


End Term Evaluation of Water and Livelihood Programme

Draft Evaluation Report

August 2022



**Green Growth and Employment
Thematic Programme (GGEP)**

Executive Summary

The Water and Livelihood Programme (WLP) was funded by the Government of Denmark through DANIDA and the Government of Kenya as additional funding to the Green Growth and Employment Programme to address aggravated challenges due to the influx of refugees in Turkana County. The programme targeted refugees, Host, and other Vulnerable Communities in Turkana West. WLP was implemented from January 2020 – June 2022. The programme sought to increase access to water and sanitation services and management of water resources including rangelands in refugee hosting areas as well as addressing livelihood and community resilience. The projects were implemented by Water Sector Trust Fund (WaterFund) in partnership with five INGO's Implementing Partners (IP).

The end-term evaluation assessed the overall results and impact of the WLP projects and their sustainability, and establish lessons learned and best practices related to planning, design, and implementation of water sector programmes. Geographically, the evaluation focused on WLP target areas; the 5 Wards (Kalobeyei, Lokichogio, Songot, Kakuma, and Lopur) of Turkana West Sub County. The evaluation targeted both the host community and refugees focusing on the Kakuma camp and the refugee integration at the Kalobeyei settlement scheme.

The evaluation mainly adopted a theory-based approach to evaluation guided by the programme theory of change. Further, the evaluation was guided by the revised Organization for Economic Co-operation and Development (OECD) criteria of Relevance, Coherence, Effectiveness, Efficiency, Impact, and Sustainability in reviewing the programme design, implementation strategies and mechanisms, activities, contextual factors, achieved results, and their sustainability. The specific objectives of this evaluation were to assess:

- i. The extent to which the interventions have brought intended and unintended change to the beneficiary groups in line with the targets of WLP and how well they were achieved.
- ii. Functionality and sustainability of water supply, water resources management, and sanitation projects.
- iii. Effectiveness of the established systems of engagement with Turkana County in water planning, implementation, and assessment of implementation capacities of implementing partners including adherence to the financing agreements and other contractual obligations.
- iv. Capacity building approaches' effectiveness and efficiency in the delivery of sustainable water supply and water resources management projects with a focus on operation and Maintenance (O&M) training.
- v. The outcomes and impact of the policy and institutional support structures on WaterFund and at the county level.

The evaluators collected both secondary and primary data, utilizing participatory and interactive approaches zeroing on quantitative and qualitative methodologies to collect data (mixed-method approach). ADI developed and employed an array of practical and participatory tools a) qualitative study design, a structured questionnaire was utilized to collect data from primary stakeholders b) quantitative study design, Key Informant Interviews (KII) guides and Focus Group Discussions (FGD) guides were utilized. For secondary data, a desk review was conducted to capture past work and studies on thematic areas under GGEP, this was done in the broader context of the two partnering countries (Kenya and Denmark). This detailed desk review provided the basis for analysis and discussion within the evaluation

context. A total of 165 participants were surveyed at the household level consisting of 36% refugees and 64% representing the host communities. Also, more than 30 key stakeholders participated in in-depth interviews drawn from IPs, WaterFund, DANIDA, United Nations High Commissioner for Refugees (UNHCR), County and National Government staff e.g., Water Resources Authority (WRA), Projects leadership, and other Development Partners in the water sector. Data analysis and synthesis was done using Microsoft Excel and SPSS for quantitative data, qualitative data was analyzed through coding to capture cross-cutting themes. To establish change, a comparison was done with baseline data and targets set for the programme, also against standards established by stakeholders or other institutions including the Ministry of Health's (MoH) ratio of students per toilet and Sphere's Core Humanitarian Standards (CHS) e.g., minimum distance to a water source. Other analyses conducted included Sustainability Index (SI), Creditworthiness Index (CWI) and Kirkpatrick's model to assess the effectiveness of training delivered.

Evaluation Findings

WLP achieved the overall Development Engagement (DE) Objective of enhanced water resources management and investments in selected ASAL counties for improved and sustained access by communities and households to water and sanitation for their domestic and productive needs. An estimated 10,900 new households received water services because of WLP through drilling, solarization, rehabilitation of boreholes, installation of storage tanks, pipeline extensions with the construction of fetching points and water kiosks as well as rehabilitation of shallow wells. Similarly, approximately 4,050 new households have access to sustainable sanitation services. This was achieved through a combination of sanitation approaches targeting both communities and institutions including Community Led Total Sanitation (CLTS), hygiene promotion, casting, and distribution of slabs for the household latrine, and construction of VIP pit latrines. Under improved water resources management planning, four new Water Resource Users Association (WRUA) catchment areas (Kakuma, Tarach, Lotikipi, and Lokichogio) with a total combined area of 11,929.6 Km² were planned through the development of Sub-Catchment Management Plans (SCMPs) for coordinated management of the resources. Further, 667.89 km² of rangeland was also mapped and put under community management.

Summary of Key Findings

Evaluation Criteria (OECD)	Key Findings
Relevance	<p>WLP is relevant to the water, sanitation, and Water Resources Management (WRM) needs of primary beneficiaries. The project's implementation structures ensured appropriate responses to community needs. The programme was also found to be well aligned with key stakeholder policies, priorities, and strategic objectives</p> <p>The design and Theory of change were found to be robust with shortcomings at the level of causal assumption</p>
Coherence	<p>WLP programme design is internally and externally coherent. The design was informed by lessons learned from previous programmes and harmonized with existing efforts in Turkana County including Kalobeyi Integrated Socio-Economic Development Programme (KISEDIP) WASH component</p>
Effectiveness	<p>Output 1: Turkana County's capacity and engagement in integrated water, sanitation, and water resources-related planning improved.</p>

	<p>Turkana County's capacity and engagement in integrated water, sanitation, and water resources-related planning has been improved through partnerships and collaborations with WLP and other development partners</p> <p>Output 2: Water and Sanitation needs of Turkana West Refugee camps and host community addressed including livelihoods.</p> <p>WLP has greatly impacted on access to water and sanitation in Turkana West by increasing the number of households accessing water (10,900 new households) and sanitation (4050 new households also, 4180 school pupils had access to improved sanitation meeting Ministry of Health (MoH) pupil to toilet ratio standards) services for both refugees and the host community</p> <p>Both refugees and the host communities within WLP target areas are satisfied with water (82%) and sanitation (76%) services. However, satisfaction with sanitation among the host community was somehow low and did not meet the WLP target.</p> <p>WLP impacted the livelihoods of both refugees and the host community. More than half engaged in new livelihood activities, also a significant proportion adopted new agricultural practices consequently improving resilience and adaptive capacity.</p> <p>All WLP investments were climate-proofed and mainstreamed green approaches</p> <p>WLP projects had a high sustainability index, above 70% Sustainability Index (SI) by 2022</p> <p>Output 3: Sustainable and community-based management of water resources and rangeland improved</p> <p>WLP has improved Sustainable and community-based management of water resources in Turkana West by significantly increasing water storage capacity (200,00m³ water storage was successfully developed.) and expanding the area under improved water resources planning (12,597.5km² of new catchment)</p> <p>Output 4: Improved capacity and engagement by Implementing Partners for planning and efficient water service delivery</p> <p>Nearly all (96%) WLP projects were successfully implemented, indicating the improved capacity of IP to manage and implement ASAL climate change resilience projects.</p> <p>Capacity-building approaches were highly effective and contributed to successful implementation, improved service delivery and sustainability of the investment.</p> <p>Two of the main supported WSPs (Kakuma and Lokichogio) are creditworthy. However, Creditworthiness Index (CWI) of 53.8% did not meet the WLP target</p> <p>Output 5: Strengthened institutional performance of WaterFund</p> <p>WSTF institutional performance was improved by WLP investment as evidenced by effective utilization of Management Information System (MIS) system to map and manage supported investments and improved capacity in programme management</p> <p>Improved efficiency and accountability in project implementation. No WLP investment cost was questioned.</p>
Efficiency	<p>WLP projects utilized resources efficiently, ensuring value for money for the intended primary beneficiaries. Local expertise was effectively utilized, and the County Government provided most of the technical backstopping. However, the programme was not implemented within the design period of six months leading to a long no-cost extension.</p>

	Regulatory, structural, and administrative requirements did not hinder WLP implementation. However, it was discovered that some projects did not comply with existing regulatory requirements
Impact	<p>Improvement in WASH and flood control: WLP has improved the WASH of both communities and refugees consequently improving health outcomes. Half of the sampled households reported rare cases of diarrhea among children less than 5 years by both refugee and the host communities</p> <p>Inequality in access to water and sanitation services: There is a significant reduction in inequality in access to water and sanitation between the host community and refugees. However, statistical evidence suggests that refugees still have more access to sanitation than the host community. Respondents from Kalobeyi Integrated settlement reported higher levels of equality in access to water and sanitation services among refugees and host community compared to respondents at Kakuma, However, statistical evidence did not support differences in access to both water and sanitation for Kakuma and Kalobeyi</p> <p>Living Standards: WLP is perceived to have improved the living standards of communities living in Turkana West (Both refugees and host community), improved health, food security and increased household income were the top three areas impacted.</p> <p>Improvement in Natural Resources Management: WLP has implemented activities that have reduced communal conflicts and destruction of natural resources, 63% of respondents reported that WLP has reduced intercommunal conflicts through increasing access to water and providing alternative livelihood activities</p> <p>New livelihood opportunities: Livelihood opportunities from WLP have improved the lives of both refugees and the host community, about 64% of respondents are engaged in new livelihood activities, and 81% had experienced an increase in farm produce over the past 5 years</p>
Sustainability	<p>WLP put robust mechanisms to ensure the sustainability of the investment</p> <p>Mapping of natural resources, Capacity building of beneficiaries, Establishing institutional structures, Targeting women and other vulnerable groups, Construction of water pans to increase water storage coupled with rangeland management, Formation of WRUAs where none existed and development of SCMP, Steady progress was noted in sanitation at the household level, Sensitization of Health Clubs, teachers, and school population on best practices on WASH, Monitoring of water resources and handing over of completed projects to County Government and United Nations High Commissioner for Refugees (UNHCR) for continued support.</p>
Cross-Cutting Issues	<p>Adaptation to Programme Context: WLP implementation context largely remained the same throughout the WLP implementation</p> <p>Gender, Equality and Social Inclusion (GESI): WLP mainstreamed GESI throughout the programme design and implementation, participation of women and youth was given priority, and most facilities were designed to cater for people living with disability (PLWD) including having a ramp</p> <p>Partnerships and Stakeholder Cooperation: Effective collaboration between partners led to optimal utilization of resources</p> <p>Environment, Social and Governance (ESG) risks and Opportunities: There exist opportunities that can be exploited to mitigate ESG risks identified</p>

	<p>Monitoring, Evaluation, Reporting, and Learning (MERL) mechanisms: WLP established a robust Monitoring and Evaluation (M&E) framework that facilitated reporting and sharing experiences between stakeholders, therefore, facilitating learning and accountability</p> <p>Innovation and Learning: WLP implementation tested and adopted promising technologies to promote the reduction of non-revenue water, improving water quality, natural resource management and in sanitation service delivery. These innovations are still nascent and can be upscaled and replicated for improved service delivery</p>
WLP Strategy/ Mechanisms	<p>An integrated approach to refugee settlement has improved the perception and relations between refugees and the host community. WLP projects have contributed to improving the relationship between the host community and the refugees</p> <p>WaterFund's shift to the strategic partnership with INGOs and the private sector to design and finance bigger projects enhanced WLP's success</p> <p>Investment in broader catchment planning for sustained impact improved Water Resources Management</p>

Lessons learned

- i. Project implementation under the WLP programme had a strong reliance on community engagement from the design stages which facilitated good governance, financial management, and proper project implementation.
- ii. Sustained monitoring and follow-up of projects are essential ingredients for effective and efficient implementation of activities and sustained investment.
- iii. Provision of water for domestic and livestock production, integrated water resources management, and rangeland management significantly reduce intra- and inter-communal conflicts.
- iv. The involvement of the Turkana County government is central to the success and sustainability of the investment.
- v. Implementation of activities at the County level demands a well-established institutional framework.
- vi. The Implementing Partners could leverage on strengths among them for a more efficient/effective implementation of activities.
- vii. The integrated model used in the implementation of WLP projects targeting refugees and host communities as well as the provision of water, sanitation, and hygiene with a livelihood component significantly improved the relationship between the two communities.

Recommendations

- i. There is a need to establish sustainable partnerships between WaterFund and IPs and the communities served
- ii. WaterFund should partner with County Government through co-financing to support IPs in form of an increased monitoring budget for county government officers. Note that the County government does not budget for donor-funded projects
- iii. The County Government to have a front seat to drive stakeholder engagement in project implementation. This will lead to enhanced budgetary allocation after handing over ownership of the projects to ensure sustainability.

