs and KIIs connected the cash transfers with a rise in overall spending on food and non-food items, which in turn affected the quantity and quality of food consumed. However, there was agreement that the CfW efforts, while delivering short-term advantages for extremely chronically poor households, were less successful in alleviating chronic, structural food insecurity. Nevertheless, the assets produced and capacities for adequate maintenance of these facilities were said to be long-term benefits of the infrastructure rehabilitation.

Figure 11. Ways in which the cash transfer improved the livelihoods of beneficiaries



Outcome indicator 2.8: % community members reporting an increase in cross-border employment opportunities

In the Mandera Triangle's economy, informal cross-border trade plays a significant role in supplying the area with necessities like goods and services. Livestock, fresh vegetables, foodstuffs, and electronics are among the commodities traded, while a large portion of border trade is unofficial and takes a more informal form. BORESHA created structures aimed at fostering a favourable environment for sustainable growth by making use of the strong cultural links, social bonds, and language that promote trade. These structures included:

- The Tri-border business committees (TBCs) are composed of different stakeholders, including government officials and traders, to advise upcoming businesses and the grantees supported by the programme, and sustain private sector engagement.
- Business Development Centres to provide business-related advisory services.
- Mobile-based trade information and social accountability platforms provide important market information for the business.

The work of the TBC was known to 88.3% of those interviewed, but only 18.5% of them stated that they had benefited from the aforementioned cross-border support activities. As noted by the key informants and FGDs noted several benefits of the BORESHA cross-border trade support, but most of these interventions were at the systems level and it was challenging to quickly see the impact at the household level. As noted by Hawa Mohamed Ali, a member of the Belet Hawa TBC who had also benefitted from the business grants, these interventions were essential in assisting cross-border traders like her to gain access to operating cash, which enabled her to grow and diversify her business. She now has connections with Ethiopian traders through her membership in the Belet Hawa TBC, which helps her better understand the market, manage her supplies, and meet the demands of her consumers. The business skills training contributed to improved business practices.

"Cross-border trade is challenging for women since there are many dangers and red tape to deal with. Without sufficient networks and funding, it is easy to lose all of your money. I had the good fortune to benefit from the Business Grant Facility and sign up for the Belet Hawa TBC at the same time. With the help of cross-border contacts and dialogues, I was able to expand and diversify my business, and now I have suppliers and customers on the other side of the three borders. I can monitor trade dynamics and profit from price variations and trade flows."

🧕Hawa Mohamed, member, Belet Hawa TBC

Outcome 3: Cross-border rangeland and other shared natural resources are more equitably and sustainably managed

The Mandera Triangle's rangelands are in danger from many changes, including shifting resource use and management regimes, worsening land degradation, and climate change-related drought cycles that are more frequent and shorter. Lack of proper frameworks for managing local resources and capacity issues among the major stakeholders, on both the community and government extension services sides, exacerbate these problems. To address the issue, the project introduced and trained communities in the Mandera Triangle on the Participatory Rangelands Management (PRM) approach. This approach involves several interventions, such as training local government officials on NRM, community consultations, and the establishment of NRM committees and Rangelands Council, rehabilitation of rangelands through CfW, promotion and support for management by alternative utilisation of Prosopis juliflora, and environmental education.

Outcome indicator 3.1: % change in land area rehabilitated and managed for communal use

Key informants claim that as a result of 82 rangeland sites that were restored through reseeding, check dams, and other sustainable land management approaches there are now sources of dry season fodder, and there has been a gradual recovery of vegetation. As seen by the well-managed 5.5 ha enclosure intended to graze animals during the drought visited in Oda, Belet Hawa, Somalia, these committees have restored degraded rangelands throughout the three countries. These actions also lessened the effects of deforestation and its impacts which included drought and flooding in the region. In addition, the organisation of groups such as NRM, VSLAs, TBC and WUCs has increased bonding social capital with the communities in each region, and with the cross-border communities. Other benefits recorded increased access to grazing reserves and improved capacity of the communities to manage and utilise the rangelands better. And, as these activities were mostly implemented under cash for work, the activity enable households to earn incomes to purchase food and other essential commodities as reported under outcome 2.7.

Outcome indicator 3.2: Number of natural resource management committees reporting increased productivity due to land management practices

Water and grazing resources are the most important shared cross-border resources. The NRM mapping in the Mandera Triangle identified the protracted conflict in Somalia, recurrent resource conflicts related to water and pasture, poorly developed policy environment and lack of investment in infrastructure as the main challenges in cross-border NRM sharing. The project constructed or rehabilitated water points, supported the establishment of 10 functional water management committees at the community level, and enhanced natural resource management because a lack of natural resources may both lead to conflict and be a barrier to economic empowerment.

The overall findings suggest that the NRM had beneficial effects on resilience by resulting in harmonious management of natural resources. Although the drought impacted negatively on the natural resources, there was a gradual recovery of the rangelands. In terms of the perceived functionality of the NRM committees, key informants and other stakeholders reported that they were aware of the existence of these structures. Participatory rangeland management training was attended by 69% of the households surveyed, which contributed to raising awareness of the harm caused by the indiscriminate cutting of native trees for the production of charcoal. The establishment and strengthening of NRM Committees and Water User Committees (WUCs), as well as the training of government officials and communities in NRM, have improved resource governance and enhanced land productivity, according to key informants and FGD participants. Restoring degraded rangelands, introducing practices for conserving soil and water, and undertaking initiatives to reseed grasses, restore indigenous trees, and develop dry-season pasture conservation all helped to increase productivity.

Outcome indicator 3.3: # of households generating income through alternative uses of invasive species

Invasive species, in particular Prosopis Juliflora, have spread throughout the Mandera Triangle and are harming the landscape, reducing grazing resources, and affecting the health of both livestock and humans. According to a mapping study in Mandera County[7] that was conducted in the area, Prosopis had a standing biomass density of 10.56 tonnes per hectare for stems alone and 23.83 tonnes per hectare for the entire biomass, including leaves and branches. The prospective wood yield per sub-county was calculated using its annual production of 1.4 tonnes per Ha. BORESHA is collaborating with the communities to find ways to use this invasive plant while boosting

[7] CARE. Mapping study (value chain analysis) on commercialisation on Prosopis Juliflora in Mandera County.

household resilience, training the communities, and promoting the alternate use of Prosopis to make quality charcoal briquettes and livestock feed.

Training on alternative utilisation of Prosopis Juliflora was given to 40 NRM groups (779 members), who were also given equipment and support to make charcoal briquettes and fodder blocks from Prosopis. Seventy (70%) of the households in the three countries that were surveyed said they had attended training on using Prosopis, and of those, 76.4% said they had used it in several ways while 65.7% said they had made some money from using it. The Girisa Agro-Pastoral Field School (APFS) reported producing livestock feed that is 2-3 times more nutrient-dense than regular livestock feed. When asked to estimate their Prosopis revenue during the peak season, households estimated an average of USD 60.4. (USD 66 for Kenya, USD 57 for Ethiopia and USD 60 for Somalia). Improved production of animals fed on quality Prosopis feed, and access to quality charcoal, and firewood for the women were also cited as additional advantages of the intervention by Sowda Maalim Gedi from Neboi LCIG.

"Prosopis was once thought to be a useless plant that was dangerous to humans and animals, but now that we know how it may be used, we know that it can be used to make charcoal, animal feed, and even local building materials. The newly developed technology also enables us to restore our farms and livestock pastures by assisting communities in cleaning up some grazing areas that were encroached upon by the plant."

🙍‍♀️Sowda Maalim Gedi from Neboi LCIG, Mandera.

