



LIVELIHOOD ANALYSIS

TURKANA, KENYA

SOUTH NORTH NEXUS AND BIOREGIONS INTERNATIONAL

DEBORAH HINES, JOSEPH MULUPI, MADELINE METCALF

01 MARCH 2021



EXECUTIVE SUMMARY

Climate change is a primary contributor to livelihood risks in Africa today. In the arid and semi-arid lands of Kenya, climate-related shocks have undermined community-based institutions, increased poverty, contributed to child malnutrition, and weakened social structures and social capital development. Turkana county in North Western Kenya continues to be affected by these challenges and lags behind other counties in Kenya regarding most development indicators, including acute malnutrition and food insecurity.

South North Nexus (SNN) and BioRegions International (BRI) collaborated with Turkana University, and the county government of Turkana to undertake a livelihood analysis with the aim of sharing best practices and solutions to help communities and families cope and adapt to a variety of shocks. The livelihood study captured the views and experiences of women and men, pastoralists, immigrants and refugees living in Turkana, an area with a long history of food, nutrition and social insecurity. SNN and BRI, collaborating with the Nairobi-based group, Inclusive Concepts and Innovations, worked with local partners who conducted a livelihood analysis with the objective of understanding the past, current, and future livelihood challenges faced by families and communities.

Using an innovative, participatory study design, the objective was to better understand how families and communities have responded to and recovered from a range of shocks, including the impacts of a changing climate, the trend of increasing shock frequency, health events (in particular, COVID), economic fluctuations, the influx of migrants and refugees, and the ability to protect and rebuild livelihoods. Important for this study was understanding how different members of the community are impacted and also their vision for strengthening their livelihoods to withstand shocks. Focus group, household, and key informant interviews ensured the participation of women, men, elders and adolescents, as well as their views and roles in decision making.

Approximately, 100 household respondents provided information on their livelihood strategies and risks, gender roles, conflict, and the effectiveness of local institutional responses. Focus group discussions provided evidence on factors such as: income fluctuations, livelihood challenges, employment opportunities, and potential solutions to address identified challenges. Discussions with key informants provided detailed information on the effectiveness of responses to climate shocks, the prevalence of conflict at community and family level, and how shocks and access to and control over resources may have contributed to disagreements and tensions, including gender-based violence.

While the study determined that the Turkana people primarily depend on livestock and animal products as their main livelihood resource, people want to diversify to more resilient livelihood activities including home gardening, entry into markets, and service provision. A large percentage of livestock earnings go to food purchases for household consumption. In Turkana county, livestock rearing responsibilities are shared among household members; however, men make the significant decisions regarding the use of livestock and income. NGOs and church organizations were identified as groups that made significant contributions to the livelihood strategies of the Turkana people. However, more needs to be done to protect livelihoods from shocks.

When asked about the challenges they were facing, respondents, development partners and government officials identified lack of water and pasture for livestock as the most significant constraints. The distance that people walk, predominately women, in search of water, increases when droughts occur, and this was cited as a major concern. Disease and insecurity were other significant challenges mentioned.

Turkana residents face increasing challenges and limited livelihood options. Climate shocks and a lack of support from both the county and national governments exacerbate already fragile livelihoods. It is hoped that this study will contribute to a better understanding of the factors affecting livelihood sustainability, those that are most affected, and local solutions and practices that can support climate change adaptation. It is also hoped that it will catalyse discussion and perhaps, most importantly, concrete actions that will support social cohesion and diversified livelihood strategies that reduce food insecurity, malnutrition and poverty for the Turkana people.

The Swelling Lake

Lake Turkana, Kenya

During the past months **South North Nexus (SNN)** has been working with local partners to understand how shocks, including climate change and the COVID pandemic, are affecting families and communities in this area.

A once valuable and dependable livelihood source is quickly becoming a liability.

Havoc is caused by lake water rising from erratic and increased rainfall, the spillover from the Ethiopia and Kenya highland riparian zones, and depleted vegetative cover due to deforestation.



CHAPTER 1: INTRODUCTION

Indigenous and rural communities have traditional and local knowledge that is important to document and share, particularly when traditional knowledge integrates with contemporary science and technologies to improve the environment-diet-nutrition-health nexus. South North Nexus (SNN) and BioRegions International (BRI) collaborated with Turkana University and the county government of Turkana to undertake a livelihood analyses with the aim of sharing best practices and solutions to help communities and families cope and adapt to a variety of shocks. SNN and BRI, collaborating with the Nairobi-based group, Inclusive Concepts and Innovations, worked with local partners who conducted the livelihood analysis with the objective of understanding the past, current, and future livelihood challenges faced by families and communities. For this study, livelihoods were defined as the capabilities, assets and activities undertaken for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks (or disturbances putting ways of life at risk).

Indigenous and rural communities globally are increasingly affected by a range of shocks that are destroying traditional ways of living, and contributing to fast growing inequalities and food insecurity. However, documentation on how families, communities and local governments cope, adapt and develop new solutions is not widely collected or shared, especially across bioregions. While the tendency is to focus on natural disasters, the COVID 19 pandemic has clearly revealed that shocks cover a range of sectors and that the most vulnerable people are least able to mitigate impacts and recover fully. In this context, our livelihood analysis concept was expanded to include a broader concept of shocks that negatively affect livelihood assets and strategies.

The analysis was based on an innovative study design with the objective of understanding how families and communities responded to and recovered from a range of shocks, including the impacts of a changing climate, natural disasters, rising shock frequency, health events (specifically COVID), economic fluctuations, and the influx of migrants. Important for this study was understanding not only how different members of the community are impacted, but their ability to protect and rebuild livelihoods, and their vision for strengthening their livelihoods to withstand shocks. Thus, focus group, household and other key informant interviews ensured the participation of women, men, elders, and adolescents, and the documentation of each group's views and their roles in decision making. Also, the study put attention on the prevalence of conflict at both community and family levels, and how shocks and access to and control over resources may have contributed to disagreements and tensions, including gender-based violence.

Collaborations among bioregions— regions defined by their cultural and natural environments- were the basis for selecting the Turkana region of Kenya. Specifically, dry ecosystems affected by shocks, an indigenous population dependent on herding animals and small-scale agriculture, and high levels of food insecurity were the criteria for selecting Turkana, Kenya. South North Nexus and BioRegions International is carrying out livelihood analyses in similar regions and communities in Colombia, Mongolia, and Montana with the intention of sharing learning and actions that support resilient livelihoods.

The methodology prioritized an inclusive approach (not extractive), a visioning process to understand how families and communities would like their livelihoods to become more resilient, and concrete solutions that could lead to more equitable, resilient livelihood opportunities. The inclusive approach helped to stimulate community-based information exchange, learning, and innovation for all members.

Promoting collective memory, women's central roles, and traditional cultural practices (music, for example) facilitated the effective communication of climate threats and other shocks, risk reduction

measures (including for conflict), and concrete actions to improve responses to health crises, including diets and food security. Given the COVID 19 pandemic, a number of precautions were incorporated in the methodology to ensure the safety of the study team and all community members. These measures were discussed with local authorities and will be standard practice in all future work.

Based on the results of the livelihood analysis, a sharing process will be organized at the local level and then among all communities involved in the livelihood discussions across bioregions (the latter likely by Zoom unless travel becomes more viable). The sharing of findings within the targeted communities and bioregions is a main outcome of the study. The hypothesis is that the sharing of experiences and lessons with collective learning will contribute to strengthening livelihood resilience, and enable families, communities, and local entities to better plan for and respond to shocks, with women having an important role in knowledge sharing.

This exchange will help frame a follow up consultation processes with communities to identify priorities and concrete solutions. The visioning exercise combined a systems approach, which helped participants to clearly identify priorities and solutions that will make their communities more resilient. Using inputs from the local and bioregions discussions, SNN and BRI will present funding proposals with the aim of supporting priority solutions to be implemented by communities.

This document presents the findings from the Kenya Livelihood Analysis, starting with the context of Turkana county in Chapter 2, based on secondary data that describes the culture of the Turkana people, the ecosystem of the Lake Turkana region, shock trends, main livelihood activities and poverty, food insecurity and nutrition challenges. Chapter 2 also highlights gender roles and the causes of rising inequalities. Chapter 3 presents the methodology applied and lessons from implementing the field work, including modifications to the approach that were required to better align with differing contexts within the bioregion. Learning questions and hypotheses guided the data collection and analysis, and these are presented in relation to the data analysis methods.

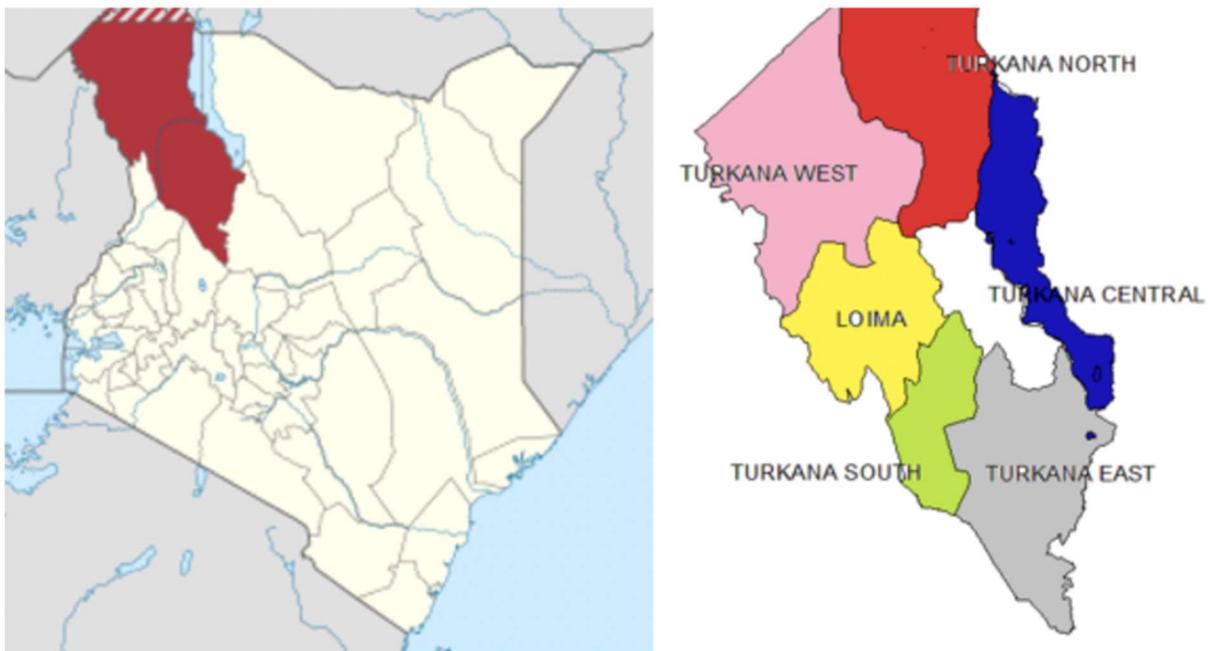
Chapters 4 and 5 present the main results and findings from the Turkana livelihood analysis. We begin with an overview of main results related to each learning question in Chapter 4. Concrete answers are provided to each question, disaggregated by gender and age, with attention to ethnicity. Stories reinforce findings and provide personal views of how shocks have directly affected families and individual lives. Chapter 5 illustrates detailed results by thematic area including: food and nutrition security; gender empowerment considerations: the impact of shocks on women; decision making power of women; migrant and refugee challenges; livelihood capitals; and shocks and conflict.

In Chapter 6 we turn our attention to the main findings from the visioning exercise. Characteristics of improved future livelihoods, as described by respondents, are presented, disaggregated by gender, age and ethnic group. Priority solutions for addressing the main livelihood challenges and achieving the “identified future” are discussed. In Chapter 7 we conclude with next steps and concrete recommendations with attention to technical and financial issues. Finally, we present our ideas for sharing the findings from the Turkana livelihood analysis with the families, communities and partners who participated in the survey, with other Kenyan communities and organizations, with our other bioregion partners and more broadly.