- iv. There is a need to revise upwards the cost allocation for project administration from 10% to incentivize IPs for participation in similar programmes. Similarly, increase the budget for provision of software components of the programme such as support for CLTS and community engagement.
- v. WaterFund to enhance IPs' capacity on the government procurement procedure for acceptance and uptake. The Public Procurement and Asset Disposal Act (PPADA) should not be viewed as tedious and time-consuming but to ensure value for money to the targeted communities.
- vi. A shift to the use of technology in monitoring project implementation, water use, and groundwater level monitoring is likely to save on project costs and promote efficiency in service delivery.
- vii. Compliance with laid down provisions of Law in form of rules and regulations is vital for sustained enjoyment of benefits derived from the programme. EIA/ESIA informs on the sustainability of the environment, and hydrological and hydrogeological surveys assess the availability of water resources.

Conclusions

- a) A combination of approaches such as rights-based approach, pro-poor based interventions, community-based natural resources management, and green growth and employment strategies works well to ensure natural assets deliver full economic potential on a sustainable basis to enhance the community's resilience.
- b) The adoption of an integrated approach to community challenges is a step in the right direction to meeting the needs of the host community and refugees to reduce conflicts and build resilience to mitigate against poverty and emerging climate change challenges.
- c) Enhanced water resources management and investments in Turkana West for improved and sustained access by communities and households to water and sanitation for their domestic and productive needs were achieved through improving access to sustainable sources of water and sanitation and improving water resource management in Turkana West Sub County.

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List of abbreviations and acronyms

ADI	Advance Development Initiative
AAHI	Action Africa Help International
AMREF	African Medical and Research Foundation
ASAL	Arid and Semi-Arid Lands
CBA	Cost Benefit Analysis
CBO	Community Based Organization
CBNRM	Community Based Natural Resource Management
CIDP	County Integrated Development Plan
CHEW	Community Health Extension Worker
CHV	Community Health Volunteer
CLTS	Community Lead Total Sanitation
CPHO	County Public Health Officer
COVID	Corona Virus Disease
CRM	County Resident Monitor
CSO	Civil Society Organization
CWI	Credit worthiness Index
DAC	Development Assistance Committee
DANIDA	Danish International Development Agency
DE	Development Engagement
DED	Development Engagement Document
DERP	Drought Emergency Response Project
DRDIP	Development Response to displacement Impacts Project
EIA	Environmental Impact assessment
ESIA	Environmental and Social Impact Assessment
EMCA	Environmental Management and Coordination Act
ELIWAS	Enhancing Livelihood through Water and Sanitation
ESG	Environment, Social and Governance
EU	European Union
FGD	Focus Group Discussion
GESI	Gender and Social Inclusion
GGEP	Green Growth and Employment Programme
GPS	Global Positioning System
HH	Household
HR	Human Resource
ILAC	Institutional Learning and Change
INGO	International Non-Governmental Organization
IP	Implementing Partners
JAOME	Joint Annual Operations Monitoring
JICA	Japan International Cooperation Agency
KII	Key Informant Interview
KPI	Key Performance Indicator
KISEDIP	Kalobeyei Integrated Socio-Economic Development Programme
KNBS	Kenya National Bureau of Statistics
M&E	Monitoring and Evaluation
MD	Managing Director
MEAL	Monitoring, Evaluation, Accountability and Learning
MERL	Monitoring, Evaluation, Research and Learning
MoH	Ministry of Health

MTAP	Medium-term ASAL Programme
NDMA	National Drought Management Authority
NEMA	The National Environmental Management Authority
NRC	Norwegian Refugee Council
NGO	Non-Governmental Organization
OD	Open Defecation
ODF	Open Defecation Free
OECD	Organization of Economic Corporation and Development
O&M	Operations and Maintenance
PPADA	Public Procurement and Asset Disposal
PPCP	Public Private Community Partnership
PWD	People with Disability
PWJ	Peace Wind Japan
RMC	Rangeland Management Authority
SCPHO	Sub County Public Health Officer
SCMP	Sub Catchment Management Plan
SI	Sustainability Index
SDG	Sustainable Development Goals
ToC	Theory of Change
TOR	Terms of Reference
UDDT	Urine Diverting Dry Toilets
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations International Children’s Emergency Fund
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
USAID	United States Agency for international Development
USD	United States Dollar
VIP latrine	Ventilated Improved Pit latrine
WASH	Water, Sanitation and Hygiene
WASREB	Water Sector Regulatory Board
WDC	WRUA Development Cycle
WHO	World Health Organization
WLP	Water and Livelihoods
WRA	Water Resources Authority
WRM	Water Resources Management
WRA	Water Resources Authority
WRUA	Water Resource Users Association
WSP	Water Service Provider
WaterFund	Water Sector Trust Fund
WU	Water Utility
WUA	Water Users Association

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Chapter 1: Evaluation Background

1.1 Introduction

The concept of green growth has its origins in the Asia and Pacific Region where it was viewed as a key strategy for achieving sustainable development as well as the Millennium Development Goals (2 and 7 relating to poverty reduction and environmental sustainability)- United Nations Economic and Social Commission for Asia and the Pacific- UNESCAP, UNESCAP, 2012. At the global level, the Rio+20 Summit in 2012 called for the adoption of a green economy. Green growth has further been defined as a strategy of investing in natural capital, thus making “green” an ecologically sustainable driver of economic growth. Green growth is also used as an efficient strategy to support the implementation of the 2030 Agenda for Sustainable Development.

Sustainable Development Goals (SDG) Agenda 2030 provides a scope of reference for global development up to 2030. The sixth goal (SDG 6) focuses specifically on water-related issues, including water, sanitation, and hygiene (WASH) services. In line with this interdependence between SDGs, WASH related targets are also either explicitly or indirectly linked to all other SDGs including eradication of poverty, zero hunger, gender equity, education, sustainable cities. For example, the SDGs on health, education and communities contain targets that are directly contingent on developing WASH services.

For the water and sanitation sector, the SDG target of achieving universal access by 2030 is particularly ambitious in those countries with large disparities in access, such as in sub-Saharan Africa. These countries are still far from meeting the targets. According to WHO, achieving universal coverage by 2030 will require a quadrupling of current rates of progress in safely managed drinking water, safely managed sanitation, and basic hygiene services.

Kenya’s Situation: Significantly more Kenyans have access to safe drinking water (59 %) than to basic sanitation (29 %)¹. Since 2000, access to safe drinking water has increased by 12 percent, while access to basic sanitation has fallen by five percent. Similarly, 9.9 million people drink directly from contaminated surface water sources and an estimated five million people practice open defecation. Only 25% have hand-washing facilities with soap and water at home. Achieving universal access to drinking water and sanitation by 2030 will be challenging given current levels of investment, projected population growth, and climate change.

1.2 Description of WLP Intervention

Water Sector Trust Fund (WaterFund) has completed implementing five-year water, sanitation, and water resources management programme funded by the Government of Denmark through DANIDA and the Government of Kenya through development cooperation. This engagement targeted the Arid and Semi-Arid (ASAL) Counties of Northern and North-Eastern Kenya. These dryland counties are home to the poorest population in Kenya, characterized by persistent drought and limited water availability. These Counties constitute 80% of the land area of Kenya and are home to approximately 20% of the population.

The engagement addressed the provision of water and sanitation services and the management of water resources. These services are key aspects in addressing poverty reduction, inclusive green growth, rights, and sustainable management of natural resources in the ASALs. The thematic Green Growth and

¹ UNICEF, 2022: [Water, Sanitation and Hygiene](#) | UNICEF Kenya

Employment Programme was implemented under the overarching Kenya Country Programme 2016-2020 to support Kenya’s “inclusive greener growth with higher employment”. Refugees hosting ASAL Counties experience aggravated difficulties. Turkana West within Turkana County was found to be in a specific difficult situation with a significant influx of refugees in the area. Consequently, DANIDA provided additional funding added to the engagement in 2018 (Water and Livelihood Sub-programme) to further provide WaterFund with opportunities for addressing access to water and sanitation services and management of water resources including rangelands in refugee-hosting areas.

Table 1: Programme Development Engagement Summary

Title of the DE (Development Engagement)	Access to and management of water resources in the arid and semi-arid lands (ASALs)
Implementing partner or partners	Water Sector Trust Fund
Date of the Development Engagement Document (DED) agreement	20 th December 2017
Planned period of implementation	2 years 6 months: From December 2018 to June 2021
Actual period of implementation	2 years 6 months From January 2020 to June 2022
Total grant as per DED	DKK 40 million
Disbursed amount	Ksh. 617, 432,608.20
Spent amount	Ksh. 614,061,075.00

1.3 WLP Implementation

The WLP implementation started in January 2020 after its launch on 9th December 2019 in Kakuma. The Programme was implemented by WaterFund through a partnership with five International Non-Governmental Organizations (INGOs) Implementing Partners (IP). Each of the five IPs had a specific objective all contributing to the overall WLP goal.

Table 2: WLP Implementing Partners (IP)

Implementing Partner	Project Name/Objective	Location targeted
Action Africa Help (AAHI)	Enhancing Livelihoods Through Water and Sanitation (ELIWAS)	Lopur Ward, Kalobeyei Ward
Amref Health Africa	Turkana West Water, Sanitation and Livelihood (TWASWALI) project	Songot Ward
Norwegian Refugee Council (NRC)	WASH Improvement for Refugees and Host Community in Kakuma Ward	Kakuma refugee camp and the host community.
Oxfam Great Britain	Support for Sustainable and Resilient WASH Services for Kakuma town, Turkana West	Kakuma Town
World Vision	Turkana West Water, Sanitation and Environmental Management (TWASEMA) Project	Lokichogio, and Kalobeyei Wards

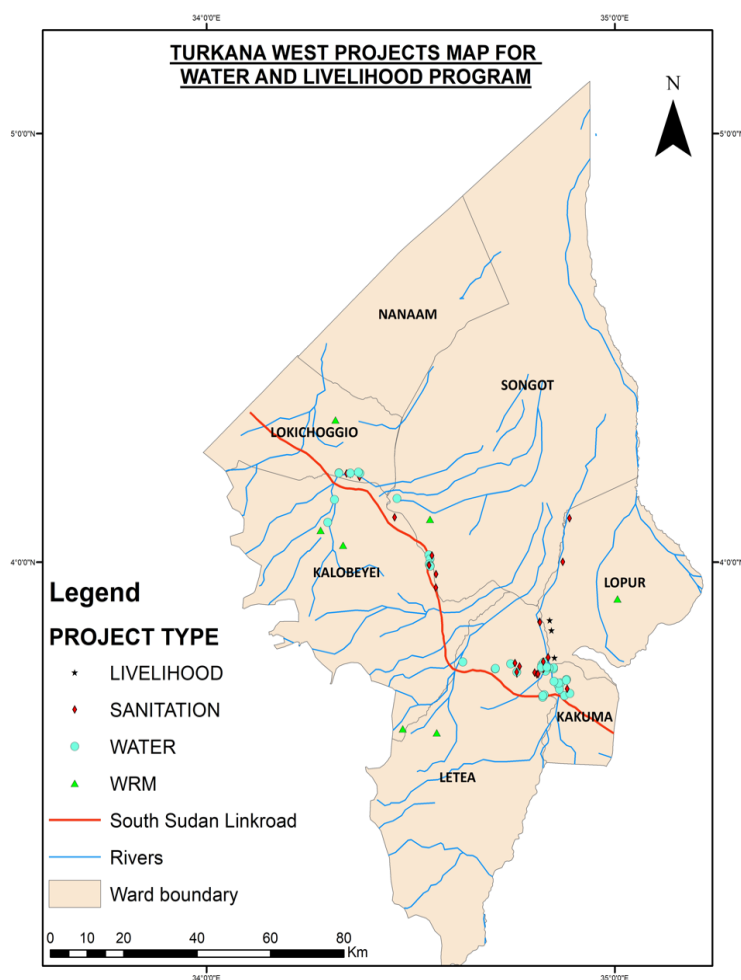


Figure 1: Map Showing Georeferenced WLP Project Areas

knowledge will be utilized by the Ministry of Water, Sanitation and Irrigation and other stakeholders in the Water Sector to guide policy and ASAL interventions. Broadly, the evaluation was to inform DANIDA, the Government of Kenya, County Government of Turkana inter alia on the extent to which the objectives of the programme were met in terms of provision of water and sanitation services access and water resources management in Turkana County in addition to the functionality and sustainability of funded water supply, sanitation, and water resources management investments.

The Specific objectives of this evaluation are to assess:

- a) The extent to which the interventions have brought intended and unintended change to the beneficiary groups in line with the targets of the WLP and how well they were achieved.
- b) Functionality and sustainability of water supply, water resources management and sanitation projects.
- c) Effectiveness of the established systems of engagement with Turkana County in water planning, implementation, and assessment of implementation capacities of implementing partners including adherence to the financing agreements and other contractual obligations.
- d) Effectiveness and efficiency of capacity-building approaches in the delivery of sustainable water supply and water resources management projects with a focus on O&M training.
- e) The outcomes and impact of the policy and institutional support structures on WaterFund and at the county level

1.4 Evaluation Purpose, Objectives, and Scope

1.4.1 Purpose and Objectives

This evaluation was commissioned to provide evidence to WaterFund and DANIDA on achieved results in WLP projects and their sustainability. Further, the evaluation was to determine lessons learned and best practices related to the planning, design, and implementation of water sector programmes in similar contexts. This knowledge will be utilized to inform and strengthen various approaches adopted by DANIDA and WaterFund in the implementation of projects through different implementation agents (Water Service Providers, Water Users Associations, Water Resources Users Associations, Community Based Organizations, and International Non-Governmental Organizations (INGOs)).