Despite the advantages of alternative technology—one sack of Prosopis briquettes sufficed for a typical household's monthly needs in place of three sacks of charcoal that would have cost KES 2,400—its uptake was slow. As a new technology, acceptance is gradual, machine maintenance and operation skills are inadequate, and the expense of fuel to run some of the machines makes use costly. As noted by the key informants, considering the difficulties in adopting the technology and costs associated with its operations, it will not be possible to take the intervention to scale, be sustainable and have a long-term positive influence on the environment. Considerable funding (outside of the current BORESHA programs) might need to be allocated to implementing Kenya's National Strategy and Action Plan, which combines biological, chemical, mechanical, and useful strategies to manage the species efficiently. The Strategy and Action Plan is focused on the targeted removal of Prosopis juliflora trees and the reclamation of these sites through the introduction of active land use systems, which include the planting of alternative tree species, suitable pasture grass, perennial browse shrubs, horticultural, and food crops, all of which provide a variety of alternative livelihood options to affected communities sustainably.

Outcome indicator 3.4: New efforts in cross-border collaboration in managing natural resources

Despite intensive efforts under IGAD to promote transnational policy, cross-border management of natural resources has been difficult to achieve, according to the NRM mapping report. To address the challenge, the project facilitated an NRM process that resulted in the natural resource use, sharing and management agreement to make these resources more sustainable and equitable. Following the introduction of the PRM approach and the capacity building of the NRM committees, a critical accomplishment was their ability to promote dialogue between the communities, ease interactions, and ultimately improve conflict management in cross-border areas.

Alongside the NRM committees, cross-border collaborations were also facilitated by the TBCs who played critical in fostering smooth cross-border trade. Also, the close collaboration and coordination with the local authorities were instrumental in facilitating the implementation of regional policies. For instance, the collaborative work with ICPALD/IGAD was the initial step in operationalisation in the implementation of the Framework on Cross-border

Animal Health and Sanitary interventions in Kenya and Ethiopia. According to the County Director of Veterinary Services (CDVS), Mandera, by working on this information sharing, harmonised disease surveillance, vaccination and reporting, the project contributed to cross-border health management.

Outcome indicator 3.5: Number of households accessing water for domestic and livelihood activities from rehabilitated/developed water sources.

In the entire cross-border region, water is essential for sustaining livelihoods and fostering economic development. These communities rely significantly on surface water, shallow groundwater, and groundwater for communities that are far from rivers. The project established functional water points (under/overground water tanks, construction/rehabilitation of water sources, water pipeline connection/extension, water pump, solarization of water pump system, and community water distribution point).

According to the interviewees, these interventions improved water supplies have had positive benefits and were essential in enabling households to withstand the effects of the droughts, with 95.7% of the surveyed households having access to water from these established/rehabilitated water projects. According to 81.2%, the 46 water points developed/renovated, reaching 361,000 beneficiaries also boosted the availability of water. The responders took, on average, 12 minutes to get to the watering point to get water (10 minutes in Ethiopia, 20 minutes in Kenya and 9 minutes in Somalia). As a result, compared to the earlier period when households relied on far-off sources, such as the seasonal river Dawa, which is located 5 kilometres away, the intervention significantly decreased the time it required for households to obtain water. Numerous pastoralists and agro-pastoralists from adjacent areas have decreased their need to travel to distant locations in search of water during the dry season by using the same water sources for their households and livestock consumption.

The County Government no longer needed to water trucks from far boreholes during the dry season thanks to the solarization of boreholes, which also reduced the expenses of operating the boreholes by lowering the demand for fuel to run the generators. The County government stated that no BORESHA targeted areas are included because there were no significant water stresses among the 197 centres chosen for water trucking due to the high levels of water stress. Some of these communities, like Ashabito, Domal, and Kubi, relied on water trucking or required residents to travel great distances to access water. When water fees (KES 20 per 20 litres) were implemented as a consequence of the training of the water user's committees that were in charge of the water points, they developed resources for sustainably managing operation and maintenance as well as for water trucking during the peak dry seasons. Women who are in charge of collecting water now have more time to work at other economic activities to help support their family's incomes.

"The water in the river was unfit for human consumption, therefore women and girls in the village used to journey daily for five kilometres to get water from it using containers that weren't big enough for domestic use. They were always in danger, especially at night when they travelled between the homestead and the river. Fortunately, CARE built for us a solar-powered water infrastructure with an elevated tank and three water kiosks within our village through BORESHA Phase III. Now, it takes less than 5 minutes to collect clean water from the water points, and residents utilise that time to work more productively, such as farming, doing paid work or caring for the village's shoats. We are grateful for BORESHA's assistance."

Omar Abdullahi, WUC member Qalbi Allan village, Dollow, Somalia

Indicator 3.6: Number of schools making use of water collected from water harvesting schemes

Although rainwater harvesting was reported to be known by 37.1% of respondents at baseline, its utilization was low standing at 31.7% for domestic and livestock use, and 25.3% for agricultural use. The project increased the uptake of rainwater harvesting in schools as a means to increase access to water. A total of 28 schools were supplied with water harvesting and storage schemes, reaching 13,706 beneficiaries. The use of water harvesting technology, according to key informants, increased the availability of water for the schools, had a beneficial effect on the communities, and notably helped to increase their resilience.

Progress made to improve/develop market systems and key value chains

The project supported several value chains and market systems, with special emphasis on the livestock sector. To identify systemic barriers to cross-border livelihoods, gaps in market information and linkages, and to design interventions to address the identified barriers, including farmers' and pastoralists' limited or low access to technical services and inputs, skills, and financing, the project conducted a value chain analysis and labour market assessment in 2018 during the inception phase of the project. Resulting interventions included improving access to animal health workers through CAHWs/CDRs, provision of TVET skills, development of business development centres, the establishment of a grant facility, promotion of IBLI, a mobile platform for information sharing, and provision of agricultural inputs and livestock vaccinations, treatment and fodder. These interventions were highly appreciated and credited with protecting and increasing the productivity of the livestock and crop value chains. As discussed below, IBLI and animal health services were two critical inputs in the livestock sector the project supported.

The project made good strides in encouraging the adoption of IBLI, raising livestock keepers' awareness of the product and increasing premium purchases in Kenya, though not Somalia or Ethiopia (although premium purchases have decreased recently due to several factors). The project empowered community-based IBLI agents and assisted in the development of an interactive, multilingual mobile application that offers assessments and video tutorials on IBLI.

The impact analysis indicated that IBLI confronts numerous systemic constraints and implementation difficulties as a nascent market. Creating a sustainable delivery model for the product to livestock keepers is a systemic constraint in the IBLI core market. The present agency model is unsustainable due to the high transaction costs brought on by supplying the product to a dispersed customer base, a lack of infrastructure, and limited product adoption. Bundling IBLI with other animal health inputs and services, connecting IBLI with VSLAs and financial services, and working closely with TIA to test out alternative agency models, as stated by World Vision, the lead for the thematic intervention, may all help to mitigate this constraint.

Respondents in the mixed-participant FGDs (of insurance users and non-users) said they would be willing to buy the product. When asked to describe the product, it was clear they did not sufficiently understand it. It was, therefore, common for them to complain about non-payment of indemnities, with some of the clients thinking that the product was an investment that would pay off within six months or a year. Further, some pastoralists reported experiencing a prolonged dry season that resulted in livestock losses and unfortunately, the index did not trigger any payout.

It was also obvious that the problem had to do with how well the general public understood the product. The IBLI community agents and the livestock keepers have a weak relationship, and the majority of these livestock keepers

depend on their friends, family, and neighbours to decide whether or not to purchase the product. To address the areas of dissatisfaction, it is necessary to continue having conversations with the community. At the same time, it is important to improve information dissemination, raise awareness of how IBLI functions, foster a greater understanding of feedback regarding indemnity payments and strengthen relationships between clients and insurers and agents.