South North Nexus and BioRegions International are committed to the sharing of best practices generated from actions that integrate traditional ecological knowledge with contemporary science and technologies to improve the environment-diet-nutrition-health nexus at community level, with special attention to indigenous communities and indigenous nations. Hopefully this study is the start of a broader effort to not only document and share information, but to also work with communities to

identify durable solutions that lead to more equitable and resilient livelihoods for families and communities confronting multiple and increasingly harmful shocks.

Map of Kenya – Turkana Highlighted, and with Regions



CHAPTER 2: CONTEXT

Bioregion Characteristics

Turkana county is situated in the North Western part of Kenya. The county is administratively divided into 6 sub-counties, 30 wards, and 56 locations that are further subdivided into 156 sub-locations. The county population according to the 2009 Kenya Population and Housing Census is 1,227,797 inhabitants, mainly from the Turkana ethnic group. The Turkana people are traditionally pastoralists and until recently the only notable migration pattern was rural-to-rural movement in the form of nomadism. The settlement patterns of the county are determined by various factors such as climate, soil fertility and infrastructure. Rainfall in the county follows a fairly erratic pattern varying significantly both over time and space. The county, however, receives both short and long rains. The driest months are January, February and September. The long rains season is between April and July with the short rains occur during the months of October, November and December.

Turkana is divided into various bioregion/livelihood zones, which were defined in 2012 with participants from the National Drought Management Authority, Ministry of Agriculture, Livestock and Fisheries, United Nations Development Programme, World Vision, Oxfam, and the Diocese of Lodwar. The Central Pastoral Zone is arid, but with more permanent settlements given that it is the main administrative headquarters of Turkana. The Central Pastoral Zone is more secure (and suffers less livestock raiding than the Border Pastoral Zone) and has better access to the county's main markets, lower staple food prices, and better government health services and schools. The Border Pastoral Zone has more rainfall than the Central Pastoral Zone and, consequently, better pasture and water access for livestock. The population in this livelihood zone is more nomadic than in the Central Pastoral Zone, where permanent settlements are now well established. Two agro-pastoral zones have been identified along the Turkwel and Kerio Rivers, where irrigation projects have been developed in what are otherwise semi-arid to arid areas. The zone has a hot climate, with temperatures ranging between 24°C and 38°C and an annual average temperature of 30°C. Rainfall is bimodal, erratic and unreliable. The short rains (April-July) and the long rain season (October-November) average 300 to 400mm of rainfall yearly.

The county is endowed with many natural resources such as sun, oil and minerals, including gold. Turkana has the largest gold deposits in Kenya and there are many areas within the county where people practice informal gold mining on a small scale. The county has ten blocks of oil deposits that are now under exploration.

Over the past three decades the livelihoods of the Turkana people have been shaped to some extent by the presence of the refugees and migrants from Sudan and Somalia. They sometimes are perceived as a burden for the host communities, putting pressure on public budgets and service provision. However, they also contribute to the development of the county, providing skills and resources, increasing production capacity and demand for a variety of local products. Conflict between refugees or migrants and their hosts does occur and reflects a failure of local integration efforts resulting in poor refugee-host relations.

Conflicts related to livestock raiding are not a new phenomenon in Turkana. Violent conflict poses a significant threat to pastoral livelihoods, which are already under pressure from recurrent drought, diseases, and political marginalisation. The direct impact of violent livestock raiding results in loss of human life and property, reduction in animal numbers, restrictions on access to water, overused pastures, and forced migration. Indirectly, these conflicts create a strong and omnipresent perception of insecurity, which results in ineffective resource utilisation, reduced mobility, food insecurity and

closure of markets and schools. These aspects of pastoral life undermine adaptation strategies and the nomadic way of life.

Livelihood Strategies

The majority of residents in Turkana are semi nomadic (46%) and most others are fully settled (43%). There are proportionally smaller numbers of occasional nomads, internally displaced persons, and migrant laborers living within the county. The main livelihood activities are food crop production, livestock raising, firewood collection and charcoal production. Other income generating activities include hunting, gathering of forest products and casual wage labor. Employment in Turkana's emerging oil and gas sector is being promoted as an opportunity for diversifying livelihood strategies in the county.

Pastoralism is an important livelihood strategy in Turkana; however, climate change is making it harder to sustain. Livestock production is the largest contributor to pastoralist household income; up to 85%. Income is generated from the sale of livestock products like meat, milk, hides and skins. An average household keeps up to 5 cattle, 10-20 goats, 10-20 sheep, chickens, ducks, a donkey and a camel. Goats, sheep and cattle are the largest contributors to cash income, and goats to household food stocks. Livestock, including poultry production, contribute to up to a third of household income. Food crop production contributes to up to 40% of household income. Crops are cultivated under rainfed and irrigated systems during both rainy seasons. Households consume their own produce including sorghum, maize, vegetables and dairy products. Market purchases include maize, beans, rice, wheat and meat. Maize and sorghum are the most important crops grown under irrigation. Sorghum is the highest contributor to cash income from household crop production, followed by tomatoes, maize and pulses. Remittances and gifts can contribute up to 10% of income for poorer households.

Insecurity, poor road infrastructure, degraded natural resources including soils, and low levels of education are some of the underlying factors that result in high levels of food and nutrition insecurity in the county. Although markets are poorly integrated and characterized by high inefficiency, supplies often flow in from Ethiopia through Moyale and Marsabit (April-July) increasing and contributing to food availability. The nutritional situation in Turkana Country remains a critical issue; Turkana has a Global Acute Malnutrition (GAM) level among infants and young children between 15% and 29.9%. According to the World Health Organization, a GAM level greater than 15% indicates a critical emergency. Turkana is one of the hottest and driest regions in the world. Over the last few years Turkana has experienced severe shortages of rainfall, contributing to acute food insecurity and malnutrition. According to World Relief, in 2019 60 to 80% of livestock died due to dehydration and starvation, posing an extreme threat to individual and household livelihoods who depend on livestock and crop production as the only means to provide for their families.

As of December 2020, the United States Agency for International Development reported that Kenya hosted approximately 520,000 refugees; 264,000 were Somali, 122,000 South Sudanese and the rest Ethiopian, Burundians, Rwandese and Congolese. Refugees are hosted primarily in two camps located in Turkana and Garissa counties. Migrants, in addition to refugees place, have greatly increased the population and put further pressure on already strained food systems in Turkana.

Gender Relations

Women are increasingly assuming a wider range of roles in the community, primarily due to the opportunities provided by education, economic development and international and national aid

projects. However, even though women may be present on committees, women’s issues are generally not on the agenda and women often choose to be passive, letting men make the decisions. Also, men still take more independent decisions within the household. They control most of the family’s resources and are regarded as the protectors of their lands. Table 1 provides an overview of gender roles and the division of labor among Turkana women and men.

Table 1: Division of Labor and Gender in Turkana
Robert Ereng, Turkana County Official

Duties & Roles	Women	Men
Home Management and Maintenance	<ul style="list-style-type: none"> • Gathering water, firewood, and wild fruits for household use • Preparation of food • General household cleaning • Construction of animal enclosures • Construction of household 	<ul style="list-style-type: none"> • Supervision of women’s roles and decision making • Delegation of responsibilities to women and children • Enforce discipline within the home
Livestock Production	<ul style="list-style-type: none"> • Watering of livestock (not cattle) • Preparing for migration • Milking animals and determining household uses • Herding of small livestock (goats) 	<ul style="list-style-type: none"> • Ensuring livestock have pasture • Exploring grazing land and water resources • Providing health resources to livestock • Making decisions regarding slaughter and sale of livestock • Making decisions regarding location and time of migration
Cultural	<ul style="list-style-type: none"> • Nurturing and introducing children (girls) to Turkana lifestyle • Prepare girls for marriage • Making clothes for women and children • Preparing food, singing for traditional rituals 	<ul style="list-style-type: none"> • Socialization of boys into adulthood • Teaching young boys skills to develop a future livelihood • Decision making regarding marriage and dowry payment, rituals, and performance
Non-Pastoral Activities	<ul style="list-style-type: none"> • Weaving of baskets, mats, and hats 	<ul style="list-style-type: none"> • Organizing small business activities

Shock Trends

The Turkana county economy is highly dependent on the natural resource base and, thus, is highly vulnerable to climate variability and change. Climate events, in combination with existing political, environmental and economic development challenges, have had an impact on the Turkana people's ability to access food, water, health services, and security or protection support.

Rising temperatures and changing rainfall patterns, resulting in increased frequency and intensity of extreme weather events, importantly droughts and flooding, threaten the sustainability of the county's development. Among the most vulnerable regions in Kenya are the arid and semi-arid lands, which are simply referred to as the drylands. Due to high poverty rates, changing socioeconomic and political circumstances and demographic growth, traditional coping strategies are increasingly insufficient. The increased frequency of extreme events is not allowing time to recuperate after these shocks. In response, the county government of Turkana has developed a Climate Change Policy to improve the response to climate shocks.

Turkana county has long experienced periods of cyclical drought. However, increasing temperatures and shifting precipitation patterns, combined with population growth and threats to Lake Turkana from hydroelectric and irrigation projects in Ethiopia present significant, long-term challenges for the county and the Kenyan government. Industrial and agricultural development across Turkana's northern border with Ethiopia also poses threats that could affect the realization of basic rights for the Turkana people. Over the past several years, Ethiopia has embarked on a massive plan for dam expansion, water-intensive irrigated cotton and sugar plantations, irrigation canals, and other infrastructure in Ethiopia's Omo River Basin, which provides 90% of the water in Lake Turkana. These developments are predicted to dramatically reduce the water supply of Lake Turkana; the planned irrigation projects alone could reduce the Omo River's total flow by up to 50%.

Turkana Fishermen



CHAPTER 3: METHODS

Approach

The livelihood analysis prioritized an inclusive approach including sharing findings within the targeted communities and bioregions and following up with funding for concrete pilot actions. The intention was to promote collective learning and the sharing of experiences and lessons that strengthen livelihood resilience and enable families, communities, and local entities to better plan for and respond to shocks. Specifically, inclusive dialogue and discussions were centered around livelihood strategies and responses by families, communities, and local entities to shocks, including the COVID-19 pandemic, reoccurring natural disasters, conflict, and the longer-term impacts of climate change.

Specifically, the goal of the livelihood analysis was to understand the challenges faced by families and communities, with emphasis on impacts due to shocks, gender dynamics, the health-food security-nutrition nexus, conflicts, the loss of coping mechanisms, and the need to migrate. An integrated approach with a range of stakeholders discussed food and nutrition security, resilience activities, capacities to respond to climate variability, ancestral practices and traditions, and gender differentiated approaches to support income generation, health, and the food security of families and communities.

As women have a central role in knowledge gathering and sharing in Turkana, special focus groups were organized to understand their substantial roles and knowledge regarding resilience building. Promoting collective memory, women's central roles, and traditional cultural practices led to important exchanges that identified climate threats, risk reduction measures (including for conflict), and concrete actions to improve income generation opportunities, food security, and livelihoods for all members of the family.

Livelihood Framework

For purposes of this study, a livelihood entails the capabilities, assets – both material and social resources – and activities required for a means of living. A livelihood is considered *sustainable* when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, and provide net benefits to other livelihoods locally and more widely, both now and in the future, while not undermining the natural resource base. The extent to which a livelihood is sustainable is determined by the interaction of several forces and elements. Core elements which lead to understanding livelihood outcomes include:

- Livelihood assets and activities
- Vulnerability and coping strategies
- Livelihood outcomes based on individual, family, and community priorities

Livelihood assets refer to the “resources base” of people and communities, generally consisting of the following five capitals: human, social, natural, physical, financial, and political. As already mentioned, livelihood assets and strategies are influenced by several endogenous and exogenous factors that result from past and current influences characterized by: 1) existing *cultural norms and values* affecting people, from the extended family and local community, to the larger context of the national state and beyond; 2) the *vulnerability/risk context* which describes the set of external social, economic and political forces and stresses that directly affect people; 3) *gender relations* and the consideration of access to and control over resources and issues related to gender-based violence; and 4) *coping strategies*, or the ability to deal with shocks, adapt, and maintain the asset

base, emphasizing capacities and opportunities for recovery. All are crucial for increasing resiliency in livelihoods and responding to and recovering from disasters, and were considered in this analysis.