In addition, it is expected that the

1.5 Scope of the Evaluation

1.5.1 Programmatic Scope

This evaluation covered the full extent of the WLP Programme as detailed in the revised Development Engagement Document. This included a review of the programme design, implementation strategies and mechanisms, activities, and contextual factors. The evaluation has also reviewed and assessed findings and recommendations made during the Programme Midterm Review (2018) and their implementation.

1.5.2 Geographical Scope

Geographically the evaluation focused on WLP target areas; the 5 Wards (Kalobeyei, Lokichogio, Songot, Kakuma, and Lopur) of Turkana West Sub County of Turkana County. The economy of these arid lands is dominated by pastoralism. The cost of providing water and sanitation is very high outside the towns due to the scattered population in the ASALs, approximated at 10-30%, which is way below the national average for rural areas at 49%. The annual rainfall in arid areas ranges between 150mm and 550mm per year. Temperatures are high throughout the year, with high rates of evapotranspiration. Turkana West's difficult conditions are further aggravated by the arrival and presence of many refugees from neighboring counties. Approximately 186,000 refugees in Kalobeyei settlement and Kakuma camps constitute more than 40% of Turkana West population. With high levels of population growth in Turkana West (49% increase since 2013)² poverty is likely to grow unless major investments are made in services and productive sectors.

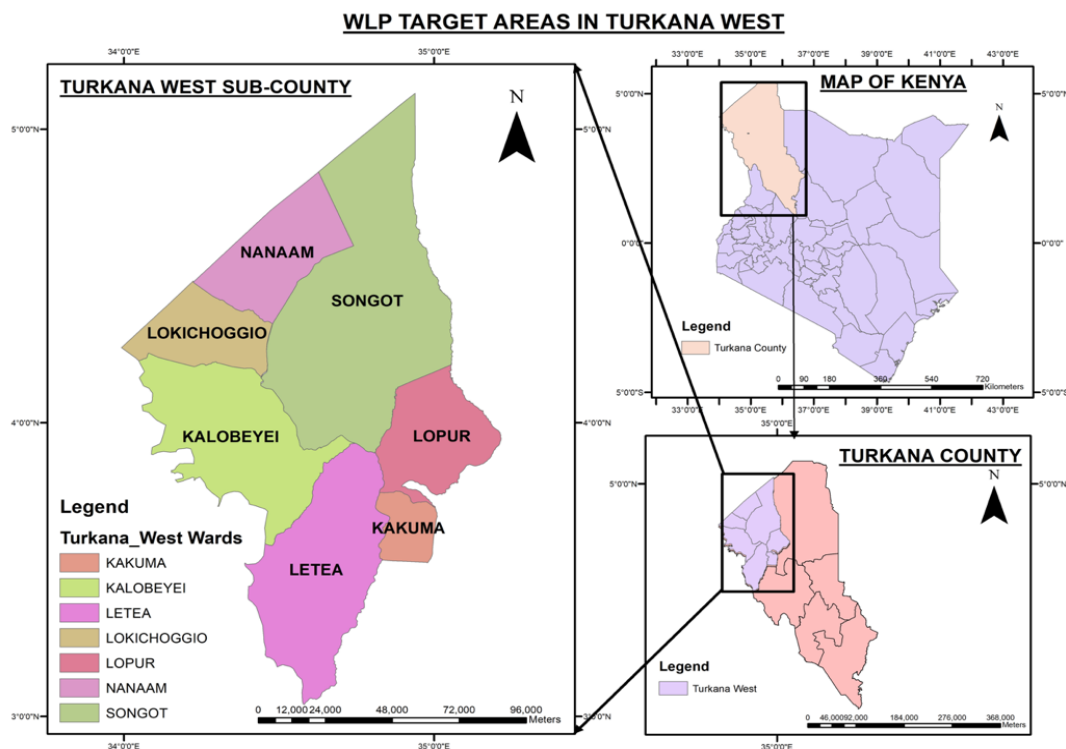


Figure 2: Map showing WLP Target areas in Turkana West

² Kalobeyei Integrated Socio-Economic Development Plan, KISED P 2018

1.6 Programme Theory of Changes and Results Chain

The long-term goal of WLP (GGEP) engagement is captured within the WaterFund mission statement of ‘assured water resources availability and accessibility of water and sanitation by all’ and directed by the WaterFund commitment to reach out further to the underserved ASAL counties. The intermediate goal is ‘enhanced water resources management and investments in selected ASAL counties for improved and sustained access by communities and households to water and sanitation for their domestic and productive needs. This includes “increasing access to water and livelihood opportunities in refugee-host and other vulnerable communities, created through enhanced water resources management and investments in Turkana West”. This too is the goal and outcome of the additional and new funding for WaterFund work. To achieve this goal, several major challenges need to be overcome by this intervention particularly: the specific challenges associated with limited access to water, sanitation, and poor management of water and range resources found in ASAL refugee-hosting areas, where resource strain and competition are of serious scale.

In summary, the Theory of Change for the development engagement states that if support is provided to:

- a) Better capacities of implementing agents to plan, undertake and manage water, sanitation, and water resource management investments (output 4)
- b) Improved capacities of counties to plan, prioritize and facilitate water, sanitation, and water resource management investments (output 1)
- c) Enhanced institutional performance and delivery mechanism of WaterFund to plan, deliver and facilitate water, sanitation, and water resource management investments (output 6) and,
- d) Increased investments in water, sanitation, and water resources management infrastructure that are sustainable and climate resilient (part of outputs 2 and 3)

Then this will, considering that risks are negotiated as described in risk assessment, result in:

- a) Improved access to water/secured water supply and sanitation services, (output 2)
- b) Improved and integrated management of water resources and improved livelihoods/economic opportunities (output 3)
- c) Sustainable and inclusive economic growth in the ASALs (outcome of the DED)

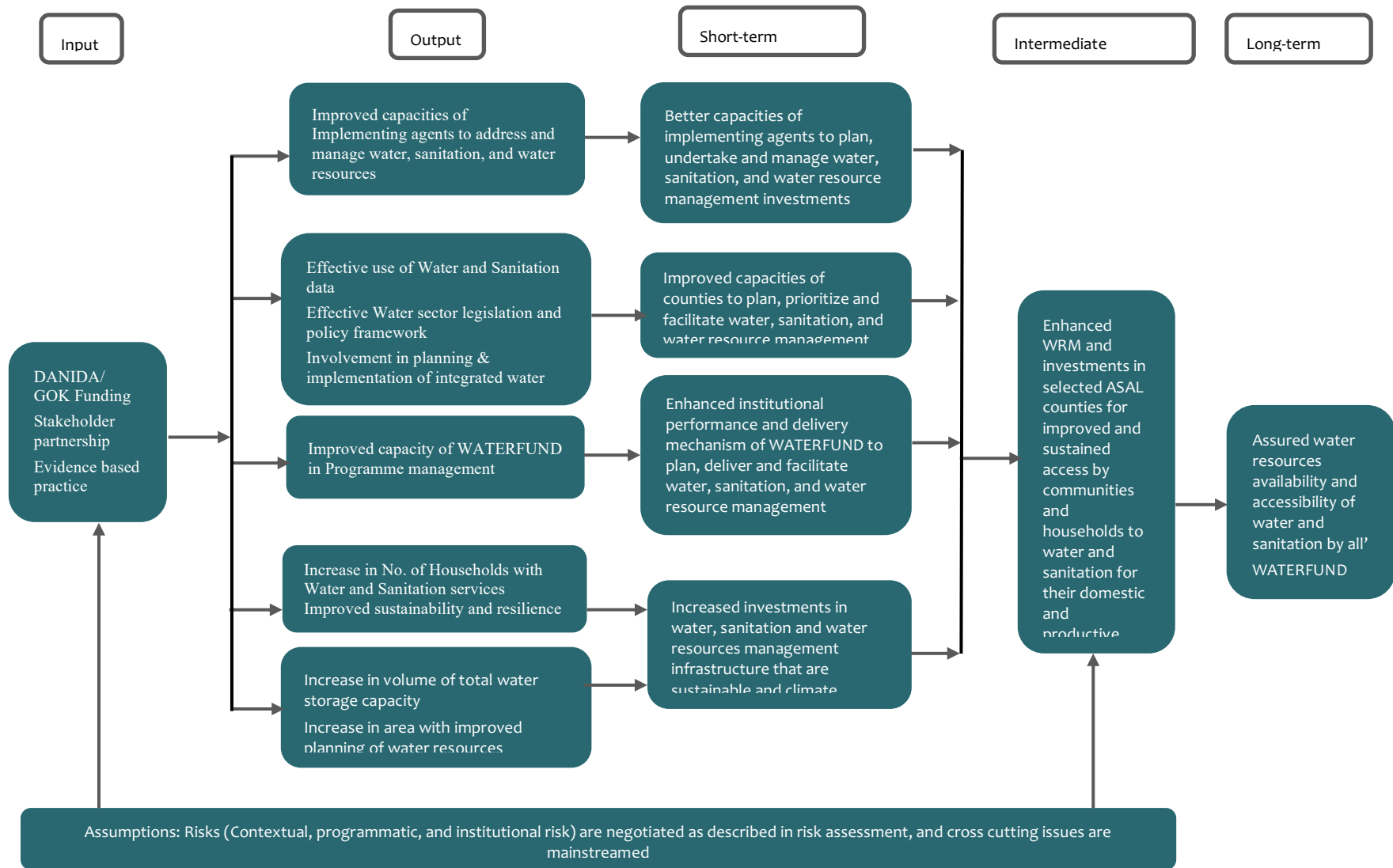


Figure 3: WLP Programme Theory (Logic Model)

Chapter 2: Evaluation Methodology

2.1 Evaluation Design and Approach

The Evaluation of the WLP programme utilized a theory-based approach to evaluation. The inherent societal complexity of interventions has seen theory-based evaluation move into the mainstream of thinking and practice about how interventions are designed, described, measured, and evaluated within the last 20 years³. Theory-based evaluation establishes evidence to a) test the assumptions underlying the chain of causality that leads from output to intermediate outcomes, and contributions towards impact and b) test the theory to see if it holds and draw conclusions about whether and how an intervention contributed to observed results. This evaluation will therefore adopt the Theory of change (TOC) evaluation and contribution analysis. The evaluation was guided by the ToC as explicitly outlined in Development Engagement Document and further illustrated in the Results Framework to guide a) formulation of evaluation questions and, b) selection of various evaluation methods

2.2 Description of Methods

Theory of change and contribution analysis are two theory-based approaches to evaluation that complement one another and can be used in combination with most evaluation designs and data collection techniques. The core evaluation methodology that has been used in evaluating the contribution of WLP intervention to the observed results was Contribution Analysis. Contribution Analysis refers to a theory-based approach that aims to confirm that an intervention is a contributory cause to a given outcome. It is used to assess cause and effect relationships in circumstances when impacts result from a complex interplay of actions by multiple players and a variety of contextual factors. The evaluation team implemented the following iterative six steps in the application of contribution analysis.

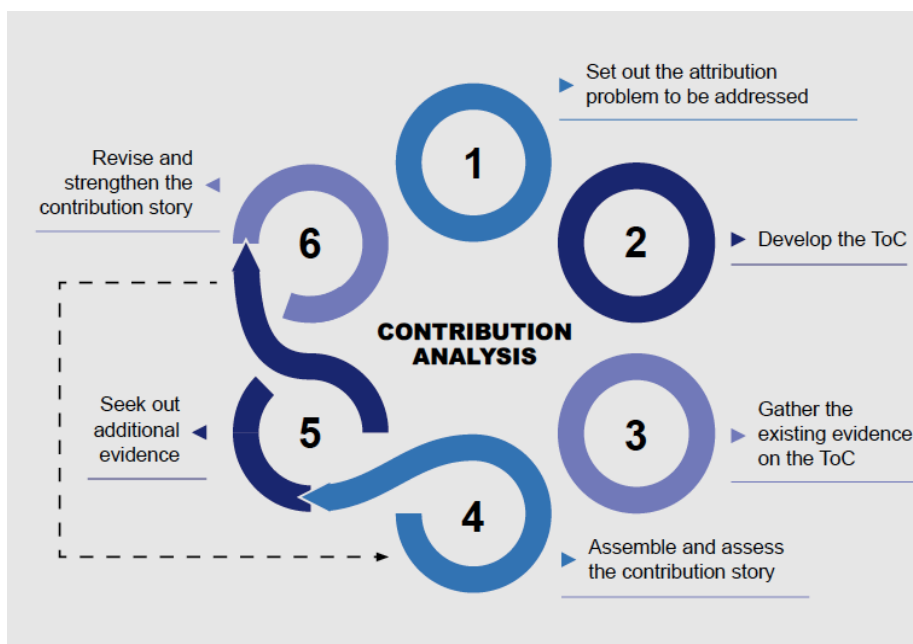


Figure 4: Contribution Analysis

³ Treasury Board Secretariat of Canada (2012). Theory-based approaches to evaluation: Concepts and practices. Ottawa, Canada: Treasury Board Secretariat.