There was a consensus that the insurance product was good and the key informants said that it is an innovative way of helping livestock producers manage the negative consequences of the most common risk affecting their productivity in the pastoral areas. It was considered a promising innovation, though it would be some time before it was commonly adopted. An important aspect of the roll out of IBLI is changing perceptions among both livestock keepers and insurance service providers regarding its potential importance. Although it has not reached scale, there is increasing interest in providing IBLI, driven by the large livestock population in the areas and the impact/losses of droughts on the population.

Due to the importance of animal health to the livelihoods of those living in the Mandera Triangle, the project increased access to and coverage of animal services by training and providing equipment to more than 114 CAHWs/CDRs, promoting better husbandry, and scaling up fodder production. As noted in the study "Assessment of agrovets and the perceptions of livestock herders towards animal health services in Mandera County"[8], the market system for animal health inputs in the Mandera Triangle remained weak. Although the project supported training and equipping the CAHWs/CDRs, access to a sustainable supply of inputs remains a challenge. As recommended in the above study, it will be important to facilitate and strengthen better partnerships and linkages between input suppliers/distributors and local retailers, enhancing the management capacities of the agrovets and enhancing access to a sustainable supply of inputs and financial services and credit.

IBLI will continue to be marketed in the region given the ongoing interest on the national level (in Kenya) in promoting it as a great alternative for reducing drought-related losses to livestock assets for vulnerable pastoralist households. To help all the pastoralists in the nation, the Kenya Livestock Insurance Programme (KLIP) is being expanded. More recently, the State Department for Livestock (SDL) introduced the World Bank-funded DRIVE, a project that brings together Kenya, Ethiopia, Somalia, and Djibouti to address the drought shock. DRIVE and other similar IBLI initiatives can draw valuable lessons from BORESHA's experience in IBLI. IBLI is a key component of this project whose objectives are to protect pastoral economies against drought risk, increase the financial inclusion of pastoralists and better connect them to markets. However, with its current business model, it is still challenging to achieve scalability. Therefore, the project should consider letting more market system-oriented actors manage it, even though BORESHA may consider taking part in discussions regarding IBLI given its significance to the livestock industry and the effects of shocks. If the ones who pay for IBLI continue to be the project's donors rather than the livestock owners looking to buy insurance, it will be challenging to sustain this market.

Interviewees frequently echoed that more could have been done to advance agro-pastoralist value chain/market systems, including supporting more sustainable access to drug supply for CAHWs/CDRs, access to farming inputs (seeds, irrigation technologies etc), and linking with markets. It is unclear what types of tried-and-tested goods or services were attempted and supported, aside from helping CAHWs/CDRs, small businesses, and cross-border traders with business skills and grants. There could have been a greater effort made to include additional product providers (for IBLI, veterinary inputs and agricultural technologies). It's unclear if there was flexible funding for these activities. In summary, BORESHA's support for business model promotion is still limited, especially when it

[8] DRC. 2021. Assessment of Agrovets and the perceptions of livestock keepers towards animal health services in Mandera County.

comes to large geographic areas and dispersed communities, where accessing them requires expensive transaction costs for private sector actors. The respondents recommended investing more resources into encouraging private sector players to participate more in these markets and developing a more cohesive strategy for promoting various commercial solutions for the required goods and services.

The impact of unexpected shocks/external factors, such as COVID-19, drought and other shocks

As stated, several shocks and stressors have affected the three project regions and added enormous pressure on the implementation of the project. The situation continued to evolve during the implementation of the three BORESHA projects, worsening in some instances, and adding to the challenges faced by the target population. Several challenges have been identified related to droughts, Covid-19 and other shocks such as locust invasion as discussed below:

Impact of drought on beneficiaries and programming

As indicated earlier the project areas faced one of the worst droughts in recent memory, which impacted even the most resilient communities' ability to cope and threatened the gain made under the project. In rural areas of Kenya, Somalia, and Ethiopia, the severe drought has led to severe pasture and water shortages, forcing pastoralist communities to migrate across the borders in search of pasture and water. The water from boreholes dramatically decreased and communal surface water sources were significantly depleted. This has caused water prices to skyrocket.

The Consortium partners gave priority to and increased the scale of humanitarian assistance to vulnerable communities in the project area as well as emergency drought response actions. For instance, the partners constructed and rehabilitated communal water points for the supply of safe drinking water, gave out hygiene kits and water filters, and targeted recipients with cash-for-work and unconditional cash transfers. However, the project had to navigate numerous administrative procedures and mobilize external resources for the drought response because there was no built-in crisis modifier to support a faster early response to the shock, which added to the strain in the entire team and delayed the action. Even yet, the implementing partners were able to leverage other resources to maximize influence and impact and achieve economies of scale. The project's and its partners' initiatives were mutually reinforcing each other even within BORESHA.

Impact of Covid -19 on beneficiaries and programming

Although Covid -19 was widespread, the situation was worse in the Mandera Triangle because the biggest market in the area, Mandera Town, was put under lockdown to prevent the virus's spread. The pandemic continued to present the area with numerous, significant issues for more than a year after the lockdown was removed, which had an impact on project implementation and could not have been anticipated. For instance, the epidemic hampered cross-border trade movements of people and animals as well as household income derived from both, placing a greater burden mostly on low-income households.

The Covid-19 lockdown and travel restrictions restricted cross-border movement for the population for markets, service access (such as health) and other livelihood engagements. It was also a barrier to engaging the different local administrations and limited the ability of the project team to provide technical support, training and field visits, and organising meetings and cross-border collaborations. In particular, Covid-19 hindered cross-border movement/collaboration, it slowed down opportunities for TBC and cross-border Rangelands Council and Peace committees to physically meet and share information.

The project implemented response activities, such as raising awareness of how to prevent the spread of COVID-19, using messages on community radios that reached 1 million people, and assisting schools in developing safety protocols, in addition to adapting the project's implementation to new realities. However, it should be emphasised that the project's implementation continued despite these shocks, albeit with an adapted approach. The project demonstrated flexibility in managing changing situations. For instance, the interruptions of in-person activities have led to innovation - To maintain information exchange and cooperation after border movement restrictions and the Covid-19 outbreak, the project employed communication tools like Skype and WhatsApp to hold regular monthly meetings and exchange videos and images of activities.

Impact of locust invasion

Beginning in April 2019, a locust invasion in the area damaged the stability of the Mandera Triangle and worsened the economic situation of the area, which was already suffering from a drought and an increase in the price of food globally. The invasion had devastated 110,000 hectares on average in the Horn of Africa, with crops being destroyed on 70,000 and 65,000 hectares in Somalia and Ethiopia, respectively. The implementing partners responded against the invasion by using alternative financial sources. As an illustration, DRC in Kenya carried out an urgent desert locust response effort in collaboration with various stakeholders in Mandera County.

Impact of insecurity and political tensions

Mandera Triangle has also experienced periods of transboundary conflicts and periodic attacks by violent extremists. Due to fighting along the borders and Kenya's efforts to block the spread of insecurity from Somalia, Informal Cross-Border Trade (ICBT) was suspended numerous times in recent years, which had a severe impact on volumes of trade, thus affecting the livelihoods, resilience and well-being of the communities. Such conflicts also can easily undermine the capacity to propose a more unified approach to the shocks.

To identify opportunities for livelihood and economic growth, to better understand the nature and underlying causes of the barriers impeding the potential of various economic activities, and to better understand the complex and multi-layered dynamics in the implementation areas, the project has conducted studies. Additionally, through establishing trade committees and holding meetings, it actively involved border communities and local government agencies, developed several community organizations and contributed to initiatives advancing and supporting ICBT and livelihoods. To support the county administration in addressing the causes of conflict and responding to any crises that may arise, the project partners also actively participated in the Mandera Peace Actors Forum.