Learning Questions and Hypotheses

Seven learning questions and hypotheses were developed to focus the scope of the study and provide a framework for data analysis and report preparation. The learning questions are answered later in the results chapters, and the hypotheses guided the discussions with all interviewees.

Learning Questions:

1. What are the main livelihood activities for communities and households?
2. Are household livelihood strategies sufficiently resilient to withstand the frequency and intensity of shocks experienced in the last 10 years?
3. Which types of shocks present the greatest future risks for each group in the community?
4. With each shock, who was most affected, how were they affected, and how did they cope?
5. What is the status of the ecosystem services that people depend on, disaggregated by gender and ethnic group, and is there competition for these resources?
6. What coping mechanisms allowed people to respond to shocks and livelihood stresses?
7. What practices would allow families and communities to better respond to and adapt to shocks?

Hypotheses:

1. Shocks have increased in frequency and intensity, and livelihoods are not sufficiently resilient to recover and adapt.
2. Women and ethnic minorities are the most vulnerable to shocks and receive less support during an emergency.
3. The ecosystems that people depend on are increasingly degraded, and not managed with sustainability and ecosystem integrity as core objectives.
4. Local and national policies and funding are insufficient to address the resilience building needs of the communities interviewed and in the surrounding areas.
5. Empowering communities through information exchange, dialogue, and learning will enable them to better adapt to and recover from shocks.
6. It is crucial for families and communities to strengthen capacities to prevent from experiencing food insecurity and falling back into poverty when exposed to shocks.
7. Good practices and lessons pertinent to building resilient livelihood strategies are relevant across bioregions.

Implementation Strategy

To ensure that the approach, fieldwork, data analysis, and data presentation were inclusive, participatory, followed “do no harm” principles, and produced accurate information, the following actions guided the design and implementation phases of the analysis. The survey teams:

- Built relations with respondents and ensured that participants understood the purpose of the study, and how it related to their family and community and possible follow-up actions. As the project involved indirect rather than direct benefits to families and the community, this was openly explained to all participants. All members of the community were informed that they would be given the research findings through simple and inexpensive means such as

community workshops. Importantly, communities were not selected to participate without discussion and their formal agreement to participate.

- “Do no harm” principles were strictly applied, and special consideration was given to women and children. Teams determined how to conduct household interviews privately, and out of hearing range of family members, neighbors, and local government officials. The project team guaranteed anonymity in the processing and publication of data. Data ownership was fully discussed with Turkana University, and methods were validated. All participants voluntarily agreed to participate in the interviews and their agreement was formalized.
- Teams consisted of dedicated enumerators, with an experienced team leader and students from Turkana University. All team members received training and were compensated for their work. Teams were aware of sensitive issues before starting the survey. If issues arose, discussions were held with the community and experts on how best to treat sensitive information, in particular, issues related to gender relations and conflicts.
- The enumerators checked questionnaires as soon as possible after the interviews, corrected errors, and entered data into Kobo Toolbox in the field. Sufficient time was made for data checking, cleaning, and harmonization with comparative standards. Kobo Toolbox’s online tool was used to collect data in the field. However, paper forms were used as a back-up in case there were problems with internet services, computers, or the functioning of the online tool.

Survey Participants and Informants

Data was collected from three informant groups: key informants, households, and community focus groups. Ten key informants, including community leaders, elders, academics, government officials, and business leaders, were interviewed on a variety of livelihood topics including climate, food security and nutrition, conflict, migration, gender issues, and natural resource policy and management trends. These interviews also helped to capture indigenous knowledge and cultural norms. These discussions provided valuable context for the study. Information is provided above in the context chapter, and is also integrated throughout the results section.

The objective of the household survey was to gain understanding of household dynamics, with a focus on main livelihood plans, coping strategies, gender relations, the impacts of shocks at the household level, and support for resilience-building solutions. The household survey was conducted in five communities with similar characteristics, including similar ecosystem characteristics, shock frequency, livelihood activities and social challenges. The survey team conducted various participatory exercises including resource mapping, perception exercises, and visioning to understand how households responded and adapted to various shocks, social constraints and conflict. The mapping of gender roles was an important exercise to begin the conversation on gender empowerment issues. The visioning exercise helped to identify how livelihoods could be strengthened and what a resilient livelihood could look like. Cultural traditions were incorporated into these exercises to gather individual stories. Stories from community members helped to capture the details of individual lives. Twenty representative households were randomly selected in each community, and interviews included women, men and in some cases children or elders in the family.

Focus group discussions were held in each community, with at least three focus groups per community. Groups from each community included women, men, elders and then other groups that were identified by the community as important for understanding community relations, including

migrants and leaders. The focus groups consisted of in-depth discussions covering the impact of shocks on livelihoods, how to diversify or make livelihoods more sustainable, important coping mechanisms, food and nutrition issues, and the effectiveness of local government to respond to shocks and promote development opportunities.

Data Collection and Analysis

Teams of enumerators who spoke English were accompanied by translators who spoke Turkana and English. They conducted each survey in Turkana. In the field, data was collected digitally, cleaned, processed, and stored using the online Kobo Toolbox. Upon the completion of data collection, initial results were analyzed in Kobo Toolbox and then exported to Microsoft Excel for a more in-depth analysis. Throughout the analysis process, teams were careful to establish causation, differentiate exogenous and endogenous variables, and use confidence intervals as appropriate.

Data collectors were trained to assemble accurate data, collaborate with the local community, and manage unexpected circumstances. Interviews took place with households, individuals, key stakeholders within the community, and focus groups to gather both quantitative and qualitative data. Data triangulation was used to minimize bias and all data was verified, organized, translated, and extracted in an appropriate output form. Data analysis involved secondary, primary, quantitative, and qualitative information that required distinctive processes for collecting and organizing the data including:

Descriptive Analysis: analyzed past data in the bioregion, 10 years or more, to describe past events and their impacts.

Diagnostic Analysis: determined why events in the region happened, current and past, and their quantitative impacts.

Predictive Analysis: examined what is likely to happen in the future in the region. Tools, such as resource mapping, identified trends derived from past periods and helped to make predictions about future events and their impacts.

Prescriptive Analysis: combined the information found from the previous 3 data analyses and aided in identifying actions or solutions to address identified issues.

Perception Analysis: incorporated people's view on past and future events, impacts, and solutions.

Survey Implementation Lessons

- ✓ Communities and households were very welcoming and allowed the enumerators and the team into their lives and activities. Community members knew the translators and had confidence in their integrity.
- ✓ The local government facilitated the process by providing letters of introduction and directly communicating with the local officials.
- ✓ An implementation guide was developed and was a very useful resource. It should be shared widely.

- ✓ Despite the length of the household survey, the data collected is very rich and all is required for a complete understanding of livelihood issues. Thus, it is recommended not to shorten the questionnaire.
- ✓ Geographical spread was extensive and allowed the survey team to cover areas that are remote and usually not reached.
- ✓ The survey team employed strategies to actively engage households and communities. Teams went to places where the villagers congregate, not expecting them to come to them. They also tried to make it easy for respondents to participate by arranging suitable times, transport options, COVID-19 protection, and soft drink/water. Also, community leaders were engaged to help recruit people to participate in the survey processes.
- ✓ Paper surveys were used as a backup when an enumerator did not have internet service, could not access the Kobo server, or because of power outages.
- ✓ Email interviews were used to reach key informants who were unavailable to meet in person.
- ✓ Breaks were incorporated into the survey schedule to recap and reflect on progress.
- ✓ Household and focal group interviews often had interruptions, including attending to livestock, children and cooking. Given the length of the survey it was important to give the interviewees breaks and refreshments.

Findings were validated with the households, communities, and stakeholders who participated in the survey. There was considerable interest in the findings coming from the different interviews. Thus, results are being shared locally, nationally and with other bioregions to facilitate collaboration and collective learning. Practices and solutions that have been identified to effectively help families and communities respond, recover, build resilience, and strengthen livelihoods in the face of climate change and shocks will be compiled in a brief to be discussed with government officials and NGOs.

Survey Team Member at Work



CHAPTER 4: SUMMARY OF RESULTS

Main Findings

This section presents an overview of the main study findings as they relate to food insecurity, gender disparities, and livelihoods that are not resilient in the face of shocks, including climate (floods and droughts), conflict, and the COVID-19 pandemic. Two important conclusions identified by communities, women and men, are: 1) the necessity to diversify livelihood assets, including through more advanced irrigation techniques; and 2) the urgent need for specific trainings on a number of subjects including gender roles, women's rights, sustainable use of natural resources, financial literacy, small business management, and more resilient agriculture systems. Other main findings are presented below.

Local perceptions on shocks: Turkana county is an arid, sparsely populated area stretching across 63,000 kms². It is affected by drought and other climate change effects resulting in food shortages, limited availability of pasture and water shortages. Interviewees had various views regarding current and past events in the study area. People perceive that the current climate in the area is behaving differently from past years. The seasonal cycle '*msimu*' has changed, persistent droughts are more recurrent, pest and disease incidences for livestock are more frequent, the average temperature has increased, and the waters of Lake Turkana have risen, swallowing at least 7 resorts and hotels. Most people reported that these shocks are more frequent and are affecting the majority of communities in the region. Other shocks were mentioned, including COVID and tensions with other communities; however, climate shocks were the focus of the respondents.

Livelihood challenges: Families reported that Turkana livelihoods are severely affected by drought. Productive agriculture systems remain largely dependent on access to and availability of irrigation water. Lack of access to water in the non-irrigated areas is due to a number of factors including the high cost and availability of electricity. Also, small traders have challenges in finding buyers on a regular basis. Solutions proposed related to the diversification of livelihood assets, are mainly focused on agriculture and include practices such as the increased introduction of small livestock (rabbits, chickens, etc.) and native, nutritious crops such as okra.

Effectiveness of coping measures: Interviewees stressed that local adaptive practices and coping mechanisms are prevalent in Turkana communities and the following were discussed in detail: a) traditional responses including pond excavation and retention of rainwater in canals; b) state supported responses including humanitarian food assistance; and c) family-level responses such as selling livestock, seeking jobs in urban areas, and alternating between livestock and poultry raising. Informants indicated that these adaptive practices will not be very effective for the long term. Depending on the shock, some measures are suitable as short-term responses, and most are not effective under severe drought or variable climatic conditions.

Institutional capacities: As part of the political capital component, the study examined the institutional structures under which families and communities work, socialize and survive. Several types of institutions--national and local government agencies, NGOs, social, informal and private entities, and organized farmers and water user groups--are operating in the area. The institutional assessment found that the diverse entities working in the region have different roles, capacities and plans for dealing with livelihood risks, and that there is little effective coordination among them. Communities do not have much confidence in their ability to share or provide durable solutions.

Learning Question Findings

This section provides a more in depth look at how interviewees responded to the learning questions posed. These responses provide a summary of important family and community-level characteristics, challenges and views on potential solutions.

1. What are the main livelihood activities for the community/household? Pastoralism remains the main economic activity of the Turkana people and supports the majority of households. Production of crops and livestock give families a means of providing for their household and as additional income generated by selling their products at local markets within the community. The poverty level is generally high in Turkana county due to, among other factors, marginalization of women in economic development, governance and decision-making both at household and community level. For women, it is most common to be looking after the homestead and caring for children as they wait for the men to return home from the grazing fields. Livelihoods are very traditional and the culture does not allow women to participate in most income generating activities or work outside of the household. Thus, women's livelihoods are more vulnerable than their male counterparts.

A Personal Story

Nadupoi, 29, sleeps quietly under the shade of the Red Cross tent with 13 other women from a village on the outskirts of Kakuma town. The majority are single mothers, divorced, or widows. All are hungry. Another woman, Linet, shares her story. "We have many problems. We have no income and we are often sick so we cannot work. Education for our children is a problem due to the costs. But we are proud. We earn money from cleaning jobs at hotels and restaurants. Some of us are sex workers."