2.2.1 Methods for Gathering the Evidence

The evaluators collected both secondary and primary data, utilizing participatory and interactive approaches zeroing on quantitative and qualitative methodologies to collect data (mixed-method approach). The evaluators developed and employed an array of practical and participatory tools a) qualitative study design, and a structured questionnaire was utilized to collect data from primary stakeholders focusing on the direct primary stakeholders with households as the unit of analysis. The Survey was designed to answer questions specific to various projects' outcomes, impact, and sustainability and, b) quantitative study design, Key Informant Interviews (KII) guides and Focus Group Discussions (FGD) guides were utilized. (Annex 8_ Data collection tools). In keeping with the principle of employing inclusive and highly participatory processes, the approach ensured active participation of identified stakeholders at each level of the evaluation. Measures were taken to prioritize women and girls' experiences and ensure that data collection was conducted in a gender-sensitive and culturally appropriate manner.

For secondary data, desk review was conducted to capture past work and studies on thematic areas under GGEP, this was done in the broader context of the two partnering countries (Kenya and Denmark). This detailed desk review provided the basis for analysis and discussion within the evaluation context. Some of the key documents reviewed included a) Turkana County CIDP b) programme documents including Development Engagement documents, Mid-term review, and completion report c) other key partners strategic documents and reports including WaterFund's strategic plan, Annual Rural Harmonized Report, DANIDAs' The Right to a Better Life' Strategy for Denmark's Development Cooperation, Implementing Partners completion reports, Kalobeyei Integrated Socio-Economic Development Plan (KISDEP) and, d) Kenya water sector management framework documents e.g., Kenya Water Act, National Environmental Sanitation and Hygiene Policy, WRUA Development Cycle, 2019 Population and Housing Census Reports among other key documents (Annex 6_ Documents Reviewed)

2.2.2 Sampling Plan

The consultants utilized a two-stage sampling process. First, projects were sampled purposively after in-depth discussions with Implementing Partners to understand the scope of projects implemented across all thematic project areas e.g., water, sanitation, water resource management, livelihood, and hygiene promotion. Secondly, participants for household surveys were sampled systematically using stratified random sampling. A total sample of 152 households was calculated using the Cochran Israel formula with an adjustment of 10% to take care of any possible design effect, and an adjusted $P=0.1$ due to reduced variability was utilized to arrive at the appropriate sample size.

Table 3: Sampling formula

$n \geq (Z^2 \cdot p \cdot q) / d^2$	Where:
$n \geq ([1.96]^2 \times 0.1 \times 0.5) / [0.05]^2 = 138.2$	n = desired sample size
Adding 10% for design effect: $n = 139 + (139 \times 10/100) = 139 + 14 = 152$	z = standard normal deviation at the required confidence level
Sample size (n) ≥ 152	p = proportion of the target population or the estimated characteristics being measured
	q = the maximum prevalent error for the prevalent estimate ± 0.05
	d = the marginal error allowed ($d=0.05$ since confidence limit is 95%)

This sample size was then distributed proportionately among implementing partners (areas). A total of 15 household surveys were carried out within the sampled project areas.

2.3 Methods for synthesis and analysis

This stage involved synthesis, collation, and analysis of both secondary and primary data to establish evidence for conclusion on various evaluation questions. Quantitative data was analyzed mainly using descriptive statistics by use of Microsoft Excel and SPSS. Qualitative data was analyzed through coding to capture cross-cutting themes. To establish change, a comparison was done with baseline data and targets set for the programme, also against standards established by stakeholders or other institutions including the Ministry of Health's ratio of students per toilet and Sphere CHS standards e.g., minimum distance to a water source. Other analyses conducted included Sustainability Index, Creditworthiness Index and Kirkpatrick's model to assess the effectiveness of training delivered.

2.4 Evaluation Questions

To achieve the evaluation objectives and purpose, the evaluators formulated and endeavored to answer the following key evaluation questions and sub-questions based on the OECD-DAC criteria of relevance, effectiveness, efficiency, impact, and sustainability. A set of indicators, data sources, tools, and specific techniques that guided the gathering of evidence is shown in the evaluation design matrix (Annex 1).

The evaluators also assessed mainstreaming of the following cross-cutting issues in the design, implementation, and achievements of WLP programme goals i) Gender, Equality, and Social Inclusion (GESI), ii) Partnerships and Collaboration iii) Environment, Social, and Governance (ESG) iv) Accountability and v) Innovation and learning.

Table 4: Key Evaluation Questions

Evaluation Criteria and Key Evaluation Question	Sub-questions
<p>Relevance</p> <p>How are the objectives of the intervention consistent with the beneficiary needs and Stakeholders' policies and priorities?</p>	<p>1.1 Are the objectives and strategies of the intervention relevant to the Water, Sanitation, and WRM needs/priorities of intended beneficiaries?</p> <p>1.2 To what extent are the intervention objectives relevant to WaterFund, DANIDA, Turkana County, and National Government policies and strategic objectives?</p>
<p>Coherence</p> <p>How compatible is the programme with other interventions within the counties?</p>	<p>2.1 What are the synergies and interlinkages between the intervention and other interventions carried out by DANIDA/ WaterFund /IP</p> <p>2.2 How consistent is the intervention with other actors' interventions in the same context (ASALs')</p>
<p>Effectiveness</p> <p>To what extent have the expected outputs of the intervention been achieved?</p>	<p>Output 1: Turkana counties' capacity and engagement in integrated water, sanitation, and water resources-related planning improved.</p> <p>3.1 Is Turkana County effectively using water and sanitation data for planning and performing its regulatory functions?</p> <p>3.2 Does Turkana County have an effective water sector legislative and policy formulation framework to support planning and implementation?</p> <p>3.3 To what extent is Turkana County involved in the planning and implementation of integrated water and natural resources management?</p>

Evaluation Criteria and Key Evaluation Question	Sub-questions
	<p>Output 2: Water and sanitation needs of Turkana West Refugees and host communities addressed including livelihood</p> <p>3.4 Has the number of households with access to water services increased?</p> <p>3.5 Has the number of households with access to sanitation services increased?</p> <p>3.6 Has the intervention improved water and sanitation services?</p> <p>3.7 Has the intervention increased livelihood opportunities for both refugees and host communities?</p> <p>Output 3: Sustainable and community-based management of water resources and rangeland improved</p> <p>3.8 Has the intervention improved Community-Based Natural Resource Management (CBNRM)</p> <p>Output 4: Capacity of Implementing Partners/ agents (WRUA, CBO, and WU/WSP, CSO, and NGO) improved</p> <p>3.9 Has the capacity of implementing partners improved?</p> <p>Output 5: Strengthened Institutional Performance of WaterFund</p> <p>3.10 How has the intervention impacted WaterFund Project management practice?</p> <p>3.11 Has the intervention improved WaterFund efficiency?</p>
<p>Efficiency</p> <p>How efficient was the programme implementation?</p>	<p>4.1 Was project implementation as cost-effective as budgeted?</p> <p>4.2 Has the intervention been implemented within the scheduled time?</p> <p>4.3 Could financial resources have been used more efficiently (Value-for- money)?</p> <p>4.4 To what extent did the programme implementation utilize existing expertise</p> <p>4.5 To what extent have regulatory, administrative, time, other resources and procedures contributed to or hindered the achievement of output</p>
<p>Impact</p> <p>How effective have the project strategies and approaches in contributing to Overall WLP Objective</p>	<p>5.1 To what extent has improvement in WASH and flood control improved the health of refugees and the host community?</p> <p>5.2 Has the intervention reduced inequality in access to water, sanitation services, and distribution of other resources and living standards?</p> <p>5.3 Has improvement in Natural Resources Management reduced competition for natural resources?</p> <p>5.4 How has the livelihood opportunities improved the living standards of refugees, host community, and other vulnerable communities?</p>
<p>Sustainability</p> <p>What is the likelihood that results will continue once Programme funding and assistance have ended?</p>	<p>6.1 How sustainable are the intervention results from a social-political and climatic point of view?</p> <p>6.2 How sustainable are the intervention results from an economic and/or financial perspective?</p> <p>6.3 How sustainable are the intervention results from an institutional point of view?</p> <p>6.4 Can the programme be upscaled or replicated?</p>

Evaluation Criteria and Key Evaluation Question	Sub-questions
<p>Cross-cutting issues</p> <p>What are the key crosscutting issues that considered in the programme?</p>	<p>7.1 To what extent has the programme adapted to its context?</p> <p>7.2 How has the GESI issue been considered throughout the programme?</p> <p>7.3 To what extent did partnerships and stakeholder cooperation, affect the achievement of results?</p> <p>7.4 What are some of the potential ESG risks and opportunities in WLP investments?</p> <p>7.5 To what extent were the results of the intervention influenced by Monitoring, Evaluation, Reporting, and Learning (MERL) mechanisms?</p> <p>7.6 Does the intervention provide relevant lessons and experiences for other similar projects in the future?</p> <p>7.7 Has the intervention identified a new way of working that could be shared with others?</p>
<p>How effective has the intervention strategy/ mechanism been in achieving expected results?</p>	<p>7.8 To what extent has an integrated approach to refugee settlement improved perception and relations between refugees and the host communities?</p> <p>7.9 How does WaterFund shift to strategic partnership and collaboration with NGOs and the private sector to design and finance bigger projects enhanced the success of the programme?</p> <p>7.10 To what extent did investment in broader catchment planning for sustained impact improve water resources management?</p> <p>7.11 Did investment in the rangeland approach improve livestock production?</p>

2.5 Limitations of Evaluation Methodology

This evaluation was limited by the inherent challenges facing theory-based evaluations. Theory-based approaches to evaluation are not a panacea for attributing results to programmes⁴. They do not necessarily provide a quantitative measure of the size of the contribution an intervention is making. If this is required, there may still be a need for analysis that supports the measurement of the size of observed results^{5,6}. Further, contribution analysis which is the core methodology for this evaluation is meant to be done iteratively. This means that evidence should be repeatedly collected and synthesized to refine narratives. Considering the limited resources and scope of this evaluation, it was difficult to have iterations. However, the evaluators implemented contribution analysis in a participatory way with many projects and study participants sampled to validate performance narratives.

⁴ Treasury Board Secretariat of Canada (2012). Theory-based approaches to evaluation: Concepts and practices. Ottawa, Canada: Treasury Board Secretariat

⁵ Mackenzie, M., and Blamey, A. (2005). The practice and the theory: Lessons from the application of a theories of change approach. *Evaluation*, 11(2), 151–168

⁶ Weiss, C. H. (1997). How can theory-based evaluation make greater headway? *Evaluation Review*, 21(4), 501–524

Chapter 3: Evaluation Findings

3.1 Household Characteristics (Demographics)

The evaluation targeted both the host community and refugees focusing on the Kakuma camp and the refugee integration at the Kalobeyei settlement scheme. A total of 165 participants were surveyed at the household level consisting of 49% male and 51% female. Among the respondents, 36% were refugees and 64% were nonrefugees including refugee host communities. More than half of the respondents were youthful, 53% (aged 18-35) with 36% being middle-aged. Further, most (54%) of the targeted participants did not have any form of education. In terms of gender, the majority of those without any education were female 39% while only 15% were male. Only 6% of the respondents had post-secondary education. Overall, the results indicate low levels of education among study participants and disproportionate access to education between males and females. This is likely to influence WASH outcomes.