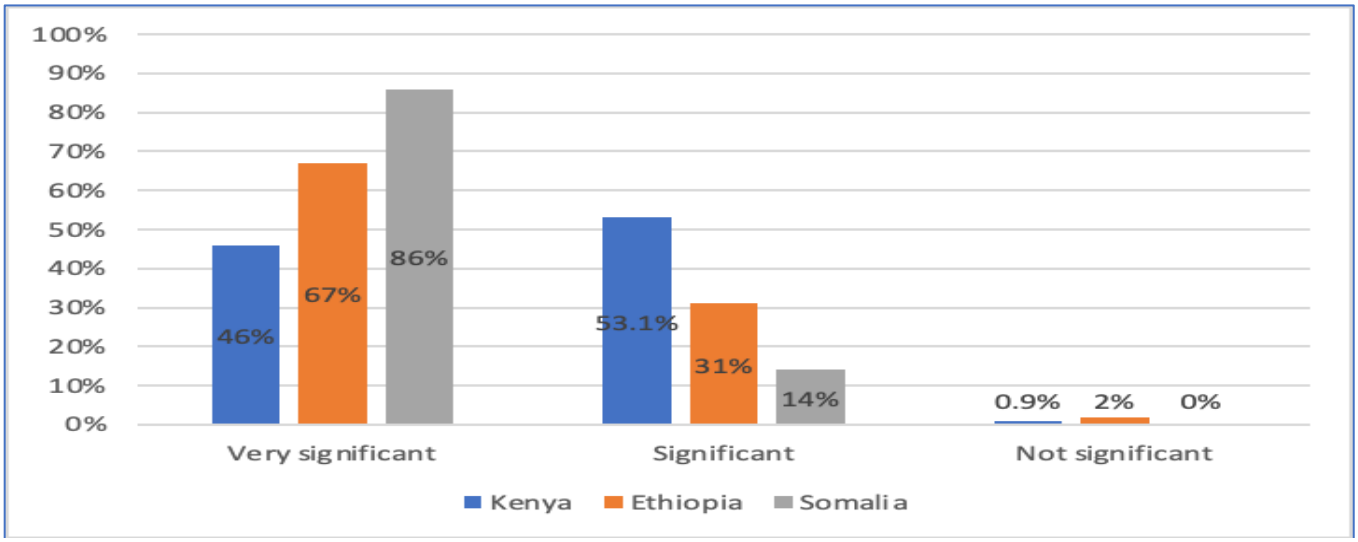
Impact of BORESHA in supporting target communities to cope with the shocks

The beneficiaries received assistance throughout these unexpected shocks. The beneficiaries of the project were better able to deal with the negative consequences of the shock since the project was able to activate some contingency plans to scale up livelihood intervention during the shocks. For example, Covid protective equipment was distributed, unconditional cash transfer was provided, and a short message (SMS) platform developed by Sauti Africa continued to ease sharing of market information, and traders were able to access market prices without the need to cross the borders during Covid restriction period. Beneficiaries were also allowed to develop solutions to the shocks. For instance, the TVET graduates produced face masks while the business sector produced hand-washing facilities that were distributed to the beneficiaries.

The impact study team has enquired into the significance of BORESHA's assistance in helping households cope with shocks and stressors. Beneficiary households claimed that the support was very significant for a large majority

(66.4%) of them (46% in Kenya, 67% in Ethiopia, and 86% in Somalia), while 32.6% (53.1% in Kenya, 31% in Ethiopia, and 14% in Somalia) reported that it was significant (Figure 12). Only 1% of those surveyed claimed that the assistance was insignificant for coping with shocks and stressors. For instance, 25% of the households in the three countries strongly agreed that their household's vulnerability was reduced as a result of interaction with BORESHA, 30%.7% agreed with the same, and 20% were indifferent about it; only 24.3% of them disagreed with the statement. At the community level, the same statement was strongly agreed with by 12.4% of those surveyed, agreed with by 39.9%, and indifferent by 29.7% of those surveyed, while disagreed with it by 18% of those surveyed.

Figure 12. Significance of BORESHA support in dealing with shocks and stressors



Asked whether their household incomes had changed due to the interventions, 49.3% said that they had, whilst 22.4% said there had been no changes and 28.3% disagreed that their household earnings had grown compared to before the project. Respondents in the focus group discussions and interviews were quite clear on the significance of the infrastructure built or renovated in enabling households to become more resilient to shocks and stressors. The household survey, which found that just 25.7% of respondents disagreed with the statement and that 28.3% of respondents agreed, 27% were neutral, and 19% strongly agreed with it, corroborated this.

Success in adapting the programme to the context of cross-border work

The delivery of BORESHA through the Consortium

The project was carried out in collaboration with a consortium of non-governmental organisations (NGOs) led by the Danish Refugee Council (DRC), World Vision, CARE International, and WYG/Tetra Tech (in BORESHA I). Effective coordination and communication were promoted both vertically (from the frontline implementers to the coordinator in charge of strategic decisions) and horizontally (across countries in the same thematic areas and the different program themes) by a project management unit that is in charge of overall project management. The coordination structures include the Technical Working Group (TWG), which includes representatives from all consortium partners and provides technical program support for the implementation of the program, the

Technical Implementation Groups (TIG), and the Steering Committee (SC), which is made up of the Country and Regional Directors of the various consortium partners and ensures that partner-specific challenges are discussed.

Although the Impact Study Team did not thoroughly examine the systems and structures of reporting, several observations from the interviews were made. Given the size, depth, and breadth of this type of partnership, an effective PMU is unquestionably essential to its success. Without a centralizing focus from the PMU, it is difficult to see how BORESHA would have achieved the accomplishments it has and carried out its mandate. That said, it is challenging to determine whether a scenario with no Consortium and fewer partners at the table would have produced a greater impact. In fairness, the value-for-money portion of the impact study was not mandated, and the partner organizations' budgets, spending patterns, or other relevant factors were not examined. Interviewees noted that although the partnership got off to a slow start, a lot of work went into forging it at every level. For instance, significant went into converging the variety of tested implementation approaches and methodologies within each partner in each country, and in tailoring these approaches for the cross-border areas. Also, the Memorandum of Understanding (MoU) signed by the partners, was among the essential components of relationship building.

Gradually over time the structures put in place, the reporting process and channels, and emerging designated roles and responsibilities became clearer and did not negatively affect project implementation. The level of trust between the stakeholders and structure also became more successful and adapted to the requirements of the complex cross-border programming, according to key informants and the team. For instance, the Senior Field Coordinator for the PMU based in Mandera ensured that the cross-border activities were well coordinated, that the TIG meet regularly and that the partners even at the field level were brought together. The project was centred around the theory of change and from the discussions, it was evident that there was a shared monitoring and reporting mechanism, highly well-integrated initiatives that complemented one another, and ongoing coordination and communication between the parties. All the offices have access to the aggregated information and reporting from all countries and can review what progress is being made or approaches are being taken. Additionally, within countries reporting is sufficient and, in some cases, has made use of informal communications due to COVID-19 limitations (e.g., more phone calls, emails, and texts).

Flexibility and adaptability of the programming

To integrate the project with existing programs, an initial stakeholder mapping was conducted and throughout the implementation period, BORESHA shared experiences and held meeting with these stakeholders to create synergies. Similarly, the project coordinated with other EUTF-funded programs, and with private sector actors such as Takaful Insurance of Africa. For instance, RASMI and BORESHA collaborated and conducted a Participatory Learning and Action (PLA) process with the communities from Malkamari-Kenya and Mubarak-Ethiopia. Internally, regular and ongoing review of plans by the TIG and TWG as well as the planning sessions helped the program remain flexible to respond to the dynamic realities.