The women are paid just KSh 100 (\$0.90) for all day cleaning work, however the reality can be a lot worse. At times work isn't there, or they work and are not paid. When the time comes to be paid there is no money and instead of payment, they are chased and abused. The women claimed that it is better to be a refugee in the nearby Kakuma camp, despite its many hardships, than a member of the Turkana, the host community that surrounds the camp.

Desperate for clean water

The women walk for three hours, round trip, in scorching, over 30-degree heat to a dirty river, where they seek water for cooking, drinking, and cleaning. Linet adds: "Our greatest wish is for a water bore hole. It would change everything. We would not be exhausted from walking for water, or sick from drinking it. Life could change for us".

2. Are household livelihood strategies sufficiently resilient to withstand the frequency and intensity of shocks experienced in the last 10 years?

The majority of both males and females were unable to read and write across villages studied. About 28% of men and 10% of women in Turkana county are able to read and write. The number of men who can read and write is more than double that of women. Informants confirmed that education level has a significant relation with climate change vulnerability. The cross-tabulation of results showed that there is a statistically significant relationship between education and climate

change vulnerability. Women specifically are disproportionately negatively affected by livelihood shocks.

The household survey showed that when a major shock occurs, the household or family has to use more than one mechanism to respond, and generally relies on a combination of savings (74%), borrowing money (71%), or selling assets (68%) to cope with the impacts of a shock. However, many families have a small amount of savings and it can be difficult to access capital during an emergency. Women generally have less or little personal savings and assets to use when affected by a shock. This forces women to depend on male family members to provide resources during times of hardship within the household, continuing the patriarchal cycle.

Approximately 81% of families stated that they had changed their livelihood activities in the past 10 years in order to adapt to shocks. Responses varied by community and education level, and included increasing savings, migration, diversification of crops, requesting government aid, and taking out loans. The data showed that households had a difficult time creating resilient livelihoods in the face of these shocks regardless of adaptation practices. About 96% of households surveyed reported that they have been concerned about not having enough food for their household in the last year. Respondents attributed this lack of access to poverty and that livelihoods are not sufficiently resilient to deal with shocks.

3. Which type of shocks present the greatest risks for each group in the community in the future?

Most parts of Turkana are affected by droughts, which create significant hardships for all households living in those areas. Droughts were the primary shock in the region and their intensification is now a major concern, with each drought cycle becoming narrower and narrower. Apart from livestock and crop losses, drought has long-term social and economic implications. For example, now in the Turkana bioregion, widespread food shortages almost always accompany droughts.

Also, Turkana has faced severe floods in the past 10 years, with 88% of household respondents stating that recent floods have forced them to change their livelihood activities. Further, families confirmed that floods were detrimental to their livelihoods. Approximately 56% of households specified that they experienced loss of livestock and crops due to floods in recent years. However, COVID was reported to be a grave, short-term threat while land conflicts were an ongoing low-grade threat. Graph 1 summarizes the main shocks experienced in Turkana over the last 10 years as reported by household respondents.

Three major rivers drain into the Turkana Lake basin. Flooding is an occasional part of the ecology of Turkana and is associated with illness, resulting in poor households losing seven to nine workdays every month on an average during flood periods. This is especially significant for poor households that rely on selling labor for their survival. As all households face large financial costs associated with important social or family events, such as funerals, marriages, religious and community feasts, and other obligations, floods and droughts affect their ability to meet these obligations.

Graph 1: Shocks - Household Respondents

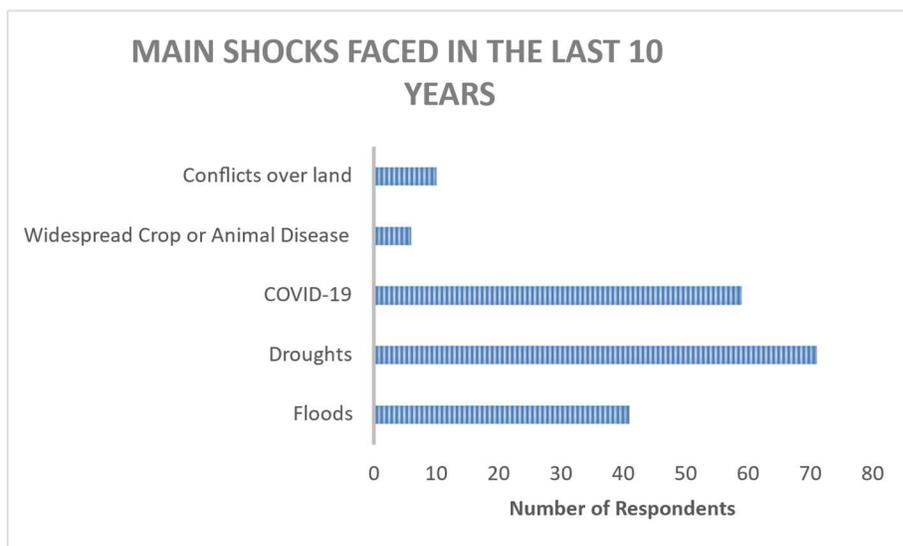


Table 2 shows the years in which major droughts resulted in high levels of food insecurity, famine, and disease since 1925. The Turkana name given to each event is also presented. Respondents stressed that the famine years listed in the table represent acute cases only and also, these were the ones they could remember.

Table 2: Major Events Turkana

Year	Local (Turkana) Name	Local perceptions
1925	<i>Ekwakoit</i>	Bad hunger.
1930	<i>Abrikae</i>	Drought and bad hunger.
1942	<i>Lolewo</i>	Bad animal disease.
1943	<i>Ekuwan Loyang</i>	Drought and famine.
1947	<i>Ataa nachoke</i>	Animal disease and famine.
1949	<i>Ngilowi</i>	Animal disease.
1952	<i>Lotira</i>	Animal disease, drought and famine.
1953-1954	<i>Lokulit</i>	Bad years, famine continued.
1960	<i>Namotor</i>	Drought and famine. All people were starving.
1966	<i>Etop</i>	Serious but short drought.

1971	<i>Lolewo</i>	Cholera epidemic, many deaths.
1979-1981	<i>Loukoi (CCPP), Lopiar, Atanayanaye</i>	Animal disease (CCPP, anthrax), security problems, famine.
1984	<i>Kilejok, Kidirik</i>	Minimal rain, animal raiding.
1990-1992	<i>Lopiar</i>	Skins everywhere, due to many livestock deaths.
1997	<i>Etop</i>	Serious but short drought.
2005-2006	<i>Kumando</i>	Drought and bad hunger. Drought which terminated everything.

Confirmed with the Turkana Drought Contingency Unit and field data.

4. With each shock, who was most affected? The poor are the most affected and least able to respond to livelihood shocks. Respondents shared that droughts cause water shortages, which decrease agricultural activities, affecting production and wages, limiting access to safe water, and increasing vulnerability to diseases. Respondents indicated that the most vulnerable groups to climate variability associated with droughts and floods are women, children and the elderly because they wait at home for the men to bring food home. Results showed that elderly women are considered to be the most vulnerable by 27% of respondents, followed by elderly men (24%), the disabled (24%), female-headed households (14%), married women (5%), men (4%) and youth (2%).

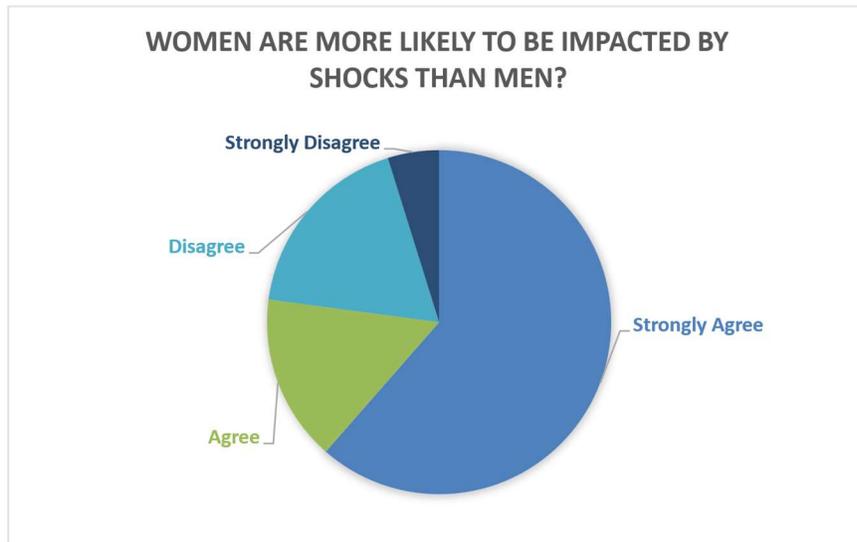
The “Swelling Lake” in Turkana



A question specifically asked was, are women were more likely to be impacted by shocks? Graph 2 shows the response, with approximately 75% of respondents replying that they strongly agree or agree that women are most impacted. A number of reasons were provided. Female-headed households are especially vulnerable if they do not have sons to assist in herding animals, especially when men are gone. Also, female-headed households are vulnerable because they

have less income and they are not well-represented in decision-making within the community. Married women are more vulnerable than married men because of their reproductive and communal roles. When men migrate because of a climate shock, women become the household head and provide security for the homestead, increasing their workload.

Graph 2: Views on Women’s Vulnerability to Shocks



5. What is the status of the ecosystem services that people depend on and is there competition for these resources?

Turkana households depend on a number of natural resources for their subsistence. Ecosystem services or benefits derived from the diverse ecosystems in the Turkana region, including agriculture lands, grasslands, forests and aquatic ecosystems, are varied and provide essential benefits to the majority of residents. Provisioning services that provide potable water, food, fiber and medicine were identified as the most important services from ecosystems; all are facing increasing pressures. Regulating services that contribute to soil formation, nutrient retention, water cycling, and the control of pests and diseases were also mentioned by key informants.

Respondents were asked questions regarding the current state of the ecosystems and natural resources in their areas. As agriculture is an important means of income for the Turkana community, services related to agriculture received the most emphasis. About 50% of household respondents stated that soil erosion is an issue in their community, and 33% of respondents stated that soil health is worsening due to soil erosion. Soil health is critical in order to obtain adequate crop yields. Also, participants overwhelmingly noted that forest diversity, grass cover, and wild animal populations are affected by over exploitation and climate events and are in a poor state with regard to availability and quantity. These deteriorating conditions can cause tensions among families, in particular with respect to communal grazing lands.

However, the accessibility of water resources has improved due to the number and intensity of floods that have occurred in the past 5 to 10 years. Flooding, however, is usually followed by

periods of drought in some areas. During times of drought, women are required to walk longer distances to retrieve an adequate amount of water for the household. This can negatively affect women's lives as they have less time to undertake income generating activities. Due to the increase in water availability, conflict over subsistence use was not a major issue during times of heavy flooding.

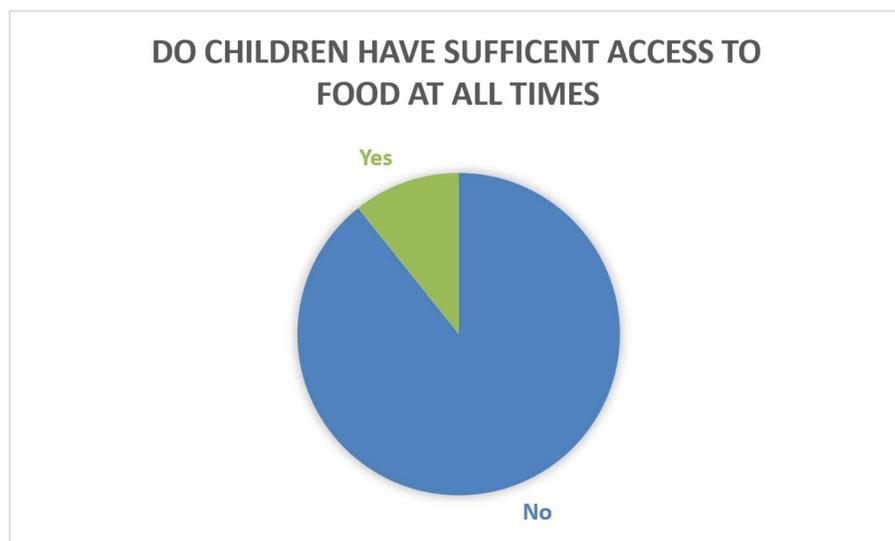
Valuable resources are often controlled by the elders within the community, resulting in frequent disputes over property ownership and conflict over land and forest products. Migrants and refugees have very little if any access to land ownership, making it even more difficult for them to integrate into the community. However, 77% of survey respondents stated that new policies are under development to conserve or improve the management of natural resources within the region. One respondent noted that, "Policies that protect individual's rights to natural resources as well as the management of resources will greatly benefit the Turkana people if implemented correctly".