Table 5: Demographic characteristics of study participants

Description		Male		Female		Total	
		Count	%	Count	%	Count	%
Gender		81	49.1	84	50.9	165	
Household status	Refugee	26	43.3	34	56.7	60	36.4
	Host community	55	55.4	50	47.6	105	63.6
Age	18 -35 years	40	24	48	29	88	53.3
	36 – 50 years	26	16	33	20	59	35.8
	>50 years	13	8	5	3	18	10.9
Level of education	None	25	15	64	39	89	53.9
	Primary	21	13	18	11	39	23.6
	Secondary	25	16	2	1	27	16.4
	Post-secondary	8	5	2	1	10	6.1

3.2 Relevance

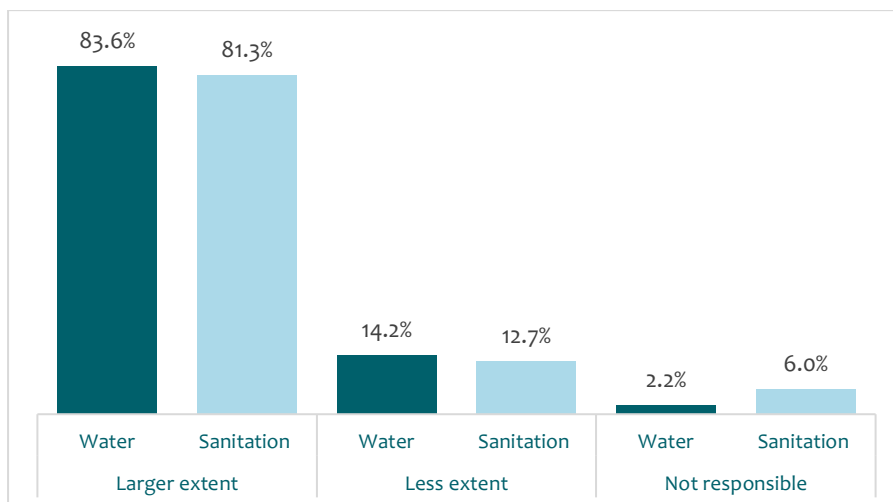
Relevance assessed the extent to which the WLP objectives and design responded to the Turkana West communities' and refugees' water, sanitation, and hygiene needs, and the objectives/priorities of key stakeholders including Turkana County Government, DANIDA, WaterFund, and the Government of Kenya

3.2.1 WLP Relevance to primary beneficiaries' needs and priorities

Finding 1: WLP is relevant to the water, sanitation, and WRM needs of primary beneficiaries. The projects implementation structures ensured appropriate response to community needs

Overall, 86% of the respondents had access to water services whereas 67% have access to sanitation services. Of the target group, 89% and 84% of the refugees and host community respectively had access to water services. About 82% and 52% of the refugees and host communities respectively had access to sanitation services. The majority (84%) of the respondents held the view that the WLP projects met their water needs to a great extent, only 2% thought WLP was not responsible for their water needs. Similarly, 81% of the respondents felt their sanitation needs were met to a large extent,

More than 80% of respondents reported that WLP addressed their water and Sanitation needs



3.2.2 WLP Relevance to Key Stakeholders’ Policies and Strategic Objectives

Finding 2: WLP was found to be well aligned with key stakeholder policies, priorities, and strategic objectives

The WLP fits into all the development frameworks of Kenya including the 2010 Constitution, Vision 2030, Big 4 agenda, and international agreements such as Sustainable Development Goals, Ngor declaration, Water and Sanitation for all, thus is very relevant to the Country, the Kenyan Government, and the people of Kenya. The engagement addressed provision of water and sanitation services and management of water resources which are key aspects in addressing poverty reduction, inclusive green growth, rights, and sustainable management of natural resources in the ASALs. This intervention through its design, objective and implementation was found to be aligned with the strategic objectives of Key partners:

DANIDA	<p>Danish development strategy 'The Right to a Better Life'. Specifically, to one of the four core objectives, green growth. Through this, Denmark intended to support developing countries in fighting poverty and creating sustainable development through green growth, increased earnings, and more jobs, especially for the youth targeting environmental protection, sustainable agriculture, sustainable and resource-efficient management, and use of energy and improved access to water.</p> <p>'The Right to a Better Life' Strategy for Denmark’s Development Cooperation, 2012</p>
Government of Kenya	<p>The Constitution of Kenya 2010 in Article 27 recognizes that measures should be put in place to encourage affirmative action programmes and policies to address past inequalities. Economic and social rights for all are also recognized in Article 43. These include the right to health care services, adequate housing and sanitation, adequate food of acceptable quality, clean and safe water, and appropriate social security for vulnerable groups in society. Supporting water infrastructure and increasing access to water is relevant to the Country’s constitution. The Kenyan government blueprints Medium Term Plans being implemented and Vision 2030 in which water provision falls under the social pillar, Big 4 agenda, Kenya Water Master Plans, and Ministry of Water, Sanitation and Irrigation’s policies all work towards access to safe water for all Kenyans by 2030.</p> <p>Constitution of Kenya 2010, Vision 2030, Kenya Water Master Plan</p>

WaterFund	WaterFund strategic objective of increasing access to water and sanitation services to 4.7 million underserved Kenyans by 2022 and Institutional development and systems strengthening of WaterFund to enhance its capacity to deliver on its mandate.
	Water Sector Trust Fund Strategic Plan (2018–2022)
Turkana County	Turkana County identified needs: Water Development through provision of sufficient clean water for human consumption, livestock utilization, and industrial use. Refugee Integration through refugee protection, access to basic services including Health, Education, Water, Agriculture and Irrigation, Livestock, Livelihoods, and Private Sector Development. These needs and water priorities are further strengthened in Turkana County Water, Sanitation Services Sector Strategic Plan 2017-2021
	Turkana County Integrated Development Plan (CIDP 2018-2022):

3.2.3 Robustness of WLP Theory of Change (TOC)

Finding 3: WLP Theory of change was found to be robust with shortcomings at the levels of causal assumptions

Evidence has shown that a robust ToC improves the effectiveness of interventions by providing clarity, rigour, and transparency, and facilitates programme monitoring and evaluation. Also, a clear ToC is integral in programme learning and adaptative management. The WLP Theory of change was found to be generally well structured by clearly outlining the underlying multidimensional challenges facing ASAL Communities in Kenya. The ToC presents a clear logic from outputs to lower-level and higher-level outcomes. It further identifies strategies to be applied to reach the outputs and the interventions. The DED has specified a proper situation analysis, stakeholder analysis, risk analysis and management, M&E plan, and implementation arrangements with meticulously identified implementing agents and partners. The design is realistic, and efficient and provides enough opportunity for stakeholder involvement and participation. However, the ToC has not presented succinctly the assumptions underpinning the theory of change nor a clear causal pathway.

For clarity and efficient implementation, the ToC was further illustrated using a results framework. The results framework was well detailed providing additional information including SMART (Specific, Measurable, Attainable, Relevant, and Time-bound) indicators at the output level- the outcome indicators can be improved on to include qualitative indicators that measure change, baseline, and targets. Some baseline data are not available from the results framework whereas other cases indicate absolute values. This nonetheless did not present a challenge to the evaluation considering the theory-based evaluation adopted in this evaluation, with contribution analysis as the core methodology of assessing the intervention. The evaluators however did not conduct an extensive Quality of Design Assessment.

3.3 Coherence

This looked at the compatibility of WLP with other interventions within the selected communities by WaterFund, the County government and DANIDA. Specifically, we assessed the synergies and interlinkages between WLP, and other interventions carried out by DANIDA and WaterFund and how consistent WLP was with other actors' interventions in Turkana County.

3.3.1. WLP Coherence in Design and Implementation

Finding 4: WLP programme design is internally and externally coherent. The design was informed by lessons learned from previous programmes and harmonized with existing efforts in ASAL

WLP design and implementation were found to be coherent both internally and externally. The MTAP 3 focuses on the very arid, poor, and underserved. The engagement builds on lessons learned from previous support (including support from DANIDA) to water resources management and water and sanitation services to the ASALs.

The DED was modeled around existing WaterFund financial and operational mechanisms a) Rural Investment: This mechanism develops rural communities' capacities to access funding and implement and maintain water and sanitation facilities. Under this mechanism, ASALs have been targeted for purposes of focusing financing water and sanitation projects. The focus recognizes and appreciates the need for water and sanitation in the ASALs, as well as their unique characteristics concerning water and sanitation and b) Water Resources Investment: This mechanism supports communities to manage their water resources including their rangelands within their sub-catchments.

The two financing mechanisms have traditionally been implemented mainly through community-based organizations (CBOs), Water Utilities and Community Based Natural Resources Management organizations such as Water Resources Users Associations (WRUAs). However, the design of WLP was informed by lessons learned from more than 10 years of DANIDA and WaterFund collaboration in ASAL through programmes such as the Medium Term ASAL Programme (MTAP) e.g., the lack of well-established partners in rural ASAL areas has been identified as a major problem, further, WaterFund model of working with CBO's and WRUA's was found to be prone to challenges and limits capacity to deliver the required services. During the implementation of the engagement and relevant for the revised DED was the need for opening for projects with larger financial requirements, so that the WaterFund portfolio will include larger projects with increased impact. Consequently, WLP adopted new strategic partnerships and collaboration to design and finance a few yet bigger projects leveraging the experience of INGOs in implementing WASH and livelihood in Turkana West.

The focus of the design was also carefully considered to avoid duplication of efforts. For instance, WLP was designed to benefit Kakuma and Kalobeyi refugee settlements including the host community in Turkana West, bypassing Dadaab Refugee Camp in Garissa County (One of the counties under GGEP) the largest refugee camp with a population of 240,000. This decision was partly guided by the existence of World Bank's USD 100m Development Response to Displacement Impacts Project (DRDIP) co-financed by DANIDA which targeted three refugee hosting sub-counties in Garissa i.e., Fafi, Lagdera, and Dadaab. This effort was aligned with the Kalobeyi Integrated Socio-Economic Development Programme (KISEDIP) WASH component in providing access to a minimum of 20 liters per person per day for 300,000 refugees and host communities and increasing the percentage coverage for latrines from the current 35% to 70% and percentage of host community attaining open defecation free (ODF) status from the current 10% to 30%.

Finally, WLP utilized WaterFund's established delivery mechanisms and partnerships with counties, which have proven to be effective in addressing the challenges of limited access to water and sanitation and poor water resources governance in ASALs'. Therefore, this engagement ensured aligned and harmonized support between WaterFund and County efforts. For instance, WLP projects included rehabilitating and augmenting existing water and sanitation infrastructure within Kakuma.

3.4 Effectiveness

Effectiveness assessed the extent to which WLP achieved its objectives, and its results, including any differential results across groups and identification of unexpected results from the intervention.

3.4.1 Achievement of Expected Results

Achievement of overall DE Objective: *Enhanced water resources management and investments in selected ASAL counties for improved and sustained access by communities and households to water and sanitation for their domestic and productive needs*

Outcome Indicators		Baseline	Target	End Term
Indicator 1.1	Increase in number of households with sustained coverage from improved water services in Turkana West because of the DE	12 % Access to water in Turkana West	6,000 households reached with sustained water services	The target was 100% achieved. Approximately 10,900 households receive water services because of WLP
Indicator 1.2	Increase in number of households with sustained coverage from improved sanitation services in Turkana West because of the DE	15 % Access to water in Turkana West	4,000 new households reached with sustained sanitation services	The target was 100% achieved. Approximately 4,050 households have access to sustainable sanitation services due to WLP. Also, 4180 school pupils had access to improved sanitation meeting MoH standards
Indicator 1.3	Increase in area implemented under improved water resources management planning (as SCMP or other water and range management arrangements) in Turkana West because of the DE	No catchment management plan for Tarach River	2000km ² implemented under improved water resources management planning	The target was 100% achieved. An estimated 12,597.5km ² of new catchment put under improved water resources planning

Finding 5: WLP's overall Development Engagement Objective was achieved

An estimated 10,900 new households received water services because of WLP, through drilling and solarization of 6 boreholes, rehabilitation of 9 boreholes, installation of storage tanks (1625m³ capacity) i.e., new storage tank (elevated steel tank and ground tanks) 930m³, rehabilitation of elevated steel tank 400m³ and masonry tank 295m³, pipeline extensions (64.5km) with the construction of fetching points and water kiosks (12No) as well as rehabilitation 8 shallow wells and construction of 2 new ones. Similarly, approximately 4050 new households have access to sustainable sanitation services due to WLP. This was achieved through a combination of sanitation approaches targeting both communities and institutions. WLP supported several interventions including Community Led Total Sanitation (CLTS) and hygiene promotion in 58 villages, with a total of 29 villages certified ODF. Over the same, 35 Urine Diverting Dry

Toilets (UDDTs), casting and distribution of 1,000 slabs for household latrine construction, 50 disability-friendly latrines and 400 Pit latrines have also been constructed as direct support to increase household sanitation coverage. At the institutional level, the programme has completed the construction of 28 blocks of 4-door Ventilated Improved Pit latrines, 2 blocks of 8 doors of Septic latrines, and 6 blocks of 4-door biodigester latrines benefitting 1,900 girls and 2,280 boys guided by Ministry of Health (MoH) pupil to toilet ratio (1:25 for girls and 1:30 for boys)

Under improved water resources management planning, four WRUA catchment areas (Kakuma, Tarach, Lotikipi, and Lokichogio) with a total combined area of 11,929.6 Km² were planned through the development of SCMPs for coordinated management of the resources. Further, 667.89 km² of rangeland was also mapped and put under community management: Tsetse flies’ control, capacity building, zonal grazing plans, development of water pans, tree planting and flood control, land reclamation for trapezoidal bunds construction, and pasture production among other livelihood activities.