Given the dynamic environment in which the project operated, interventions were designed to improve community resilience while also helping beneficiaries preserve their assets from shocks that occurred during project execution. For instance, during the drought, cash for work and unconditional cash transfers were directed towards beneficiaries, while awareness creation and distribution of protective and handwashing facilities were implemented in response to the Covid-19 outbreak. Stakeholders noted that although some flexibility existed with the budgets, the lack of a crisis modifier or a rapid response fund impacted their ability to quickly respond to the shocks. Nevertheless, BORESHA was able to scale up some interventions following an agreement with the EU.

The BORESHA II and III initiatives are built on the accomplishments and knowledge gained from BORESHA I and the project "Enhanced Livelihoods in the Mandera Triangle (ELMT)" to achieve their goals. Additionally, the project phases and partners leveraged one another to achieve sustainability. The intervention at the Yabicho Health Centre serves as a prime illustration. The outpatient facility was renovated as part of phase 1 of the project, which also installed a water piping system for the facility. The project's second phase involved building a maternity wing, setting up a solar-powered system, and installing a 24,000-litre water tank. "There are no difficulties keeping vaccinations in the cold chain." The solar system that was erected is not only sufficient; it can also power entire towns. As a result, we can now deliver all of our healthcare services without any problems, according to Minhaj Bishar, a nurse at the Yabicho Health Facility.

In addition to introducing IBLI and technologies for alternative uses of invasive species, the project supported the installation of solar at the boreholes and supported CAHWs/CDRs in their work to improve animal health services. Within the community, the solarization of the boreholes and support to CAHWs/CDRs appear to be gaining the most traction with other partners and the county government of Mandera investing in solar technology. The technology for alternative utilisation of Prosopis did not see similar success as the skills for operation and maintenance of the machines were inadequate, and the expense of fuel to run some of the machines makes use costly. The uptake of IBLI was similarly low due to its low acceptance by the community.

Learning and Advocacy

The project has utilized informal networks in addition to working closely with institutions like the IGAD to encourage cross-border trade. It has also developed trade committees and conducted dialogue meetings between the stakeholders in ICBT. The Borderlands Working Group was founded as a community of learning around borderlines program to promote cross-border work to influence discourse, policy, and practice on cross-border programming. The group examined important issues that had a direct bearing on the lives and livelihoods of the people in the Mandera Triangle, and the results were utilized to guide programs.

Partnerships and collaboration with the private sector and public sector actors

To achieve integration with the existing structures and establish the sustainability of the interventions, the project collaborated with both formal and informal private sector actors in the Mandera Triangle. Among these, the partnership the support to traders engaged in ICBT through business skills traders, trade facilitation and provision of business grants stands out. The three phases of the project included several private-sector interventions, with the TBCs being one of the more effective ones, according to key informants as they were able to enhance cross-border market linkages and learn about common challenges affecting business. Due to the prevalence of resource-based conflict in the region and the involvement of communities and actors across borders in these conflicts, the formation of NRM Committees and the Cross Border Rangelands Council (which also serves as a peace committee) received positive feedback, despite being more nascent than the TBCs. The Dollo Ado NRM Committee's assistance in mediating disputes and negotiating reciprocal grazing agreements amongst communities residing on the Kenya-Ethiopia border is one of the specific situations cited.

The project was successful in coordinating with other consortiums including RASMI, SECCI and Omo Delta initiatives and local coordination structures such as the County Steering Group (CSG) in Kenya. It also successfully integrated with existing programs, according to key informants. For instance, the project worked with Regional Approaches for Sustainable Conflict Management and Integration (RASMI), a peace-building initiative in the Mandera Triangle, to implement several activities to support cross-border conflict management and peacebuilding as well as improved resource coordination across borderlines. The two projects held peace-building meetings with pastoralists from Dollo-Ado-Ethiopia and Dollow-Somalia. These meetings gave participants the

chance to talk, identify conflict hotspots, discuss coexistence during resource scarcity brought on by drought, and set up procedures for resolving disagreements before they turn violent. Additionally, as stated by the stakeholders from the partner ministries of livestock, water, education, and natural resources, the project did a great job of coordinating its efforts with both local and central government. The project used frequent attendance at County Steering Group (CSG) meetings in Kenya, quarterly regional meetings in Jigjiga, Ethiopia, monthly reporting to Jubaland State in Somalia, and additional discussion to coordinate at the zonal level.

Gender mainstreaming

While the formal household leadership continued to be dominated by men in both the project villages and comparison groups, women from the target villages participated in large numbers across the thematic interventions and constituted the majority of participants in the VSLAs. During the FGDs, women indicated that the project had created opportunities for them to increase their economic participation. While the VSLAs provided women with opportunities to save and acquire small loans, the business grants and business skills training contributed to the economic empowerment of women. As reported by the Director of TVETs in Mandera County, female trainees were more resilient and more likely to continue in their trade compared to male trainees. It was impressive that of the 72 TVET trainees who sat for the National Industrial Training Authority (NITA) examinations, 71 of them, 52 of them were women, all passed.

Similarly, women comprised 30% of the 78 beneficiaries of the Business Grant Facility getting funding of between USD 2,500 to USD 12,000 for their businesses. About 47% of the NRM committees and Range Councils are women and were active participants in decision-making on sharing of water and grazing resources, conflict mediation and enforcement of customary by-laws.

"With BORESHA, I have increased my participation in supporting my family (food, education, health and other needs). I do this by running my small business and participating in cross-border trade"

👩‍🦰Female member of the Belet Hawa Tri-Border Business Committee

Throughout BORESHA, gender was prioritised as an issue and was mainstreamed throughout the project. This was achieved through efforts to increase understanding of gender concerns and needs in resilience building as well as the institutional capacity of the project team and stakeholders at all levels to address these concerns and needs. Under BORESHA III, CARE conducted a detailed gender analysis in the three regions. In addition, gender perspectives were integrated into all the project interventions. For example, a gender lens was applied from baseline and evaluations to highlight areas of particular importance to women. A minimum level of female participation was ensured across the project's interventions. As a result of the above efforts, 93.5% of the households interviewed reported being satisfied with the inclusion of women and vulnerable groups in project activities.

Despite the above-mentioned deliberate efforts of BORESHA to mainstream gender and social inclusion, it has yet to attain gender parity in the participation of men and women and marginalized groups in its actions, as with other programs. Gender analysis was conducted too late into the programming to allow for the incorporation of its findings into interventions and work plans. Regarding social inclusion, it seems that many recipients of interventions like business grants, VSLAs, agricultural inputs, and animal treatments are not the poorest in the program areas While this may be normal as this group have access to—or actively seek out—these types of interventions, the project should make it a priority and seek out poorer or marginalised households who may aspire to join the VSLAs or engage in small businesses. In addition, it should pay attention to the increasing inequality in pastoral societies, and in the peri-urban areas that are expanding and where poor and stockless

pastoralists are the majority, it's crucial to look into employment and labour market trends to come up with effective strategies to support new, alternative livelihoods.

The value of interventions and their contribution to peaceful interactions and co-existence between communities

In the Mandera Triangle, conflicts are frequently centred on political contestation and representation as well as resources. Droughts, for example, raise the probability of conflicts because they reduce resources, limit livelihood chances, and increase the likelihood that people may participate in criminal activity and experience insecurity. By providing interventions such as supporting animal health and production, capacities and infrastructure for disaster risk reduction and management, and diversifying livelihoods, the project-built resilience of livelihoods and protected them from shocks. Interventions such as TVETs, VSLAs and private sector support provided economic and employment opportunities reducing the risks of vulnerable groups engaging in risky behaviours and conflicts.