6. What coping mechanisms allowed people to respond to shocks and livelihood stresses? The coping strategy most frequently mentioned by families was an adjustment to their food consumption, adopted by 72% of households. Changes in consumption patterns include reducing the number of meals eaten in a day or going a whole day without eating, substituting in less preferred and less expensive foods, and limiting portions at mealtimes. These changes in consumption are especially prevalent among the poorest households, as would be expected, given their vulnerability to shocks and stresses, and few income sources. About 5% of households consumed unusual foods such as non-edible tubers and leaves during a shock to cope with a food shortage. Decreases in food consumption was linked to malnutrition, poor health and decreased productivity within the community. Graph 3 illustrates that respondents acknowledged that children do not have sufficient access to food at all times. Specifically, over 89% of households do not have sufficient access to food considering both quantity and quality. The average number of days that children did not have sufficient access to food for the surveyed households was 16 days per month. Food insecurity issues will be discussed in more detail in the next chapter.

7. What practices would allow families and communities to better respond to and adapt to shocks?

The pastoralists in Turkana are dependent on both modern technologies and indigenous adaptation strategies built on traditional social capital or relations which help them to cope with and adapt to shocks. The most common adaptation strategies for drought practiced by respondents include: construction of boreholes and reservoirs (21%); migration to places with water (19%); and digging shallow wells (10%). However, as mentioned above, most households do not have sufficient funds and relatively small amount of savings, thus they have to borrow to undertake the construction of these assets. These coping strategies, while known to be effective, are not available to the majority of the people interviewed. While microfinancing options may be available, they are not accessible at affordable rates for the majority of Turkana residents, and not for women, refugees or migrants.

Graph 3: Access to Food for Children



The analysis of coping mechanisms identified seven actions that were consistently applied across households as a response to the main shocks highlighted above. It is important to highlight that some households did feel that they had mechanisms at their disposal to deal immediately with the shocks that they are experiencing, even if they were associated with negative outcomes. However, most families expressed concern for the future, especially if the frequency and intensity of shocks continue to increase.

1. **Decreasing expenditures:** Reducing expenditure on expensive foods (sugar, meat, and oil), clothes, transport, and non-essentials (like alcohol and tobacco), in order to purchase more food, is a commonly used coping strategy pursued by all wealth groups.
2. **Increased wood collection and sale:** The sale of firewood, charcoal and construction materials is intensified in bad years. However, increased harvesting of trees is a contributor to forest degradation, which was frequently mentioned.
3. **Increased wild food consumption:** During very difficult times, household members spend more time collecting and processing wild foods. Some families also substitute commonly purchased non-staple items for natural bush items. For example, instead of purchasing tea leaves, some households collect and use wild leaves as a tea substitute.
4. **Labor migration:** Members of very poor, poor and, to some extent, middle income households, travel to urban areas, both within and outside Turkana, to look for casual work.
5. **Increased livestock sales:** Households from all wealth groups sell additional livestock to cover basic food and non-food expenses in bad years. However, the extent to which this strategy can be pursued without damaging future livelihoods is quite limited. Middle-income level households are in a better position to apply this strategy.
6. **Livestock migration:** Migrating with livestock to distant locations in search of pasture and water is a common strategy in bad years. Most household members remain in a settlement where food aid is provided (or expected), while male adults and youths migrate with the livestock. Households with very few animals generally group their animals with others.
7. **Increased reliance on crops and farming:** The diversification of pastoralist livelihoods with agriculture has been a mid- to long-term strategy to cope with the damage that successive years of drought have caused. However, it was mentioned that diversification depends on access to water, which is a constraint for most families.

CHAPTER 5: RESULTS BY THEMATIC AREAS AND LIVELIHOOD CAPITALS

Food and Nutrition Security

Interviews with key informants reported that one out of four children in Turkana county is malnourished. The livelihood analysis data showed that 81% of households do not have sufficient access to nutritious foods considering both quantity and quality, and from this analysis it is estimated that most households in Turkana will experience food deficits in the coming months as economic struggles persist due to the COVID-19 pandemic. One key informant stated:

“Our food situation is always a big challenge among the vulnerable population.” Peter Ekai.

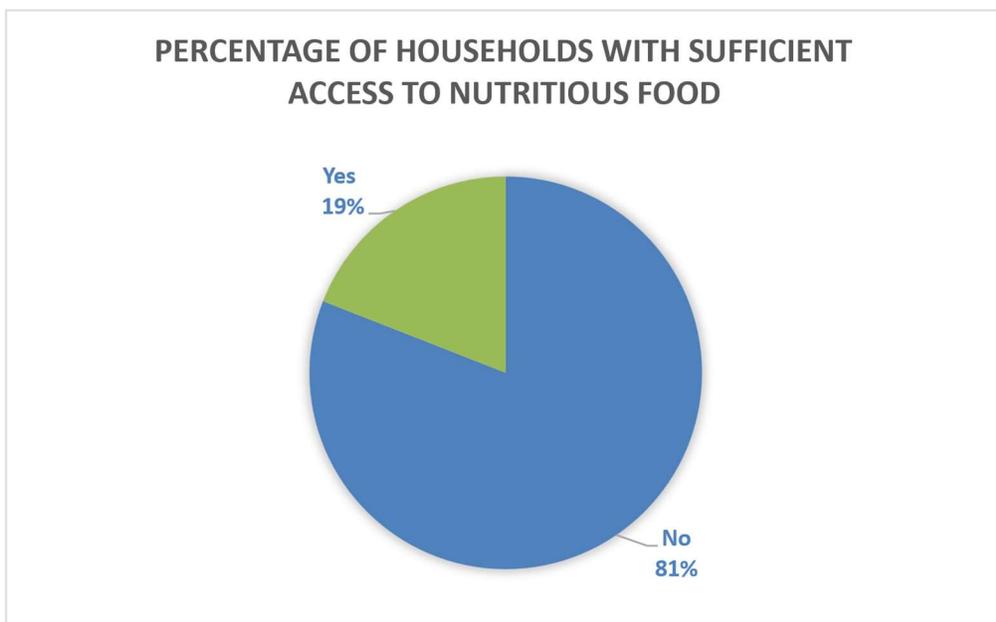
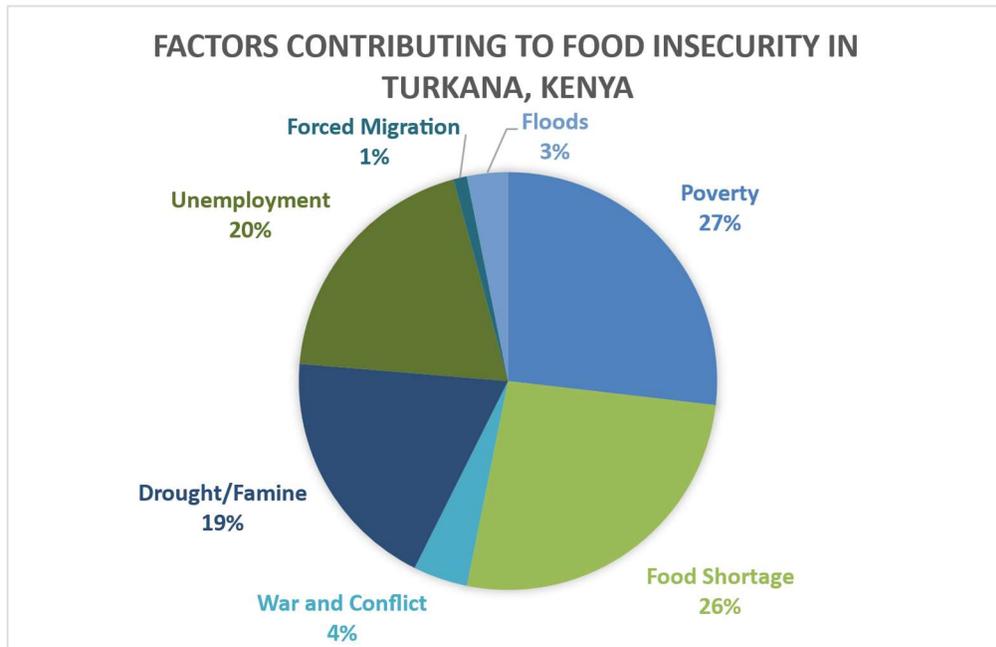
He also explained that the impact of COVID-19 on this vulnerable population in Kenya has reduced purchasing power, adding to the erosion of already vulnerable livelihoods. The pandemic exacerbates the underlying conditions that repeatedly impact access to food such as poverty, food shortages, conflict, drought, unemployment, forced migration, and floods.

In terms of food availability, there is a wide gap between food supply and demand as reflected in high prices and inefficient supply chain management, contributing to extreme food insecurity in Turkana county. Currently, the food produced locally is insufficient to cover local demand, leading to widespread food insecurity and undernourishment as reported by households. Households were specifically asked the number of days in a month when their family had sufficient access to food, considering both quality and quantity. The average response of all households surveyed was 3 days. Specifically, 89% of households stated that children do not have sufficient access to safe and nutritious food at all times; 95% of families attributed this lack of access to poverty. About 89% of households raise livestock and crops to generate income. However, the data collected from households shows economic and financial struggles leading to food security. In summary, local livestock and crop production does not meet the need, and non-locally sourced food is limited due to supply chain issues and the fact that most families are too impoverished to afford the high prices of non-local foods.

Attention to the prevalence of food insecurity in Turkana is particularly urgent considering the increasing demand and increasing prices for food staples and food supply constraints. Conversations with key informants and communities highlighted concerns related to the steady increase in population, the efficiency and effectiveness of current agriculture systems, animal husbandry practices, and access to and inefficiencies in traditional irrigation systems.

Data collected regarding recent crop harvests show an increase in the production of kale and spinach. These are rather hardy crops that can withstand changes in temperature, making them ideal for growing in Turkana where changing climate patterns are prevalent. These crops are also rich in vitamins A, C, E, and K. Leafy greens are essential to a balanced diet, however if the diet is not diversified with additional, higher caloric foods, undernourishment issues can arise as we see in Turkana. Water availability also is a constraint to rapid introduction of these crops.

Graph 4: Food Insecurity in Turkana



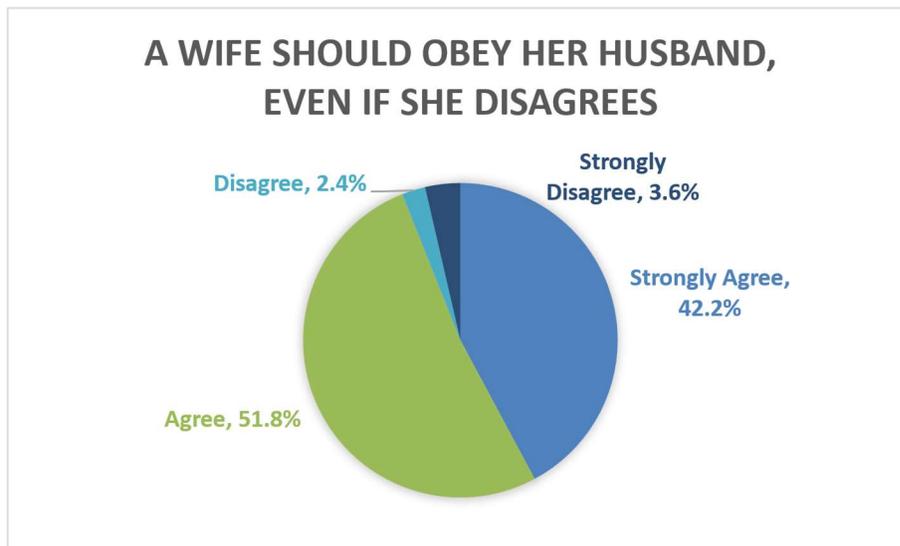
Gender Considerations

The livelihood analysis examined the role of women in Turkana communities and households, the impact of shocks on women and girls and the decision-making power of women. Findings confirm that gender disparities are still very prevalent in Turkana and that women's participation in social and economic activities is directly tied to their economic and social status. Key informants confirmed that the highly patriarchal Turkana society and traditional socialization processes have

excluded women from decision making platforms due to their perceived low status compared to their male counterparts.