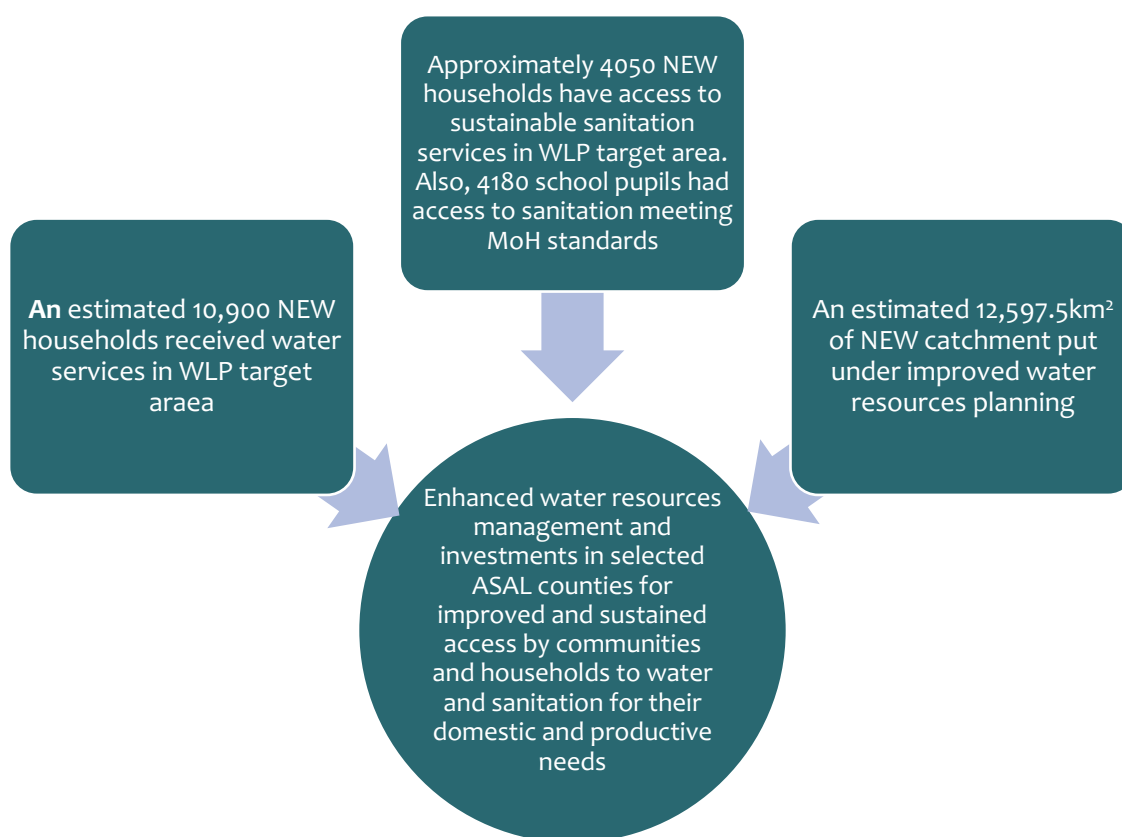


Figure 5: Achievement of overall DE Objective

Achievement of planned results 1: Turkana County's capacity and engagement in integrated water, sanitation, and water resources-related planning improved.

Output Indicators		Baseline	Target	End Term
Indicator 2.1	County effectively using water and sanitation data for planning and for performing	No water and sanitation data available and limited capacity for using data and regulating services	Turkana County using and updating water and sanitation data for improved planning and follow-up and perform their regulatory functions	The target was achieved. The county has developed a database for water and sanitation. This data is updated regularly and used for improved planning

Output Indicators		Baseline	Target	End Term
	their regulatory functions			including real-time sanitation data
Indicator 2.2	County with an effective water sector legislative and policy formulation framework to support effective planning and implementation.	Limited legislative and policy frameworks in Turkana County to support effective programme planning and implementation	Turkana County implementing an effective water sector policy and implementation frameworks in policy formulation and decision making	The target was achieved. Water Act 2019 is in place, this establishes rural and urban water service providers The county is in the process of domesticating the Kenya Environmental Sanitation and Hygiene Policy, 2016-2030
Indicator 2.3	Turkana county is effectively involved in the planning and implementation of integrated water and natural resources management	Limited capacity for integrated water resources-related planning in Turkana County	Turkana county is reporting satisfactory capacity to engage in integrated water and natural resources-related planning with a focus on addressing issues in Turkana West	The target was achieved. Turkana County coordinating water service provision, sanitation, and catchment monitoring and management

Finding 6: Turkana County's capacity and engagement in integrated water, sanitation, and water resources related planning has been improved through partnerships and collaborations with WLP and other development partners

The county with support from JICA has developed a database for water resources in Turkana County. The first phase captured data such as location and functionality while they are yet to begin phase two which will capture data such as water levels, water quality, borehole depths, and ownership. This data is regularly updated and used in designing and implementing new county and donor-funded water projects. The government has also embraced the use of technology to manage resources and water services infrastructure in the county through the development of a georeferenced asset register and using the same for coordinated planning and management of services and resources.

An implementation policy framework is in place in form of Water Act 2019 defining rural and urban water service provision and catchment management at the core of operations. WaterFund has been at the forefront to support the implementation of this water act with a focus on the registration of 2 water and sanitation companies under Turkana Water Company for the management of urban and rural water schemes. Within WLP, WaterFund supported the County to ensure the governance structure for the two companies is established i.e., establishing of rural Water Management Committees (WMC), training of the WMC, Kakuma, and Lokichogio Water schemes management in collaboration with Kenya Water Institute (KEWI) and provision of basic tools for operation and maintenance. The two water Companies have been registered and the county is currently instituting a board of management. The County public health department uses real-time data monitoring which is fed to the National Database for sanitation-CLTS Kenya. It is collected daily by the Sub County Public Health Officers (SCPHO) and validated by County

Public Health Officer (CPHO). The data is reviewed and disseminated in meetings at the county, sub-county, and ward levels. Turkana county is currently using the National Hygiene Policy, Kenya Environmental Sanitation and Hygiene Policy, 2016-2030 which was launched in May 2016. They are in the process of domesticating it with the help of Peace Wind Japan (PWJ), USAID, UNICEF, WaterFund, IRC, and World Vision. The policy allows sanitation marketing and investments in sanitation and hygiene.

The relevant county departments are continuously involved in planning for new water, sanitation, and water resources management programmes by different donors from needs identification, design, implementation, and monitoring. However, the evaluation revealed a lack of meaningful involvement of the Sanitation Department (Department of Public Health) by either the County, WaterFund, and the IPs at both the design and implementation stages. This might have contributed to lower success rates in sanitation and hygiene components like CLTS and is predicted to affect sustainability.

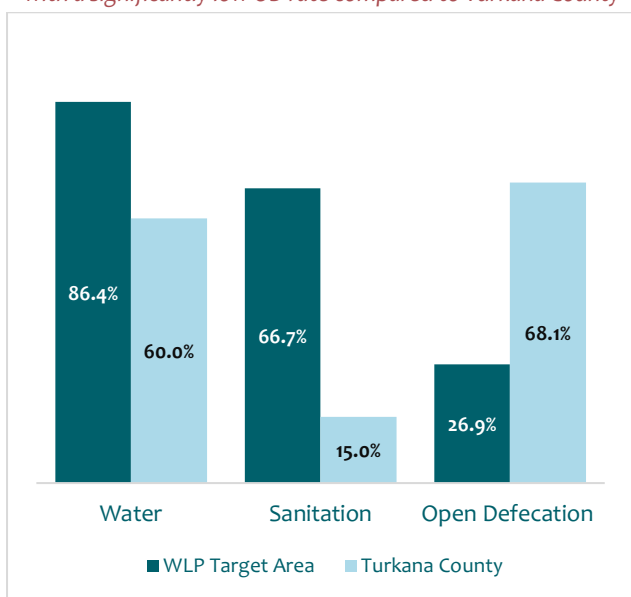
Achievement on planned results 2: Water and Sanitation needs of Turkana West Refugee camps and host community addressed including livelihoods.

Output Indicators		Target	End Term
Indicator 3.1	Increase in number of households with water services from WaterFund in this engagement in Turkana West Sub County	At least 6,000 new households reached with water services in Turkana West Sub County with at least six projects	The target was 100% achieved. Approximately 10,900 new households received water services because of WLP
Indicator 3.2	Increase in number of households with Sanitation services from WaterFund in this engagement in Turkana West Sub County	At least 4,000 new households reached with water services in Turkana West Sub County	The target was 100% achieved. Approximately 4050 new households have access to sustainable sanitation services due to WLP. Also, 4180 school pupils had access to improved sanitation meeting MoH standards
Indicator 3.3	Average Sustainability Index of the WaterFund supported investments in Turkana West Sub County	70% of the funded investments in Turkana West Sub County are sustainable by 2020	The target was 100% achieved. 79% Average Sustainability Index in 2022
Indicator 3.4	% Of facilities funded through the engagement that is climate proofed and mainstreaming green approaches.	100% of the total number of facilities funded through the engagement	100% of projects funded under WLP were climate proofed
Indicator 3.5	% Of targeted households in Turkana West Sub County expressing satisfaction with the water and/or sanitation services	80 % of those targeted with the services are expressing satisfaction with the services	82% of the target community are satisfied with water services, and 76% are satisfied with sanitation services.

Finding 7: WLP has greatly impacted access to water and sanitation in Turkana West by increasing the number of households accessing water and sanitation services for both refugees and the host community

Targets under this output were all achieved through county coordination and stakeholder engagement under the WLP programme. Implementation of the water projects ensured over 100% of targeted households receive water and sanitation services. Approximately 10,900 new households received water services because of WLP through drilling and solarization of 6 boreholes, rehabilitation of 9 boreholes, installation of storage tanks (1625m³ capacity) i.e., new storage tank (elevated steel tank and ground tanks) 930m³, rehabilitation of elevated steel tank 400m³ and masonry tank 295m³, pipeline extensions (64.5km) with the construction of fetching points and water kiosks (12No) as well as rehabilitation 8 shallow wells and construction of 2 new ones. Similarly, approximately 4050 new households have access to sustainable sanitation services due to WLP. This was achieved through a combination of sanitation approaches targeting both communities and institutions. WLP supported several interventions including Community Led Total Sanitation (CLTS) and hygiene promotion in 58 villages, with a total of 29 villages certified ODF. Over the same, 35 Urine Diverting Dry Toilets (UDDTs), casting and distribution of 1,000 slabs for household latrine construction, 50 disability-friendly latrines and 400 Pit latrines have also been constructed as direct support to increase household sanitation coverage. At the institutional level, the programme has completed the construction of 28 blocks of 4-door Ventilated Improved Pit latrines, 2

WLP target area had superior access to water and sanitation with a significantly low OD rate compared to Turkana County



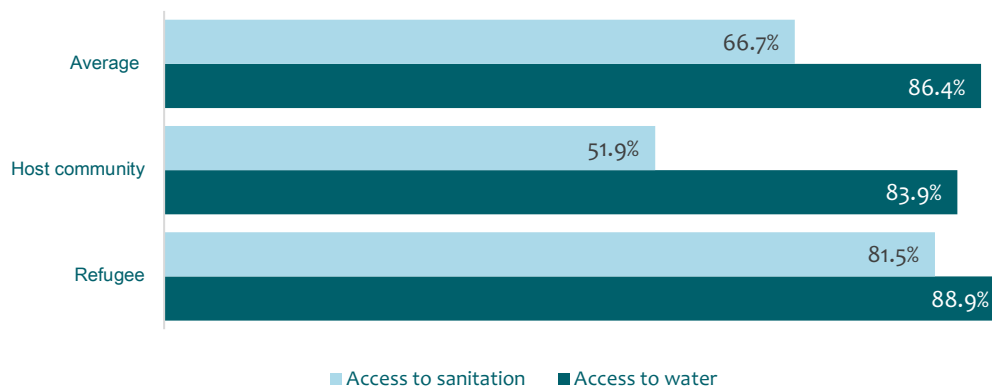
blocks of 8 doors of Septic latrines, and 6 blocks of 4-door biodigester latrines benefitting 1,900 girls and 2,280 boys guided by Ministry of Health (MoH) pupil to toilet ratio (1:25 for girls and 1:30 for boys). To enhance public sanitation and solid waste management, one block of biodigester toilet was constructed in Kakuma town and an incinerator at Kakuma Sub County hospital.

Household surveys revealed high levels of access to water among refugees and the host community. On average, 86.4% of respondents had access to clean water for both domestic and livestock use. Access to sanitation was low among the host community at 15.0% as compared to refugee households at 66.7%. Overall, access to sanitation was 66.7%, significantly lower than access to water.

Water kiosks or public taps were the main source of drinking water and for other domestic uses, for both the host community and refugees, accounting for 58%. The other sources of water included boreholes 28%. A good percentage 84.8% reported collecting enough water for their domestic use (20-25 liters per person per day- UNDP/ WHO). Of those who still do not collect enough water for domestic use in the project areas, their main reasons were, water shortage 28%, the distance being far 11%, not being able to afford enough water 21% (host community respondents), limitation of the volume of water that one can collect at a water point in a day 18.6% and lack of enough storage containers 12.8%. Source of water for livestock and other livelihood activities including farming was mainly water pan 43.2% and boreholes 34.6%, The evaluation also revealed that 68% of respondents (84.6% refugees and 51.45 host community) access to water within a distance that meets Sphere standards (Less than 500m), while only 4% are still

getting their water from a distance of more than 5km. The WLP programme has significantly reduced the distance to water points which can be as high as 15km⁷ in some ASAL areas. The reduced distance reflects shorter times spent on a round trip on water collection which is further channeled to more productive activities. It is noted that spending too much time fetching water may exacerbate water insecurity and be a barrier to sustainable development⁸.