The project staff received internal training on conflict sensitivity, enabling them to keep a conflict-sensitive lens in place throughout all project activities. For example, in all the project interventions, the team promoted stakeholder engagement and interactions. Through the peace and NRM committees and rangeland councils neighbouring pastoral and agro-pastoral communities met to share and discuss reciprocal grazing agreements that enable relationship building and prevent any conflict when these resources are reduced during dry seasons and droughts. The peace and NRM committees were also responsible for faster resolution of conflicts arising in the community through dialogue and ensuring equitable sharing of natural resources. The TBCs facilitated seamless informal cross-border trade and worked closely with the national government in allaying security fears and concerns that are mostly related to informal cross-border trade.

The sustainability of project interventions

The project's sustainability is based on a two-pronged approach strengthening both 1) the communities/household's resilience, and 2) cross-border ecosystem or market systems. The project seeks to build sustainability through all stages of the project cycle. It promotes ownership by engaging with key stakeholders, local governments, and the private sector, as well as involving and building the capacity of local communities in the three regions of the Mandera Triangle.

Institutional sustainability

The Mandera Triangle has great institutional, human, and physical capacity needs due to the nature of regions generally and of cross-border areas in particular. The situation is worse at the state level in Somalia where public service provision is constrained by limited capacity and resources to address the basic services delivery and infrastructure needs. The institutional sustainability of the project depends primarily on the ownership and capacity building of the partners and stakeholders as well as target communities. A wide range of activities was directed at enhancing community-level governance, particularly of livelihood interventions and services, with an emphasis on managing conflicts and their own shared (cross-border) natural resources, trade and facilities. These activities include:

- Strengthening the community's structure for resource governance such as the training of water users' committees, rangeland management committees and council, and tri-border business committees.

- Training of community-level service providers such as community animal health workers/disease reporters.
- Training of communities on the use of new technologies such as briquette-making machines, and operation and maintenance of solar systems for boreholes.
- Training of community members on skills that enable them to earn income.

Since stakeholder participation and ownership have been the project's strengths, BORESHA enjoys a good working relationship with the three regions. The majority of the stakeholders gave the cross-border approach high ratings since they believed that cross-border areas had common interests and means of livelihood.

Economic sustainability

As for the economic sustainability of particular interventions, key informants observed that the majority of funding for the DRR plans comes from NGOs. Only Mandera County had additional financing from the County Government for some of the priorities in the DRR plans. Notable in Kenya, is the prioritisation of rangeland management, and water infrastructure development and management in the Mandera County Integrated Development Plan (CIDP). This (weakness of dependence on funding from NGOs) limits the usefulness and sustainability of the plans. The structures such as NRM committees and TBCs have established close collaboration and have developed a mutually beneficial relationship that is likely to continue. For instance, market incentives exist for the ICBT to continue and the willingness and ability of the TBCs and informal cross-border traders to continue engaging each other as they work closely to address challenges affecting them will remain paramount. For businesses that have benefitted from the grants and TVETs graduates, monitoring data and tracer studies indicate that have continued to operate as they can earn incomes for their households.

Physical and environmental sustainability

The communities received support from the project in enhancing the physical sustainability of investments related to natural resources, water infrastructure and rangelands. The project contributes to environmental sustainability in two ways. It has reduced environmental degradation through better capacities for rangeland management, rangeland rehabilitation, and improving alternative utilisation of invasive species. For instance, in Gawido, the degraded rangelands were rehabilitated through soil and water conservation measures, the use of range enclosures that enabled pasture recovery, Prosopis clearing and re-planting. This led to improved vegetation re-growth and availability of pasture for the livestock, particularly during the dry season grazing. Secondly, through community consultation and improving access to natural resources for grazing by facilitating cross-border resource sharing and supporting conflict mitigation mechanisms. For instance, the project improved the capacity of 40 NRM committees and seven Range Councils to effectively support equitable sharing and sustainable management of cross-border rangelands and other shared natural resources. However, while there are reported improvements in the management of natural resources, the introduction of technologies and skills for the management of invasive species have not been adapted on a large scale.

Implementation challenges

Apart from the complexity of cross-border programming including the need to engage multiple stakeholders and different country-specific administrative and legal procedures as well as local administrations with personal and security interests, several contextual factors have a major bearing on the impacts of BORESHA. The different government policies, priorities and laws constrained BORESHA's cross-border activities. There were also legal and administrative delays in the operationalisation of agreements entered at the IGAD level. For instance, while there were several cross-border memoranda of understanding (MoUs) between countries and at the IGAD level, often there was a lack of awareness among the local administration and communities about them.

The frequent border closures led to disruption of staff movement and constrained the exchange of information and cooperation between the different authorities. In addition, the numerous changes to the political economy and governance structure of the Gedo region during the implementation period were noteworthy. Besides the presence of Al-Shabaab, the security and conflict situation in the Gedo region not only remained volatile during project implementation but deteriorated significantly in the last 2 years.

The project initially tried to use IGAD to facilitate a higher level of political will and cooperation with the national/central governments but faced a lot of challenges. The project then resorted to supporting and operating through the local informal community structures to implement the activities. In fostering local actors' capacities and supporting the local informal community structures, the project was instrumental in reducing tensions and enabling local administrations to continue to engage locally. For instance, the TBCs have been instrumental in easing security fears related to ICBT, helped the realistic ease of engagement between the cross-border actors, and demonstrated the alignment of priorities between these communities.

Restriction of cross-border movements affected several project activities including the inability of DRR groups to have the planned exchange visits, Joint training for NRM which had to be conducted separately in each country; Tri-border trade business committee which had to be conducted at the country level; Joint cross-border coordination with local administration was not possible due to political tensions between Kenya and Somalia, and parallel coordination systems with the respective local authorities were established at a country level instead; and, planned scholarship for youth from Somalia to attend training in institutions in Mandera Kenya was not possible. It also affected organisation exchange visits and joint quarterly meetings between BORESHA and local Government authorities.

The failure of successive rainy seasons in most parts of the Horn of Africa, and indications are that the recent long rains have also been below expectations. This situation continues to erode the resilience of pastoralists and agro-pastoralists in the region. The situation was made worse by the impact of the global crisis on fuel and commodities as well as food prices and the ability of households to recover from the shocks. These shocks impacted the region and endangered the achievements made. The project had to navigate numerous administrative procedures and mobilise external resources for the response because there was no built-in crisis modifier that supported faster early response to shocks and responsiveness to the existing grant agreement. This increased workload for the entire team and delayed the action.

Lessons learnt and best practices

1. Training and involving local administration, such as county and Kabele administration in the CoVACA assessment and development of CAAPs, will be crucial for sustainability and integration. This will ensure that the process is institutionalized and feeds into the sectoral planning processes for Ethiopia, the national development plans for Somalia, and the county-integrated planning processes for Kenya. The timing of the assessment and development of the plan should be synchronized with the government planning calendar to ease their integration into the government plans.
2. It is crucial to involve the national government (security, tax, and trade authorities) in the tri-border committees to facilitate cross-border trade dialogues and visits, as well as to facilitate communication between the authorities, given those trade restrictions (both formal and informal regulations) and security concerns are among the most significant barriers to ICBT.
3. The TVET's skill trainees are enthusiastic about the new skills and tools/equipment they have received, but their primary obstacles to starting their own business were their inability to save enough money from their

current work or to obtain credit or a loan. It is advised to target these trainees for the business grant facility or to connect them with financial service providers.