Findings show that 76% of household survey respondents “strongly agreed” that women’s opinions are valuable and should be considered when household decisions are being made. However, another question asked household participants if a wife should obey her husband at all times even if she disagrees. With both women and men answering, 51% of respondents “agreed” and 41% of respondents “strongly agreed” with the statement as shown in Graph 5. These results are rather contradictory and lead us to believe there is much ambiguity regarding women’s rights and roles in the household and the community.

Graph 5: Women’s Role in Decision Making



Approximately 77% of respondents either “strongly agreed” or “agreed” that women are more negatively affected by shocks than their male counterparts. When shocks do occur, it is widely accepted that it is the men’s responsibility to determine how the household will react. In order for women to participate substantively as part of decision-making processes there must be an improvement in their social status and equal respect for women within the household and the community.

Officials interviewed stated that development of programs, regardless of the sector, should have a component to empower women and to facilitate and enable their integration and participation in county and national affairs. Additional education and training will be necessary to inform women of their rights. And men of women’s rights. Only when there is a critical mass of economically empowered women, will women be viewed as active participants and stakeholders with recognized roles to achieve the well-being and development of the community.

Lina's Story

Lina is an impressive woman.

She lives in Katilu in Turkana South. Her level of education stopped at standard 7 (primary school) and she is semi-literate. Despite many hardships, Lina is dynamic and committed to making a better life for herself and her community.

Lina happens to live in one of the villages where Mercy Corps was running a community disaster risk reduction program. Because of her active stance on women's issues, she was elected as a community representative. Lina learned of possibilities to reduce disaster risks in the area and applied to a program that offered funds to expand and diversify economic opportunities in her community. Though unable to write, she sought help in drafting a proposal and won a Community Development Fund award to construct nurses' quarters in the village. Now she is submitting more proposals. She says, "every time I think of a project I want to do, I get someone to help me write a proposal for it, so it is ready whenever an opportunity comes".

It was emphasised that in general, women have less control and access to resources such as land, money, technology, infrastructure and participate less in decision making. Oil extraction is a case in point. The discovery of oil has had major consequences for communities in Turkana. However, many of the changes have not been positive and many people feel unrepresented in the decisions that were made. Women specifically were not well represented in the decisions that were made between the oil companies and community leaders. This gap is very apparent as women explained that they were particularly vulnerable to the problems brought about by oil extraction, including family displacement, physical insecurity, natural resource degradation, and foreigners in their areas disrupting cultural traditions.

Migrants and Refugees

The Turkana people interviewed in five communities expressed diverse views regarding refugees and migrants living among the Turkana. The discussions included a range of comments, for example: (1) "refugees are bad"; (2) "refugees are good and beneficial to the community"; (3) "refugees are violent, others or foreign usurpers"; and (4) "the Turkana are neglected by the government and discriminated against by 'down-Kenyans' yet are resilient". It is important to highlight that few respondents refer to the refugees as violent exploiters and usurpers. Only a few respondents mentioned more specific views, such as disdain, discrimination, increased crime, or substance abuse.

The Turkana of Kakuma offered more specific and detailed narratives, possibly because they interact more directly and more frequently with refugees than do the Turkana of Kalokol and Lorugum. However, their opinions also are nuanced, reflecting the complex nature of their interactions, and cultural differences with the refugees. In Kakuma there are over 200,000 refugees living in a camp situation (see photo below). Overall, respondents felt that there is a net positive impact for the local Turkana communities of Kakuma who engage with the refugees. Positive impacts were explained as greater access to: (1) cash, credit, various products, through the exchange of goods, labor, and services; and (2) health and educational services which were established for the refugees, but often benefit some Turkana residents. Conversations also suggest that the Turkana host community at Kakuma has developed a complex counter-narrative

of refugees as good and beneficial compared to the larger narrative that refugees are violent and an economic burden.

The refugees also expressed concerns regarding their integration and prospects for their future. A participant from a refugee focus group stated:

“There are no employment or income generation opportunities for refugees due to limitations posed by the government on our right to work.” Lena Mading, South Sudanese Refugee

Women in Turkana Receive Financial Education



Results by Livelihood Capitals

Social Capital and Equity

A majority of interviewed community members belong to a social group and indicated that they live in harmony together. The majority of the surveyed households, 91%, indicated that social capital and bonding, which entailed horizontal links between family members, close friends and relatives, is the most common type of social relation. “Bridging capital” was identified by 35% of respondents as important and this was defined as a network that connects members across families and communities. Also, linking social networks vertically with some type of authority was identified by 26% of respondents as existing and being important. An analysis of social network trends in Loima showed that in most communities surveyed members felt that their networks were weaker than in the past. The major reasons for the weakening of social networks included: politicization and segregation (79%), erosion of their culture and traditions due to modern ways of life (54%), and the establishment of territorial boundaries (34%). Other reasons given included insecurity and migration.

Feeling safe in the village, standing with each other in times of need, and talking to each other about problems affecting the community were identified as being important. It also was mentioned that strong relationships provide a sense of peace, however the majority of respondents were not sure whether they trust their neighbors. Respondents identified that being capable of leaving

children with a neighbor when going to the market is an important basis of a good relationship. They also identified being able to share community resources, information and knowledge, and cross border migration as important social capital elements.

Social capital facilitates resource flows that are often critical to household livelihood security, good health, and maintaining status. Respondents reported that social capital is important for the sustainability of livelihoods and that pursuing different livelihood strategies requires coordinated actions with others. The most critical social activities that influence people's livelihoods in Turkana county are family and close friendships. Findings from the household interviews described how marriage in Turkana society is a social institution, which not only connects a couple, but also extends beyond the nuclear family to include clans. Marriage is a passage into manhood and womanhood; it legitimizes children, and expands peoples' social networks. Turkana people must marry outside their clan. The main reason for the prohibition of marriage between clan members, as reported by informants, is that clan members are considered brothers and sisters with reciprocal obligations and rights, and the "implied incest" is unacceptable. Other reasons reported include the desire to avoid problems within the same clan and giving birth to ill offspring.

A variety of actors play a key role in the development of Turkana county. These actors include local government (ward and county governments), community groups, international NGOs, multinational agencies, private sector companies, local NGOs or foundations, and religious groups. Their programs enable communities and families to access training and education, capital or credit, health, materials/inputs and technology. However, these programs are not sufficient to overcome the historical and systematic marginalization of the Turkana people.

Human Capital

Human capital refers to the health, skills, knowledge, and experience possessed by an individual or community. A women respondent summed up the situation as:

"The vast majority of people in rural Turkana county have no access to health services and secondary education."

The exception is in areas around Lodwar, the county headquarters, Kakuma Refugee Camp, and Lokichockio near the border of Kenya with Sudan. Respondents discussed that human capital relating to education (including training), health, and skilled labor are major constraints to advancing and ensuring financial security. Key Informants stressed that education is one of the most important factors in achieving a stable livelihood. In Turkana, out of the 215,989 children between five and 13 years who are of primary school age, only 57,483 or 26% are enrolled in primary schools. Also, the dropout rate in primary schools is 63%, which is higher than the enrolment rate of 34%. Officials stated that the low enrollment rate is related to a cultural issue; Turkana county does not take into account the nomadic nature of families. Mobile schools could help solve part of this problem, but so far these have not been delivered in sufficient quantity to meet the need.

The other issue is related to girl's education which is especially poor, as they rarely get the opportunity to study. Key informants pointed out girl's low enrolment in both primary and secondary schools, as compared to boys. This is often related to cultural beliefs, as most respondents argued that educating a girl is "a waste of money", as they will move away from their family when they marry. A key informant (an older man from Morule village) summarized the

situation as follows:

“They [girls] are visitors; they will get married and move with their husbands. It is better to spend money on the education of boys rather than girls” (Household Interview, Morulem village).

“Some girls are sent to school, but in many cases, parents do not see any benefit of investing money in a daughter’s education when they will marry her to another family. A woman’s voice cannot be heard, so when a father decides when his girls are to marry so he can get riches and cows, the mother keeps quiet, because traditionally mothers should not say anything” (Household Interview, Morulem village).

These views about school enrolment in the Turkana County were reinforced by another informant (an elderly man from Lokichar village). His opinion was shared by many people interviewed during the fieldwork. He stated as follows:

“Some children are not sent to school because the family needs their labor; some cannot afford to pay the fees and uniforms; many have no access to schools; and others see it as a misuse of resources to send children to school when there are very few employment opportunities for those who have an education” (Key Informant Interview, Lokichar Village).

The survey discussions highlighted a number of health issues, primarily through the key informant interviews. Many families are not fully aware of pressing health and sanitation issues, although COVID was mentioned by many informants. The major diseases that have regularly been reported in Turkana county are malaria, skin diseases, respiratory tract infections, and diarrhea (UNICEF 2020). Malaria can be prevented by the use of bed nets, but not everybody has the financial means to acquire nets. UNICEF has tried to eradicate polio in many parts of the county through vaccination campaigns, but eradication has not been achieved. Informants discussed the serious problem of bad sanitation and hygiene and how they contribute negatively to the health of the population. They shared that only a few households have sanitary latrines. It was observed that solid human waste is disposed in fields close to homesteads and can make the area susceptible to diseases. Animals are slaughtered near homesteads and the remains are left for the flies and other parasites.

Physical Capital

Physical assets are the resources used in the production of goods and services, including buildings, irrigation systems, canals, roads, tools, machines. Informants stressed that the Turkana have traditionally not had access to much physical capital, and the material culture of the people has been minimal. The Turkana do not have many tools and utensils, and when moving from one cattle camp to the other, the girls and women carry the family’s belongings on their heads.

The main physical asset among the Turkana is livestock, including sheep (17%), goats (14%), camels (18%), and cattle (29%). With an estimated livestock population in Turkana County of over 250,000 cattle, 2,800,000 sheep, 2,000,000 goats and 40,000 donkeys, livestock are a main livelihood asset for families. Livestock, particularly cattle, are not only a food resource but also capital that is essential for negotiations involving influence and connections. Turkana households first own livestock to provide meat, milk, blood, hides and skin, and other by-products. Cattle, camels and goats can be used as payment, for example bride wealth where girls and livestock exchanges take place.

From the discussions with community members and key informants, the livestock holdings of the community have dropped drastically over the last 10 years, with the average holding size for goats falling from 200 to 300 to as low as 70 to 90 goats on average. The few families who now raise camels have an average holding of 6 to 15 camels. These decreases are mainly due to unpredictable weather patterns such as extreme droughts and flooding, reduced animal food availability, and the taking of animals by raiders. Also, land demarcation for ranches, implementation of irrigation systems, and large state projects, for example oil extraction, have affected nomadic patterns, reduced grazing acreage, and the carrying capacity of pasture lands. Specifically, families reported that sporadic and ad hoc development has led to reduced pasture lands, outmigration with families leaving with their animals, and the death of livestock.