Households reported high levels of access to clean water. However, the host community had significantly lower levels of access to sanitation



The disparity in access to water and sanitation is reflected elsewhere in Turkana County. Overall, 60% of the county population has access to potable water contrasted with only 15% accessing improved sanitation. Also, according to KNBS (Kenya National Bureau of Statistics) 2019, Turkana County has diarrhea as the second most cause of morbidity owing to low latrine coverage and utilization with open defecation practiced by 68.1% at the household level. Part of this problem is attributed to the county's financing of sanitation activities which is not commensurate with the needs. For instance, in the 2021-2022 fiscal year, the Sanitation department (Department of Public Health) only received a quarter of its sanitation budget. There is an urgent need to put more focus on sanitation and hygiene to increase reach and improve community health.



Beneficiaries at village 3 in Kalobeyei settlement fetching water at a constructed yard tap



Bio sanitation facility at Kakuma Market

⁷ Mati, B. M. et al ; 2005. Assessing water availability under pastoral livestock systems in drought prone Isiolo District, Kenya. Working Paper 106. Colombo, Sri Lanka: International Water Management Institute (IWMI)

⁸ Geere, J.-A. and Cortobius, M. 2017. Who carries the weight of water? Fetching water in rural and urban areas and the implications for water security. *Water Alternatives* 10(2): 513-540

Sustainability Index

Finding 8: WLP projects had a high sustainability index. All thematic projects (water, sanitation, water resources management, and livelihood projects) had above 70% SI by 2022

WaterFund and its development partners including DANIDA are increasingly emphasizing the need for sustainability. The objective of the Fund is to ensure that five years after commissioning, 95% of all infrastructure developed is still operational and in good technical and operational condition⁹. The sustainability index is a key quantitative performance measure to facilitate the assessment and monitoring of sustainability of investments to support progress evaluation over time and the development of appropriate response measures¹⁰. In this report, sustainability is defined as the ability of an investment to realize the objectives within 5 years of its operation. This definition is entirely based on the outcomes and outputs of the investments. The sustainability Index comprises four categories- the Functionality and Reliability of an investment, Revenue collection (ability to cover O&M), Age and Survival rate of an investment, and the Functionality of an investment. (Annex 4)

Overall, WLP projects point to a sustainability index of 79.3% indicating very good performance of the economic, social, and environmental factors. The water, sanitation, water resources management, and livelihood projects had sustainability indexes of 78.6, 78.9, 84, and 74.8 respectively. The high index shows the relevance, acceptability, and adaptability of the WLP projects. The projects emphasized green energy by solarization of the projects, reduced over-reliance on wood fuel hence reduced deforestation, efficient use of resources such as water metering, efficient use of water and sanitation services, and sustainable use and management of the resources in the environment.

Table 6: Sustainability Index

Projects		Functionality (FR)	Ability to cover O&M Cost (OM)	Age and Survival (AS)	Current Condition (CC)	Sustainability Index (SI) %
Type of Investment	No. of projects					
Water	16	17.6	43.9	9.6	7.5	78.6
Sanitation	11	17.5	42.7	10.9	7.7	78.9
WRM	12	20.0	43.9	12.6	8.0	84.5
Livelihood	09	19.1	38.9	8.6	8.2	74.8
Overall Investment	48	18.6	42.4	10.4	7.9	79.3

⁹ Water Fund Annual Rural Harmonized Report, FY 2017/2018

¹⁰ Joint Annual Operations Monitoring Exercise (JAOME, 2016)

Climate Proofing and Green Approaches

Finding 9: All WLP investments were climate-proofed and mainstreamed green approaches



Climate proofing boreholes in Kakuma using gabions

Climate change is threatening development gains and intensifying global inequities. It is stressing water and sanitation services and resources. Droughts, floods, and storms can destroy water and sanitation infrastructure putting the livelihoods of ASAL communities at risk. Climate adaptation is integral to strengthening resilience and protecting years of investment and progress towards improving access to water and sanitation¹¹. WLP mainstreamed climate proofing throughout the programme. All projects implemented were found to be climate proofed. This will contribute immensely to the sustainability of WLP investment.

Table 7: Climate Proofing of WLP Projects

Projects category	Climate proofing and green approaches mainstreaming
Water Projects	Utilization of renewable energy e.g., Solarization of water projects, training the management committees on water management and governance, by-laws to govern the committee and financial management, operation and maintenance, and climate proofing boreholes under threat of collapse using gabions and neem trees
Sanitation projects	Constructing Bio-digester latrines and utilizing biogas for fuel, construction of VIP latrines including ramps, UDDT toilets, the lining of latrine pits, and bio-San facilities in public places
WRM projects	Developing of water pans for continued water supply during dry seasons, the establishment of natural resource management committees, training the committee on taking care of the water pans, planting indigenous trees/ establishment of woodlots, clearing and uprooting of the invasive prosopis trees, training community forest associations on tree husbandry and maintenance, development and approval of the Sub-Catchment Management Plans (SCMP) and capacity building of Rangeland Management Committees (RMCs)
Livelihood projects	Setting up vegetable farms around the borehole areas, training farmers on modern/smart farming techniques including conservation agriculture, dryland farming techniques, good plant health management, soil fertility improvement and integrated pest management techniques using dichotomous earth, using portable solar pumping kits to help reduce the cost of production in the farms, biogas production through prosopis and kitchen waste biodigesters and production of high-value, fast maturing crops under drip irrigation

¹¹ Climate Adaptation & Resilience for Food & Water Security, USAID

Satisfaction with Water and Sanitation Services

Finding 10: Both refugees and host communities within WLP target areas are satisfied with water and sanitation services. However, satisfaction with sanitation among the host community was somehow low and did not meet the WLP target.

In general, 82% of the respondents were satisfied with the water services offered. The Refugee community indicated a satisfaction rate of 83% while the host community indicated a satisfaction rate of 80%. About 14% of the respondents registered their dissatisfaction with the provision of water services with the host community and refugees registering 15% and 13% respectively. Overall, 76% of the respondents were satisfied with the sanitation services offered under the WLP projects. The refugee community indicated a higher level of satisfaction (80%) while 73% of the host community was satisfied with the sanitation services. On average, 22% of the respondents were not satisfied with the sanitation services provided to them.

Impact on Livelihoods

Finding 11: WLP impacted the livelihoods of both refugees and the host community. More than half engaged in new livelihood activities, also a significant proportion adopted new agricultural practices.

The majority (64%) of respondents are engaged in new livelihood activities within the project area. About 70% of the respondents are engaged in crop farming, 45% in livestock (pastoralism), 3% in livestock under rangeland, and about 34% are engaged in different forms of employment. About 82% and 52% of the refugees practice crop farming and engaged in different forms of employment respectively. The host community is engaged in a variety of new livelihood activities as well. About 58% are engaged in crop farming, 46% in livestock (pastoralism) 3% in livestock (rangeland), and about 17% in employment. The local host community is predominantly pastoralist therefore, acquisition of crop farming is significant. This could be due to learning from their refugee counterparts who had practiced farming in their native countries, the availability of water for farming, and the need for food in the emerging climate changes characterized by the increased frequency of droughts in the region. The arising opportunities have brought about employment opportunities for the refugees and host communities, but more refugees have seized the opportunities than the host communities.

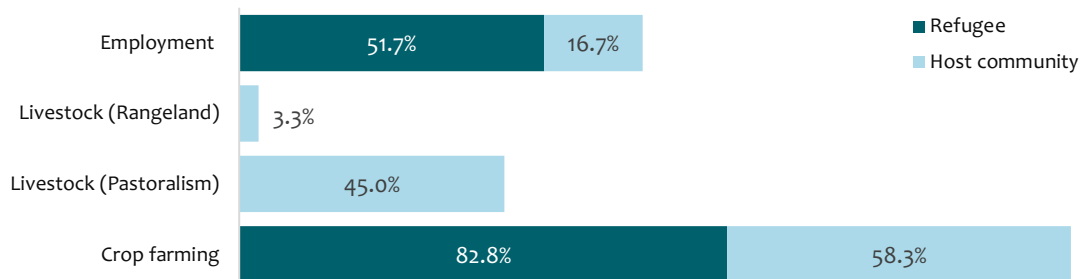
KII reports indicated that the main challenges facing both the host community and refugees are access to water for domestic and sanitation purposes and livestock, especially along the animal corridors. The provision of water for multi-purpose use is a boost to building community resilience.

New Agricultural Practices adopted in crop and livestock farming because of WLP

Crop farming was the most adopted practice in the programme area. About 51% of the respondents improved water conservation and utilization, 41% improved crop selection, 35% improved soil fertility, 18% started or improved on planted vegetables, and 16% established farming gardens. On livestock production, 32% of respondents improved on the quality of animal feeds and water, 8% improved on livestock housing and 2% reported progress in the selection of animals. However, 10% of the respondents did not make any improvements at all. The targeted practice to increase crop production is a suitable alternative to drought-prone pastoralism with higher risks as evident from the recent drought that ravaged the Northern counties in Kenya. An integrated approach to the provision of water is proving to be a good strategy to enhance community resilience to the emerging climate change challenges in the project area. With majority of the community members living below the poverty line due to their refugee

status and the unique position the Turkana West Sub-County communities find themselves in, the WLP programme has the potential to provide a lifeline to these communities.

Crop farming was the most adopted practice for both refugees and the host communities



Achievement on planned results 3: Sustainable and community-based management of water resources and rangeland improved

Output Indicators		Target	End Term
Indicator 4.1	Increase in volume of total water storage capacity from the WaterFund investments.	30% increase in total water storage capacity from the WLP investments	The target was 100% achieved. 200,000m ³ water storage developed
Indicator 4.2	Increase in areas with improved planning for water resources including range management in Turkana West and progress in catchment planning for Tarach river basin.	2,000km ² Increase in areas with improved planning for water resources including range management in Turkana West and progress in catchment planning for Tarach river basin.	The target was 100% achieved. An estimated 12,597.5km ² of new catchment put under improved water resources planning

Finding 12: WLP has improved Sustainable and community-based management of water resources in Turkana West by significantly increasing water storage capacity and expanding the area under improved water resources planning



Animals watering at a filled Ebitwosin Water pan

Water storage was significantly increased through the development of water pans and putting up of water storage tanks in the project area both for livestock and domestic water use. An estimated 200,00m³ water storage was successfully developed. Four WRUA catchment areas (Kakuma, Tarach, Lotikipi, and Lokichogio) were planned through the development of sub-catchment management plans (SCMPs) for coordinated management of the resources thereof. Further, 667.89 km² of rangeland was also mapped and put under community management.

Table 8: New catchment under improved Water Resources Planning

Implementing Partner	WRUA/ Catchment Area	Key activities	Area in Km ²
Oxfam	Kakuma WRUA	SCMP development assisted WRUA to sign and register with WRA	5746
	Tarach WRUA	SCMP development assisted WRUA to sign and register with WRA	911
World Vision	Lotikipi WRUA	SCMP development, capacity building, proposal development, Development of WRUA Constitution	4391.4
	Lokichogio WRUA	SCMP development, capacity building, proposal development, Development of WRUA Constitution	881.2
	Rangeland Management	Tsetse fly control, capacity building, zonal grazing plans, development of water pans, Mapping of rangeland resources	650
NRC	Rangeland Management	Smart meter installation, climate proofing of four boreholes using gabions, tree planting around the boreholes	17.5
AAHI	Rangeland Management	Reclaimed land for trapezoidal bunds construction, crop production, pasture production, support of startup seeds, 50 cubic meter earth pan, 15,020 indigenous trees on a 60-acre plot, clearing and uprooting of the invasive prosopis, capacity building	0.42
Total			12,597.52

It is generally noted that 87% of the WRUA members participated in activities aimed at soil, rangeland, and water resource management while about 13% did not participate at all. Among the activities the WRUA engaged in included riverbank protection (fencing, riparian pegging, tree planting) (undertaken by 63%, construction of water storage and conservation infrastructure e.g., sand dams and water pans (73%), community sensitization meetings to create awareness (58%) and protection against illegal abstractions of water and other destructive activities in the sub-catchments (15%). Regulation of water use and equitable distribution through bulk metering was not attempted in the Turkana West sub-county.

Achievement on planned results 4: Improved capacity and engagement by Implementing Partners for planning and efficient water service delivery

Output Indicators		Target	End Term
Indicator 5.1	Number of successfully implemented projects by Implementing partners under this engagement	5 successfully ¹² implemented projects by Implementing partners under this engagement	96% of WLP projects successfully implemented

¹² Successfully implemented" means completed all projects to a satisfactory level as assessed by the post-project assessment

Output Indicators		Target	End Term
Indicator 5.2	Creditworthiness index of the projects funded by this engagement	An average of 70% credit worthiness of the supported WUs/WSPs	53.8% Creditworthiness for 2 of the major supported projects achieved
Indicator 5.3	Percentage of implementing agents for new WaterFund projects in Turkana West with improved capacity for addressing and managing water, sanitation, and water resources including range in an integrated manner	All implementing Partners demonstrate an improved capacity for addressing and managing water, sanitation, and water resources including range in an integrated manner	All implementing partners reported improved capacity for addressing and managing water, sanitation, and water resources including range in an integrated manner

Finding 13: Nearly all WLP projects were successfully implemented, indicating the improved capacity of IP to manage and implement ASAL climate change resilience programmes.