4. The members of the VSLAs, like the TVETs trainees, had financial hardships during the dry seasons, making it impossible for the organizations to accumulate sufficient money for loans, start a business or as a social fund. It is advisable to connect these trainees with financial service providers or to target them for the business grant facility.
5. Delivering interventions as a "package" and the practice of integrating different project components and interventions in various phases were excellent and extremely important in enhancing the impact and sustainability of the interventions.
6. By employing animal manure in agricultural fields, integrated livestock and crop production systems in agropastoral zones serve to boost crop yields in addition to solving the issue of feed inputs for livestock. It was crucial for increasing access to animal health care and improving livestock disease surveillance that the initiative placed a strong emphasis on educating veterinary experts and CAHWs.
7. A thorough understanding of the market incentives for their adoption should guide the introduction of relevant technology, such as SMS platforms or charcoal briquette machines, and service offerings, such as IBLI. Private service suppliers of these goods and services should be pushed to create viable business plans that can be piloted on a small scale before receiving significant funding.

CONCLUSION AND RECOMMENDATIONS

This report is structured around six areas of enquiry. To date, we can assess these areas' progress, and we can make the following conclusions:

The extent and depth of resilience achieved by project interventions: The results of the impact analysis show that BORESHA as a whole significantly improved the Mandera Triangle's capacity for resilience as measured by the project's two main metrics of improved resilience and economic development. According to the results of the household survey, mean household incomes in the project villages increased from USD 35.15 at the baseline to USD 87.01 by the end of the project. Given that comparable villages with similar shock patterns experienced a lesser increase in mean household income over the same period (reaching only USD 67.87 by the end of the programme), this increase can be attributed to BORESHA's interventions. By the end of the project, households in project villages had r CSI scores of 11.1 compared to 20.8 for households in the comparison villages (improving from a score of 21.9 at the time of the baseline). These villages also had a greater HDDS (8.5) than the comparison villages, which had an HDDS of 5.7. Moreover, at the time of the impact study, the average FCS of households in the project villages was higher (54.3) than that of the comparison villages (36.4), and the majority of the families targeted by the project (81.3%) had acceptable FCS. Just 16.4% had borderline FCS, and only a small percentage (2.4%) had poor FCS, in contrast to the time of the baseline when 37% of project households had poor FCS. This indicates that, in contrast to the comparison villages, which have remained at IPC 3, the households in the project villages have improved from IPC 3 to IPC 2, and they have better average household incomes and are less commonly using negative coping strategies.

Outcomes and development results from the three phases of BORESHA: The impact study established that the project delivered a set of thematic interventions, including strengthening DRR capacities, infrastructure and services; expanding the skills and opportunities for cross-border employment, diversified enterprise and livelihoods; and improving the management and equitable sharing of cross border rangelands and other natural resources. Despite the difficulties due to the impact of shocks and external factors including drought, insecurity, locust invasion, and COVID-19, most of these outcomes and results were achieved as expected. Although acknowledged, several of these initiatives, such as IBLI, mobile platforms for exchanging market information, and alternate utilization of invasive species, while appreciated, are unlikely to accomplish their long-term results and impacts since they are still unscalable and unsustainable. In Somalia and Ethiopia, for instance, there were no mobile service providers prepared to work together on the project, thus the mobile platform still has problems with adoption. The recommendation section offers some advice on how to make these interventions better or suggests other feasible actions that will produce results and impacts that are comparable.

Progress made to improve/develop market systems and key value chains: The project-supported interventions to support important value chains and market systems notably the livestock sector, were highly appreciated and credited with protecting and increasing the productivity of value chains. For instance, the support for LCIGs enhanced the level of fodder production, improving access to feed resources, notably among the agropastoral communities, while the CAHWs/CDR improved access to animal health services and inputs. Major strides were made in facilitating ICBT through strengthening networks like the TBC, facilitating community dialogues, and easing access to credit through business grant facilities, among other interventions. Although some of these market systems, such as IBLI, faced numerous systemic constraints and implementation difficulties as a nascent market, major strides were made in facilitating ICBT. To foster cross-border work, the project also built a community of learning around borderline programs and carried out studies, research, and organized events. While the project did a good job of utilizing informal networks to support these significant sources of income, there were

some areas where the national governments and IGAD could have done a better job of facilitating the implementation of existing cross-border policies and agreements between the 3 countries.

The impact of unexpected shocks/external factors, such as COVID-19, drought etc: The three project regions have seen several shocks and stressors that have put a tremendous amount of pressure on the project and its beneficiaries. The Covid pandemic and conflicts hindered cross-border trade movements of people and animals as well as household income derived from both, placing a greater burden primarily on low-income households, and the locust invasion worsened the economic situation of the area, which was already suffering from the worst drought in recent memory and an increase in the price of food globally. These factors all threatened the gains made under the project. Although the Consortium prioritized and increased the scope of humanitarian assistance to vulnerable communities in the project area as well as emergency drought response actions, they had to navigate several administrative processes and mobilize outside resources because there was no built-in crisis modifier in the project to support faster early response to shock.

Adaption of the programme to the cross-border context: To work efficiently at the various levels in the three countries and to navigate national regulations, regional policies, and customary practices, BORESHA developed an integrated management system and structure. An efficient PMU was undoubtedly crucial to the success of this type of relationship given its size, depth, and breadth. The steering committee, TWGs, TIGs, and thematic working groups, such as the Quality Assurance, Finance, Communication, and Security networks, were additional significant governance and coordination structures that were in charge of ensuring the proper engagement of all partners in the various processes of the intervention. The project was successful in coordinating with other consortiums including RASMI, SECCI and Omo Delta initiatives and local coordination structures such as the County Steering Group (CSG) in Kenya. It also collaborated with both formal and informal private sector actors in the Mandera Triangle.

The value (social and economic) of interventions and how they contribute to peaceful interactions and co-existence between communities: The project helped promote peaceful interactions and coexistence across communities by offering interventions that promoted increased resilience of cross-border communities and systems. BORESHA included interventions like community dialogues to share and discuss reciprocal grazing agreements that enabled relationship building and prevented any conflict when these resources were reduced during dry seasons and droughts. The project also mainstreamed conflict sensitivity and gender and social inclusion and facilitated seamless ICBT. It also worked closely with the national government to allay security fears and concerns, which are primarily related to informal cross-border trade. More investments will be required in working with national governments and IGAD in facilitating the implementation of existing cross-border policies and agreements between the 3 countries.

Recommendations

The project has had a significant impact on the Mandera households' resilience in the Mandera Triangle. The results of the study also suggest that additional investments are needed to have a greater impact, protect, and sustain the gains made during the three phases of BORESHA. Some of the recommended investments include

- **The time frame of the complex cross-border program**: Projects like BORESHA should commit to longer program cycles of at least five to ten years to be cost-efficient and effective given the complexity of the environment in which they operate, especially in the Mandera Triangle and the impacts of shocks and stressors that have affected its implementation and its beneficiaries. While BORESHA has made significant

progress in achieving its outcomes and results, the nascent cross-border institutions and practices need support, and the resilience gains made thus far need to be protected. The focus should therefore be on strengthening the intervention areas that have the potential to be scaled up (see below).