Two additional categories of physical capital were identified as important by respondents: private capital (houses) and public capital (infrastructure). However, as mentioned earlier in this report, the Turkana culture is highly patriarchal, with little ownership of assets for women. Discussions with focus groups highlighted the following important family and community assets:

Houses: Extended families and clans own the land, but houses and constructions on the land are privately owned by families or individuals. A house indicates that an individual or family has user rights of the land where it is located. The construction of houses is done by women while men are in the field taking care of the animals. Most Turkana men have more than one wife and it is common that each wife maintains a separate house.

Family Huts in Turkana



©Filiberto Strazzari

Infrastructure: In Turkana county, the infrastructure is generally very poor despite efforts to improve roads and transport. There is only one major road passing through Turkana traveling to Sudan and when it rains this road is impassable. In the interior parts of Turkana, most of the roads and bridges are either damaged or have been destroyed. It is difficult to get supplies into rural areas, limiting opportunities for trade with other regions. Women are the most negatively affected by the bad roads and transport problems. Traditionally, men do not carry loads on their heads; therefore, women travel by foot carrying loads on their heads. When there are emergencies, for example during child delivery, owing to the lack of qualified midwives, women are generally required to walk long distances to access health clinics in order to receive care.

Financial Capital

Financial capital consists of liquid financial resources such as money, savings and access to credit, and less liquid resources such as livestock, food stocks, and reciprocal claims (resources owed by family, friends or clan members). Financial capital identified by respondents includes livestock, and reciprocal claims. Despite high risks, these means of saving are preferred by the Turkana people over banks, because livestock provide other benefits and are a means of living, and reciprocal claims influence their status within the community. Livestock are not only an essential form of savings or “bank”, they are the primary form of investment available.

Traditionally, livestock ownership and numbers in Turkana reflect wealth and prestige, help recover from damages, and have important cultural functions including in sacrificial rituals. According to key informants, relatives, neighbors and friends (livestock stock associates) will help and contribute an animal when needed. Animals provided by others are not purely gifts, and those who give expect to get back at a later stage. This reciprocal claim, sometimes considered a saving process, can extend from one generation to the next. Informants confirmed that the Turkana people traditionally regard the reciprocal system as part of risk management, with social bonds of mutual interests between affiliated parties. According to informants:

“The Turkana know each individual animal. They don’t build houses, they don’t drive motorcars, they just have animals. Their life is animals” (Household Interview, Lilim Village).

It is important to note that Turkana women have no control over livestock except for the care of small animals. Women have access to animals through their husbands, sons, and male relatives, but very limited access on their own. The reason was shared by 60-year-old women:

“The livestock belong to men. They have to herd them to make sure they are not raided. Women can’t herd because they can get raped and raided. Women also can’t make decisions regarding the cattle. Culturally it is men’s responsibility. If we buy cows, the men will take them to the cattle camp and we will never see them again. When our daughters get married, it is the father who has the power to keep the animals given as dowry. We do not like this as it is unfair, but there is little we can do as we have to please our people.”

In the Turkana county, men control the financial capital. If a man wishes to divide his herds into several groups, he can do it without referring the matter to the women of the household. For women who spend most of their time around the homestead in the villages, it can be quite difficult to keep track of herd changes. Women interviewed explained that this arrangement leaves them vulnerable to cheating if their husband dies and male relatives take over care of the cattle. It was confirmed that if a woman becomes a widow, the family’s livestock is passed down to her elder son. If she does not have a son, or he is too young to assume this responsibility, a relative of the late husband will take care of the livestock. Sons in the family will take over when they grow up.

Many Turkana people see their livestock as belonging not only to individuals, but also to the extended family. In some cases, the number of livestock paid as bride wealth is often much larger than what one man can pay, and the size and composition of bride wealth depends on the wealth of the bridegroom and that of his extended family. For example, a Turkana man pays livestock to get a wife, the wife gives him daughters who will be married for bride wealth, and this can be invested in new wives and social networks. It follows that a family that has lost livestock, but has daughters of marriageable age, can quickly recover from losses when the girls are married off.

On the other hand, sons will grow up and get married, which will require the payment of bride wealth and reduction in the number of cattle.

Political Capital

Political capital is the ability to use power and influence in support of political or economic positions and to enhance livelihoods. It is used to mediate access to the other livelihood capitals by influencing the stream of entitlements available through policies, institutions and processes, either to gain access legitimately or illegitimately to such entitlements, or to deny others access. Turkana people use their political capital, at national and local levels, to influence the flow of entitlements, hoping to improve the socio-economic status of their region.

Traditionally, the Turkana political system functioned through lineage. Spear-masters, witchdoctors and rainmakers have traditionally been able to influence society through their capacity to heal bewitched people, chase demons away, predict the future, foresee crises, and unite the people. They would be consulted before people went into battles. Interviews confirmed that ordinary Turkana people achieve political influence through the accumulation of financial assets, mainly cattle, and social networks. Informants stated that because women tend to have less control over various assets, it is hard for them to influence political processes with accumulated assets. When the social network is large, a person or a group will seek support from relatives and friends, and stand strong in relation to other groups. The poor, and women even less so, have in general, few assets from which political capital can be drawn or policy influence.

Woman Working and Watching Children



CHAPTER 6: VISIONING RESULTS

A visioning discussion was held with households and focus groups to develop an understanding of what a more sustainable future and livelihood would look like. In addition to concrete solutions that would help families improve the future for their children and build more resilient livelihoods, respondents discussed changes that were needed within their community to support the personal future they seek. Respondents were very clear that they are in search of a livelihood model that provides an integrated pathway out of poverty for themselves and families. While they want to improve their livelihoods and increase productivity, they stressed the importance of becoming resilient enough to survive a range of shocks and stresses that they see coming in Turkana. They also were clear that climate shocks were going to continue and the “swelling” of Lake Turkana was just one imminent threat. Below are five questions asked to participants during the visioning exercise, with participant responses.

1. What is the future vision, over the next 10 years that you have for your community and bioregion, considering: economic, social, cultural, environmental, and political factors?

“We want to see a Turkana that is fully secure and integrated in the national development discourse, away from marginalization....” Dr. Augustine Logorian, Key Informant

From the data collected through the key informant interviews, focus groups, personal observations, and an extensive literature review, the survey team found that most Turkana residents prioritize diversifying their livelihoods. The opportunity for alternative livelihoods included moving from solely relying on livestock to venturing into other specific income generating actions. Suggested actions included poultry raising, irrigated gardening agriculture, small businesses and trade for the youths, scaling up fisheries, working in the oil industry, and tourism.

2. How do you see your community and bioregion being affected by climate change and other shocks over the next 10 years?

Joseph Ammon, the Health and Human Rights Director at Human Rights Watch shared his views on the situation in the Turkana region. According to Mr. Ammon, the combination of climate change, large-scale development, and population growth poses an urgent threat to the people of the Turkana region. Lake Turkana is in danger of disappearing, and the health and livelihoods of the Turkana people along with it.

Historical data between 1967 and 2012, showed that in Kenya’s northwest corner near the border with Ethiopia, the average temperature rose between 2 and 3°C (3.6 to 5.4°F), using data from the meteorological station in Turkana’s capital. Also, rainfall patterns have changed, with the long rainy season becoming shorter and drier and the short rainy season becoming longer and wetter. Food insecurity and conflict in this region are expected to worsen as the availability of grazing lands decrease. Infrastructure, hydroelectric projects and irrigated sugar plantations in Ethiopia’s lower Omo River Valley threaten to massively reduce the water levels in Lake Turkana, the source of livelihood for 300,000 Turkana residents.

According to Mr. Ammon, people living in Turkana will face increasingly struggle to access water, making every day a fight for survival.

3. What actions will it take to mitigate the impacts of climate change and other shocks to achieve your vision for the future?

The Turkana county and Kenyan governments have acknowledged the impact of climate change and made constructive steps toward developing a national policy to address its effects. There also is an ongoing process to pass a climate change law. Key informants and households stated additional efforts are needed to support adaptation to climate change, as outlined below:

- Promote diversification of livelihood options and focus on non-traditional livestock options;
- Prioritize gender, vulnerable groups and youth in county government plans and policies;
- Support climate-smart agriculture to address all aspects of food security. Donors, civil society, NGOs and the church all have important roles to play;
- Conserve and protect existing water resources, and find new sources. Set rules for water governance; and
- Improve and expand health and education services.

4. What are the top 5 long-term actions that ideally would be taken to strengthen livelihoods in your community over the next 10 years?

Communities proposed the following areas of actions:

- The county government should disseminate and work with communities to implement the County Integrated Strategic Plan (CISP).
- Improve coordination with nonpartisan community structures to define and implement policy initiatives.
- With so many pastoralist youths dropping out of school it is important to support younger generations to develop an alternative livelihood and to stay in school. Incentives may be needed to keep youth in school, especially girls. Other actions may include diversifying traditional agro-pastoralism systems and introducing small scale micro-enterprise activities.
- Support skill development with a special focus on youth and women, including in peri-urban areas such as Lorigum, and Lokichar. Build on the work already done by local nongovernmental organizations such as Tullow Oil.
- Initiate and nurture micro-enterprise development. Undertake semi- and full processing of consumer goods such as milk and milk products, honey, and horticultural products like paw paws and melons.

5. What are 3 short-term actions that ideally would be taken now to strengthen livelihoods in your community?

Households proposed the following actions:

- Increase the production of high yielding horticultural products such as various types of melons, capsicum, onions, tomatoes and paw paw. These products will hopefully bring higher incomes within Turkana urban areas and neighboring areas and improve food security.
- Support women's groups to establish gardens and grow marketable products such as poultry and irrigated crops. These groups can also be supported through various trainings related to agriculture, business and entrepreneurship, and women's rights.

- Empower women to collect water through the development of hand dug wells, boreholes and earth dams for improved health and sanitation as well as water access for multiple uses. This will enable women and youths to develop gardens and produce vegetables for household consumption with opportunities to sell the surplus.

Tables 4a and 4b provide a summary of the community visioning goals disaggregated by gender, age and ethnic group.

Table 4a: Visioning Goals in Percentages- Women

Visioning Goals	Women	Age			Group	
		18-35	35-50	>50	Turkana	Immigrants
Develop a savings culture, through financial inclusion with both savings groups and microfinance services.	66%	25	40	35	69	31
Incorporate an Empowered World View approach to transform mindsets from women's dependence to empowerment and personal responsibility.	42%	54	21	25	86	14
Improve financial literacy education to help local communities and families to take control of their budgets and incomes.	21%	23	46	31	90	10
Promote sustainable natural resource management, with climate smart agricultural training to support sustainable agricultural production.	68%	15	46	39	32	68
Build community resilience, including through Community-Based Disaster Risk Management,	24%	NA	NA	NA		48
Develop strong partnerships for regenerative agricultural production, training to develop business skills, and help access to financial services and markets.	78%	38	36	26	76	24

Table 4b: Visioning Goals in Percentages – Men

Visioning Goals	Men	Age			Group	
		18-35	35-50	>50	Turkana	Immigrants
Develop a savings culture, through financial inclusion with both savings groups and microfinance services.	32%	14	37	28	49	21
Incorporate an Empowered World View approach to transform mindsets from women's dependence to empowerment and personal responsibility.	62%	29	17	33	41	38
Improve financial literacy education to help local communities and families to take control of their budgets and incomes.	29%	22	34	23	38	41
Promote sustainable natural resource management, with climate smart agricultural training to support sustainable agricultural production.	63%	18	33	28	32	47
Build community resilience, including through Community-Based Disaster Risk Management,	36%	17	35	27	37	39
Develop strong partnerships for regenerative agricultural production, training to develop business skills, and help access to financial services and markets.	82%	41	13	25	36	43

Priority Challenges and Proposed Solutions

The following are the top challenges, priorities, and solutions identified by households and communities during the survey process. Interviewees felt that these actions would best enable them to address their main livelihood challenges.

1. Lack of Access to Irrigation Water

Turkana small holder farmers are frequently threatened by starvation and have received food aid from the government. As they depend entirely on rain for even small harvests, variable precipitation, both in timing and intensity, impacts their ability to feed their families. For example, in the last 2 years there was only one very short period of rain resulting in drought. On average a small holder farmer experiences an 80 to 90% crop failure year after year making many food aid-dependent.

Solution: Train on and facilitate access to affordable and sustainable drip irrigation, and how to plant short-term horticulture crops with high yields, like tomatoes, onions, kale and spinach. These crops grow fast, sell well in the market and generate immediate cash for families. With this money each family can buy other foods to supplement their diets, pay school fees, pay for good health care and have a better quality of life.

2. Environmental Degradation and Educational Failure

Turkana suffers from climate shocks, deforestation, biodiversity loss, and unsustainable agriculture systems. The region also lacks economic opportunities and its public education system fails to provide students with skills for making a living. Local youth are unable to make a profit from their families' traditional pastoralist and agricultural activities and thus exploit any natural resource available.

Solution: In addition to improved educational and employment opportunities as already mentioned, provide Turkana adolescents and young adults with leadership training, environmental and climate change education. Help create a community of young activists and Eco-Clubs. Empowered young leaders would promote intergenerational knowledge transfer, environmental stewardship for example by organizing clean-ups, organic agriculture, and campaigns to reduce a communities' footprint.

3. Few Opportunities for Vulnerable People and Refugees

The Turkana bioregion consists of very vulnerable Kenyans who have been marginalized, as well as refugees from Sudan and Somalia displaced by civil wars. Kukuma refugee camp is not only one of the largest camps in the world it is one of the oldest established in 1992. The refugees have experienced horrific atrocities during these wars and continue to struggle to provide food, clothing, medicine and school fees for their families. They are striving to rebuild their lives as are many vulnerable Kenyans who host them.

Solution: Greater attention needs to be given to refugee and migrant integration, working for all people in Turkana to access training and development programs to expand their income generating potential. Programs should prioritize opportunities to learn new skills and establish businesses that lead to self-sufficiency.

4. Lack of Rights, Education and Opportunities for Women

Lack of women's rights, access to education and economic opportunities, were identified as major concerns by the women interviewed. Men also responded that it was important to empower women. Turkana pastoralist women experience widespread insecurity, violence and other harmful practices within their community. Women also identified certain cultural practices as being harmful to girls and preventing pastoralist girls from attending schools in the same numbers as boys. Women, most of whom have little or no education, lack opportunities for income generation and participation in market activities.

Solution: A gender capacity development process, working closely with religious leaders, county administrators, existing councils of elders, and women's groups was proposed with the aim to advocate for women's rights and just opportunities for women and girls, irrespective of ethnicity. Ideas included: using women's advocacy forums such as radio stations to communicate important messages and focused trainings; village-level gender dialogue forums; and Farmer Field Schools

specifically for women so they can acquire knowledge and skills to improve their lives and livelihoods. Women identified a number of training areas important to them including poultry husbandry and farm management, marketing and selling goods, and sustainable land management practices.

5. Poor Access to Financial Services, Especially for Refugees

More than 45% of households in Turkana cannot access affordable and attainable financial services to improve their livelihoods. The financial exclusion suffered by community members is even harder for refugees who are trying to integrate into their new environment. According to county officials, affordable access to financial services could help displaced people cope with shocks, reduce exposure to risk and stimulate economic activity at community level. Supporting them is essential to ensuring their sustainable integration in host communities.

Solution: Set up innovative group savings and loans (GS&L) to empower refugees, migrants, youth and women through the pooling and utilization of financial resources. Combined with training, support in enterprise development and linkages to financial institutions for both refugees, migrants and the people of Turkana is a priority if people are to move forward and away from subsistence livelihoods.

6. Livelihood Asset Diversification

Key informants, households and community members emphasized the urgent need to improve production, enable better market access, and establish micro-enterprises. Livelihood diversification programs that aim to reduce pressure on limited livelihood resources, need to be linked with strengthening natural resources governance. Viable and sustainable diversification should build on the Turkana people's aspirations, strengths and existing initiatives.

Solution: In promoting diversification, it is important for the county government to establish clear policy and program goals, informed by local context, and promote coherence with economic, environmental and social policies. It is essential to ensure participation of local communities at all stages of diversification, from program identification, planning, to implementation and evaluation. Programmatic support for diversification should be flexible and include context specific financial, business and technical services rather than narrowly specified technical interventions that often are conceived and imposed from outside.

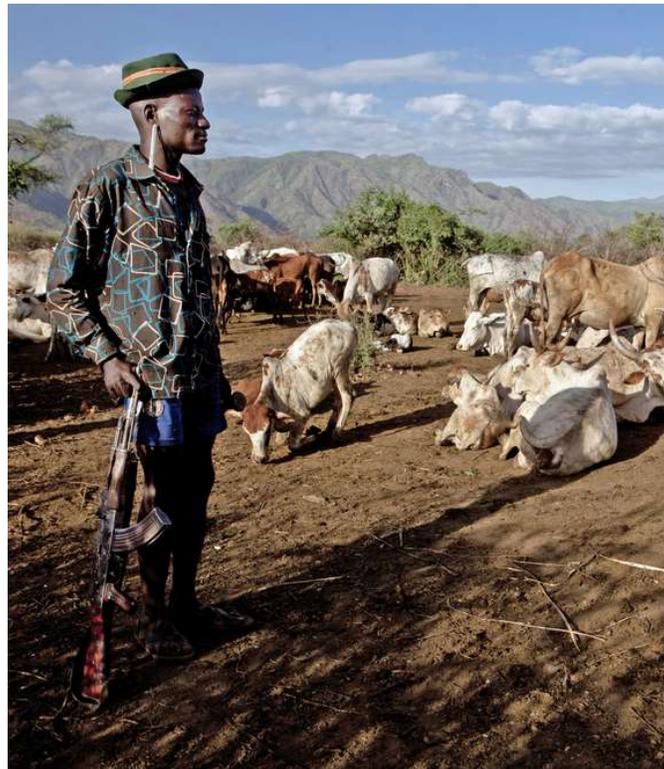
Also, diversification actions should identify marketing opportunities and constraints. Well designed and affordable microfinance can offer diverse opportunities and be used for: 1) production needs (short term); 2) cash for immediate consumption needs and education; 3) emergency/contingency savings mechanisms; and 4) voluntary savings, including with awareness raising on secure means to do so.

7. More Coherent Policy Development

The current process of policy development is constrained by national and local political processes and lacks effective consultation with local communities. In Turkana, there are ongoing grass roots-level initiatives that could usefully inform policy development or revision. But these are usually one-off actions that are poorly coordinated and have little impact on local or national policy and planning processes.

Solution: Informing policy development at local level and influencing national policies. Local policies should focus on promoting sustainable natural resource management and sustainable development for the Turkana people. Currently, policy preferences by county and national decision makers are very growth focused, aiming to increase production, extraction, and intensify and drive trade. Policies and plans largely prioritize natural resource extraction rather than conservation or sustainable use. Harmonizing policies within the framework of Sustainable Livelihoods, Regenerative Agriculture or Holistic Management, which include integrated approaches for agriculture, pastoralism and natural resource management, could provide the proper balance between conservation and development and improve policy coherence.

Pastoralists in Turkana



CHAPTER 7: NEXT STEPS AND RECOMMENDATIONS

Next Steps

A sharing process will be organized at local levels including among all communities involved in the livelihood discussions in Turkana county, as communicating findings with the targeted communities and bioregions is a main outcome of the study. The sharing of experiences and lessons with collective learning will contribute to strengthening livelihood resilience, and enable families, communities, and local entities to better plan for and respond to shocks, with women having an important role in knowledge sharing.

This early exchange will help frame follow up consultation processes with communities to identify priorities and concrete solutions. The visioning exercise combined with a holistic management approach, helped participants to clearly identify priorities and these will be shared with a range of local stakeholders. The involvement of local government in discussing these solutions, is an important step in empowering communities to take action to make their communities more resilient. Targeted audiences include Turkana county government, local livelihoods, water and health associations, donors, UN agencies, NGOs, and community groups. Initial results will be shared by:

- Presenting results to local community groups and other local stakeholders in Turkana and facilitating discussions on concrete next actions
- Publishing a policy brief
- Sharing information and experiences on social media and SNN's and BRI's websites
- Summarizing findings in reports for local government officials and potential donors
- Discussing locally driven solutions and study findings on the local radio in Turkana

Engaging the collaboration of partner organizations with different competencies and specializations (rural development, health, education, social mobilization, finance, etc.) which are then coordinated, will help to inform policy development and support livelihood diversification in Turkana. Pertinent aspects of the livelihood analysis for Turkana county will be shared with communities in other bioregions (Colombia, Mongolia, Montana) that are participating in the Livelihood Analysis project.

South North Nexus and BioRegions International also have committed to support a follow-on pilot project to begin developing a wider consultation process and to implement and test prioritized solutions, with a focus on gender empowerment. The initial pilot project prioritized, in line with the visioning results, water access and management, training and awareness raising with special attention to women's rights and capacity development, and diversifying production to support food security.

Recommendations

The following recommendations are provided with the intention of using the rich information gathered to formulate and implement concrete actions to support community and family resiliency. To a certain extent, they summarize the main findings presented above. Divided into technical, financial and policy recommendations, they outline considerations as livelihood actions are considered in Turkana county and in similar bioregions.

Technical Aspects

Livelihood diversification programs that aim to reduce pressure on limited livelihood options must be linked with support to strengthen natural resource governance.

In promoting diversification, it is important for the county government to establish clear policy and program goals which are informed by local context and are coherent with wider economic, environmental and social policies. It is essential to ensure the participation of women, men, youth, refugees and migrants in all stages of diversification, from program identification, planning, implementation, and evaluation.

Programmatic support for diversification should pay particular attention to assessing and addressing marketing opportunities and constraints. Viable and sustainable diversification needs to start with and build on the Turkana people's aspirations, strengths and existing initiatives, with the aim of strengthening institutional processes at county level.

Local governments and community organizations should lead diversification programs and their capacities and roles strengthened to do so.

Financial Aspects

Microfinance can offer diverse opportunities but it must be well targeted, designed and monitored. Training is a central element to any microfinance initiative and actions should consider financing for production needs (short term), cash-flow (consumption, credit, education), emergency/contingency, and savings mechanisms. Awareness raising on voluntary savings within communities can be very helpful for communities in times of emergencies.

Special financial products for women (traditional loan products, especially relating to weekly repayment) need to be evaluated and promoted. There is a need for pilot activities that promote understanding on how to create and sell products effectively and how to access diverse markets.

Any loan terms and conditions must be tailored to meet women's, refugee's and migrant's needs.

Policy Development

The current process of policy development is constrained by local political processes and lacks effective consultations with local communities. In Turkana, there are ongoing grass roots-level initiatives that could inform policy development or revision. These actors need to be better focused, and involve women and men to provide traditional knowledge and experiences in dealing with the complex issues facing the region.

It is important to engage the collaboration of partner organizations with different competencies and specializations (rural development, social mobilization, finance, etc.) and apply Holistic Management and integrated approaches. Currently, sectoral interventions (health, agriculture, education, etc.) are constrained by lack of coordination. This also limits their effective implementation because local institutions (such as county government units) do not have all the necessary capacity and experience to address the broad and multi-faceted issue of resources management and livelihoods development.

Women's involvement should be supported in all aspects of society. Decision-makers within the community, county and region should be aware that climate change and climate shocks disproportionately are affecting women. And women's voices must be heard when formulating implementation plans and solutions aimed at building livelihood resilience. Finally, greater attention must be placed on ensuring women's rights and safety as they become more involved in community and family livelihood diversification.

A Last Word

South North Nexus and BioRegions International are committed to the sharing of best practices generated from the Turkana Livelihood Analysis. The follow-on pilot project is an opportunity to continue the dialogue initiated with families, communities, authorities, Turkana University and Inclusive Concepts and Innovations. Our hope is to integrate traditional ecological knowledge with contemporary science and technologies to improve the environment-diet-nutrition-health nexus at community level. Concrete actions at many levels, but starting with communities, are needed if the people of Turkana and the migrants and refugees that they host, are to achieve more equitable and resilient livelihoods and adapt to the multiple and increasingly harmful shocks that are coming.