- **Strengthening the key intervention areas that have potential if scaled up:** The impact study showed that the intervention areas, such as disaster risk reduction, assistance for animal health, VSLAs, TVETs and scholarships, business skills training and cross-border support, natural resource management, and WASH, have greater potential if scaled up, while IBLI, technologies for alternative uses of invasive species, and the SMS platform for market information are not scalable and are not likely to be sustained. It is therefore recommended that going forward the project should focus on strengthening gains in these areas, particularly in the current project areas. Table 9 provides specific recommendations for supporting these intervention areas:

Table 9: Recommendations for strengthening intervention areas with potential for scale and sustainability

Intervention area	Recommendations
Disaster risk reduction	● Train and engage local administrations administration in the CoVACA assessment and development of CAAPs, so areas the process is adopted as part of local participatory planning processes and made sustainable. ● Synchronise the timing of the assessment and development of the plan with the government planning calendar so as to ease their integration into the government plans. ● Work with communities on resource mobilisation for the implementation of the DRR plans as the funding gaps exist in meeting the priorities even with the support of BORESHA. ● Deploy early warning systems through other community structures such as VSLAs, CAHW and CDRs, NRM committees, and TBCs for improved institutionalization.
Animal health, vaccination and treatment	● Support the integration of livestock and crop production systems in agropastoral zones and serve to boost crop yields in addition to solving the issue of feed inputs for livestock. ● Establishment of the more sustainable supply system for accessing animal health inputs for producers and CAHWs/CDRs
IBLI	● Bundling of the IBLI product with other livestock inputs such as animal health services and fodder. ● For BORESHA, it may be more efficient to consider engaging more market system-oriented actors to manage IBLI
VSLAs	● Target the VSLAs for the business grant facility or to connect them with financial service providers as they are unable to adequately save or loan members to start their small enterprises. ● Experimenting with the graduation model with the VSLAs in which the groups will not only be supported with capacity strengthening but also asset grants, saving schemes and income generation to enable them to grow and become more successful.
TVETs and scholarships	● Upscaling the enterprise-based TVETs (EBTVET) approach by expanding the current cohort of EBTVET could increase access and equity to skills training, especially in areas where there are no functional TVETs colleges or vocational training centres. ● Continue and strengthen the provision of business development skills alongside the TVETs skills training to fast-track the students' transition to labour markets. ● Strengthen opportunities for upgrading skills and diversify skills from one skill area to equip them with more skills to earn income and meet the market demand ● Target the TVETs trainees for the business grant facility or to connect them with financial service providers as access to credit remains a key critical area for these graduates. ● Support rapid and regular labour market assessment by TVET institutions could support demand-driven TVET.

Business skills training and cross border support	● Considering the success of the business grant facility (all of the businesses that were supported were operational) and the demand for access to credit and skills to start and grow their business, upscale the grant facility; ● Involved/include the national government (security, tax, and trade authorities) in the tri-border committees in order to facilitate cross-border trade dialogues and visits, as well as to facilitate communication between the authorities, given those trade restrictions (both formal and informal regulations) and security concerns are among the most significant barriers to ICBT.
Natural resource management	● Integrate or combine the DRR, NRM, peace, and committees as these organizations' functions overlap and it may be simpler to equip these groups with several areas of expertise to enable better management of the DRR, NRM, peace, and cross-border concerns. ● Incentivise better natural resource management e.g., by providing water and other support to communities that have shown the good process in better managing their rangelands.
Rangeland rehabilitation	● Link the operation and maintenance of machines for use of invasive species with TVETs skills training to ease access to skills for maintaining these machines. ● Solarization of the machines to reduce the costs of running these machines ● Introduction of fast-growing nutritious fodder plants such as sorghum – Sudan grass as alternative to maize as fodder. ● Use of solar irrigation systems for fodder production to reduce high costs of production related to fuel expenses for the water pumps.
WASH	● As the rehabilitation/construction of water infrastructure and strengthening of local management capacities was identified as a key intervention area that enabled communities to cope with the drought, continue upscaling the intervention targeting chronically water insecure areas such as Mandera North and Banisa sub-counties in Mandera. ● Strengthen policies that prioritise more investment in water systems infrastructure in the pastoral and agro-pastoral areas of the Mandera Triangle through public-private partnership investments: by designing and constructing ecologically-viable ground systems in model rural areas. This should be preceded by extensive groundwater assessment (geophysical and hydrological surveys).

- **Strengthen cross-border system-level interventions:** According to what was previously mentioned, the project invested at the system level, particularly in promoting ICBT, cross-border NRM and peace, and cross-border animal health systems, all of which have permitted a more equitable sharing of cross-border resources. But it takes time for these interventions to have a lasting effect. Additionally, they need the assistance of private actors, the majority of whom work in the Mandera Triangle on a modest scale and informally. Therefore, it is crucial to keep strengthening the nascent institutions in charge of overseeing these system-level thematic areas while also attempting to incentivise larger private sector actors to enter the ecosystem. For instance, it's important to upscale the business grant facility, continue hosting TBC dialogue sessions and exchanges, and involve national government actors (tax, security and trade authorities in the TBC). These incentives could consist of demonstrating the commercial worth of operating in the region by assisting with initial market research or assuming some of their first market entrance risks. For instance, one way to guarantee more sustainable animal and crop inputs in the area is the arrival of larger animal/agro-input manufacturers.

- **Linking the institutional investments with the local governance process, particularly in Somalia:** While Somalia's governance mechanisms are inadequate, Kenya and Ethiopia have governance structures and plans that can be used to anchor interventions and integrate DRR and NRM programs. However, the UNDP-facilitated District Council formation process offers a chance to connect the structures created in Somalia. UNDP is assisting district administrations with bottom-up planning and decentralised service delivery as part

of the Joint Program on Local Governance. This is carried out by ensuring that there are systems in place for reconciliation and dispute resolution, actively supporting the formation of district councils through a participatory process (ensuring broad representation, including IDPs and women where appropriate), and strengthening the capacity of district councils to provide local services.

- **Support urban livelihoods in the Mandera Triangle**: as a result of several climatic and human-induced factors and their interaction with social, economic, environmental, political, security, and seasonal environment, some pastoral and agro-pastoral households are getting displaced into urban centres such as Mandera, Belet Hawa and Dollo Ado to better access basic services, livelihoods opportunities, and humanitarian assistance. However, these populations face severe challenges. It is therefore important to pay attention to the increasing inequality in pastoral societies, and in the peri-urban areas that are expanding and where poor and stockless pastoralists are the majority and look into employment and labour market trends to come up with effective strategies to support new, alternative livelihoods.

- **Continue engaging as a Consortium**: Although the three partners have different management procedures and systems, by working together they have demonstrated a good level of cooperation and synergy. Also, the complementary areas of technical expertise have been used to the best effect and the PMU has been unquestionably essential to its success. It, therefore, is recommended that in future cross-border programming especially Mandera Triangle should continue to operate through a Consortium since the benefits derived from experience and competencies have been demonstrated. Although, as the project takes a more focused approach, there may not be the need for a broad partnership, there are opportunities and value in engaging strong locally based partners in the Mandera Triangle.

ANNEXES

ANNEX 1: LIST OF DOCUMENTS REVIEWED

1. Building Opportunities for Resilience in the Horn of Africa (BORESHA) (2022), BORESHA II End of Project Evaluation Report Nairobi: BORESHA.
2. BORESHA (2021). Technical brief: Building resilience of cross border communities through diversified livelihoods; From "unwanted' and "unknown" to an alternative source of livelihood – community management of invasive plants; IBLI; Integrating conflict sensitivity in cross border programmes; Building stronger coordination systems and responsive border institution for efficiency and results; Driving sustainable results through the integration of cross border programming; and Accelerating community economic development through cross border interventions. Nairobi: BORESHA.
3. BORESHA (2021). A BORESHA policy study on cross border trade. Nairobi: BORESHA.
4. BORESHA (2021). Report for the End-line Evaluation of Building Opportunities for Resilience in the Horn of Africa BORESHA Project. Nairobi: BORESHA.
5. BORESHA (2021). Assessment of Agrovets and perceptions of livestock keepers towards animal health inputs in Mandera County. Nairobi: BORESHA.
6. Research and Evidence Facility (2021). Borderlands infrastructure and livelihoods. A review of implications for the development of formal border crossing in Mandera County, Kenya
7. BORESHA (2020). A Snapshot of Cross-border Traders: Executive Summary. Nairobi: BORESHA.
8. BORESHA (2020). Labour Market Assessment in the Cross-border Area between Kenya, Ethiopia and Somalia. Nairobi: BORESHA.
9. Mandera County Government (2018). Mandera County Integrated Development Plan, 2018-2022
10. BORESHA (2018). Baseline Survey for BORESHA. Nairobi: BORESHA.