A total of 78No. projects were targeted for implementation by five implementing partners namely AAHI, Oxfam, World Vision, AMREF and NRC. It's worth noting that 75 (96%) of the projects were successfully implemented to completion while 3No. (4%) projects were partially completed. Kochomin community water pan implemented by AMREF stalled at 50% due to challenges by the contractor who abandoned the site. Installation of smart monitoring meters for aquifer and water level monitoring by NRC was not completed due to global shortage of electronic parts for manufacturing the modules owing to the Covid-19 pandemic. However, manual meters were installed for monitoring purposes. Two shade nets constructed by AAHI were destroyed by strong winds and the IP reconstructed them at their own cost.

The successful rate of implementation of WLP projects points to a) improved capacity of IP by WaterFund on grant management, finance, and procurement including aligning internal systems with government procedures e.g., procurement process through Public Procurement and Assets Disposal Act (PPADA), and b) The already established presence and experience of IP in implementing similar projects in ASAL areas significantly contributed to the observed success in project implementation.

Effectiveness of Training Delivered

Finding 14: Capacity-building approaches were highly effective and contributed to successful implementation, improved service delivery and sustainability of the investment

Capacity building was a key component of WLP implementation as witnessed through numerous trainings provided to IP, community members, WRUA and WUA management committees focusing on Project management and governance, sustainability, and smart agriculture. for example, at the initial stages of the programme implementation, IPs were capacity built on contract management including procurement, accountability, technical supervision, and reporting. Water Management Committees (WMCs) and WSPs' were trained on technical matters, accounting, leadership, conflict resolution and simple financial management, basic contract procedures, and monitoring and reporting to ensure the proper maintenance and operation of the new infrastructure. Under sanitation, training targeted sustainability of behaviour change; PHOs/CHEWs/CHVs were trained during CLTS implementation to enable post ODF certification follow-up to monitor latrine usage and maintenance, training of school WASH masters/patrons/health club teachers on sanitation and hygiene promotion. Under livelihood most

trainings focused on improving community resilience through smart agriculture e.g., agricultural knowledge to extend and improve crop production under irrigation focusing on the production of high-value, fast-maturing crops under drip irrigation, dryland techniques such as the sunken bed and conservation agriculture e.g., using available materials like the use of farm wastes for mulching. All the training efforts were supported by relevant County Government departments.

Kirkpatrick's model was used to evaluate the effectiveness of the training delivered to the Implementing It utilized the four levels: a) Reaction, the degree to which the training was relevant to the participants b) Learning, the degree to which the participants acquired knowledge, skills, attitude, and commitments based on their participation c) Behaviour, the degree to which participants apply what they learnt during the training in their lives, and d) Results, the extent to which the targeted outcome occurs because of training

Table 9: Kirkpatrick Training Effectiveness Assessment

Levels	Finding
Level 1: Reaction	There was a positive reaction to the training delivered, 84% of the respondents (N= 44) found the training relevant to their needs, 94% found them engaging, 89% were satisfied with what they learnt. While 96% said they would recommend the training to their colleagues.
Level 2: Learning	The methods were effective in knowledge transfer, 96% of the trainees admitted that they acquired the right knowledge and skills during the training to help with their work and livelihood
Level 3: Behavior	All project leaders reported improvement in the job performance and behavior change towards work by the trained team, 78% of the customers (primary beneficiaries) surveyed expressed satisfaction with the services. Also, all implementing partners demonstrated improved capacity. All sampled projects indicated improved efficiency in either revenue collection, reducing non-revenue water, improved project supervision and monitoring, service delivery, and accountability
Level 4: Results	Improved capacity of implementing partners has contributed to a high success rate in the implementation of WLP projects, Improved sustainability of the projects and improved service delivery as demonstrated by improved customer satisfaction

Creditworthiness

Finding 15:	Two of the main supported WSPs are creditworthy. However, CWI of 53.8% did not meet the WLP target
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Creditworthiness Index combines annual financial and operational data into a quick reference metric to estimate a WSP's creditworthiness. This metric provides a snapshot of WSP's annual operational and financial performance¹³. It relies solely on data from the financial statements and operating statistics as reported by the WSPs. The index was calculated from 6 broad and weighted indicators that are tailored from the interviews with the WSPs and the county administration

Ranges of norms were established for each indicator, with scores of 0-4 allocated to each norm to align the rating with the Kenya business credit risk universe. The Creditworthiness Index result is therefore

¹³ Kenya Water Service Provider Creditworthiness Index Report, World Bank-WASREB, 2015

aggregation of the weighted scoring with a maximum score of 100. A score of 85-100 would depict the highest credit quality. (Annex 5_Creditworthiness index)

Table 10: Creditworthiness Index

	Indicators	Kakuma Town Water Supply Project	Lokichogio Water Supply Project
Annual Cost	% Of Maintenance costs of total O&M costs	10	10
	% Of energy costs of total O&M costs	0	0
	% Of staff costs of total O&M costs	0	0
Annual Revenue	% Difference between collected Revenue and expected Revenue	7.5	2.5
	O&M Coverage (%Revenue of O&M Cost)	5	0
Technical	% Of people with water supply/population of the area	0	0
	% Estimation of NRW	4	4
	Number of staff/ 1000 people served	4	4
Governance	Availability of Management Committee	4	4
	Diversity of Management Committee (Gender, Youth, PWD)	3	3
Systems	Availability of Management systems e.g., Consumer records, financial management, HR, Stores & Investment plan	7.5	5
Liabilities	% Total debt/ Revenue Collected	10	10
	Grant Dependency, Proportion of O&M cost financed through grants	10	0
	CWI	65	42.5

The two projects had average creditworthiness of 53.75%. According to WASREB, a creditworthiness index of between 51-60 Indicates 'Creditworthy' i.e., expectations of default risk are currently low. The capacity for payment of financial commitments is considered adequate but adverse business or economic conditions are more likely to impair this capacity.

Achievement on planned results 5: Strengthened institutional performance of WaterFund

Output Indicators		Baseline	Target	End Term
Indicator 6.1	Proportion of WaterFund supported investments mapped and managed in an effective management information system	Baseline data on WaterFund implemented projects and some data on county coverage exist but no digital information or spatial data systems are available and used	100% of the WaterFund-supported investments in the target ASAL Counties are mapped and managed in a GIS-enabled management information system	All WaterFund supported investments in the targeted ASAL counties have been mapped and georeferenced
Indicator 6.2	WaterFund capacity to support project identification, implementation	WaterFund is constrained in aspects of project identification,	WaterFund reports improved capacity to undertake project identification, provide	WaterFund staff have reported and demonstrated improved capacity

Output Indicators		Baseline	Target	End Term
	support, and monitoring is improved.	implementation support and monitoring	implementation support and do project monitoring	to undertake project identification, provide implementation support, and do project monitoring
Indicator 6.3	Proportion of questioned costs funded through the DED against total WaterFund investments to assess value for money and the WaterFund capacity to manage fiduciary risk because of its investments	Zero (New investments)	Less than 10% of the total investments at the end of the programme period	The evaluation did not establish any questioned costs

Finding 16: WLP investment has improved WaterFund institutional performance

The WaterFund is using an effective Management Information System (MIS) to map and manage water and sanitation supported investments across the country. The partnership with DANIDA has improved WaterFunds' capacity to identify, implement, monitor, and sustain the funded projects. This is made possible through employing dedicated line managers and engaging full-time County Resident Monitors and Engineers across the project implementing areas. The Programme technical support was also boosted with the recruitment of a dedicated Programme Implementation Unit (PIU) as well as support from financial and technical advisors.

3.5 Efficiency

Under efficiency, we assessed the extent to which WLP delivered results in an economic and timely way and utilization of local/existing expertise; a) economic refers to the conversion of inputs e.g., funds, expertise, natural resources, time into outputs, outcomes, and impacts, in the most cost-effective way possible, as compared to feasible alternatives in the context, and b) timely delivery is within the intended timeframe, or a timeframe reasonably adjusted to the demands of the evolving context. This includes assessing operational efficiency.

Cost Effectiveness Finding 17: WLP projects utilized resources efficiently

All the IPs have established financial management systems that meet best practice criteria. However, under WLP, the public finance management system was used to ensure fiscal discipline, accountability, and value for money to the beneficiary communities. The evaluation revealed that all the IPs kept a clear record of expenditure to show financial accountability with the donor and WaterFund

closely monitoring financial utilization to ensure benefits to the targeted community. The reports further revealed that all the money allocated for activity implementation was well accounted for within the project cycle with a high rate of absorption ranging between 89% and 100%. Similarly, most of the planned activities were achieved as intended with exception of a few cases like the reallocation of funds to other worthy activities that contributed to the achievement of project objectives. For instance, NRC reallocated funds from the stalled installation of smart meters to Kalobeyei Pipeline protection works, which aimed to protect the pipeline from vandalism and hence improve water availability to the Kalobeyei community. In cases where due diligence was not done, the IP responsible met the cost incurred, e.g., AAHI reconstructed 2 shade nets in Kalobeyei that were destroyed by strong winds at their cost (Annex 8: WLP Financial Utilization)

Implementation Time Finding 18: WLP was not implemented within the design period of six months leading to a long no-cost extension.

The WLP projects were envisaged to be implemented within 6 months but had a no-cost extension of up to 20 months. This was attributed to the long government procurement process of IPs, goods, and services, the outbreak of COVID 19 and the ensuing restrictions, contractor unresponsiveness, and financial challenges with some resulting to contract termination, floods due to the October-December rains of 2020 that made roads impassable and stalling of excavation works, droughts, community dynamics including security challenges and vandalism of infrastructure. For instance, NRC implemented 95% of the projects in 26 months, Oxfam 24 months, AMREF 25 months, and AAHI 26 months including addendum projects.

Value for money Finding 19: Implementation of WLP ensured value for money for the intended primary beneficiaries

Efficient use of financial resources was achieved using an alternative mechanism to the available project option. For instance, Oxfam rehabilitated 2 masonry tanks that were no longer in use at Mission Hill and used an existing water pipeline to distribute water to the community instead of setting up new infrastructure. The reallocation of financial resources to achieve the main project objectives was evident in the programme. For instance, the Napeika deflouridation project by AMREF had a cost estimate far below the market rate. As such, the funds were reallocated to other underfunded project activities to actualize the intended outputs for the benefit of the community. NRC reallocated funds meant for smart monitoring meters, which were not procured due to COVID-19 interruption of global logistics, to vandalism proofing of a pipeline that led to sustained availability of water hence increasing access to the Kalobeyei community. Oxfam mapped out an entire Kakuma water supply system and developed a georeferenced asset register to reduce cases of duplication of projects among partners to ensure integration and value for money in the long run.

Utilization of existing/local expertise Finding 20: Local expertise was effectively utilized. The county government provided most of the technical backstopping.

Turkana County through the various departments supported the design and technical backstopping of project implementation. The support was in form of feasibility assessment, surveys, and design of technical projects such as water pans, pipelines, and boreholes. Other areas of support included conducting community training in agriculture, Forestry, water service provision management committees, WASH, and woodlot management.

WRA officers were instrumental in the formation and training of WRUAs and subsequent development of SCMPs in Tarach, Lotikipi, Lokichogio, and Kakuma. The Sub- County officers played a significant role in the monitoring of project activities in collaboration with WaterFund, and IPs. Further, they were critical in making follow-ups in conjunction with CHVs/CHEWs on the regressed villages under CLTS activities

Security was a challenge in some areas particularly, areas close to the border. The local community members provided relevant security information/status as well as the security service to projects' critical infrastructure. During the implementation of rangeland management, the local knowledge played a crucial role in identifying the location of tsetse fly traps for maximum effect. Water and sanitation projects utilized existing volunteers and community health workers etc. to reach out to community members both in the camps and the host communities. Similarly, local semi-skilled members such as plumbers, electricians, and masons were utilized during the project implementation. These sets of members are vital in project sustainability after the handover of the project to handle a simple breakdown of infrastructure.

Projects Governance and Management Finding 21: Regulatory, structural, and administrative requirements did not hinder WLP implementation. However, it was discovered some projects did not comply with existing regulatory requirements

Some of the projects implemented are required to adhere to set regulations and guidelines as stipulated in the law. Medium to large-scale projects, for instance, require compliance to EMCA 2015 regulations to undertake EIA or ESIA assessment to evaluate projects impacts and mitigation on the social and environmental conditions depending on the size of the project. Similarly, all water projects require compliance with Water Act 2016 and the WRM regulations 2007 for undertaking hydrological, and hydrogeological surveys and seek authorizations to undertake works and water permits thereafter. Accordingly, most of the projects acquired NEMA licenses after undertaking ESIA/EIA assessments e.g., Natira 1, Natira II, and Nalapatwi borehole projects, Kaawoi and Nakeruman Water pan. Hydrogeological studies were undertaken for many of the groundwater projects e.g., Kangura borehole, etc. However, the requirements for borehole supervision, authorization, and water permit were not complied with in some projects. Payment of water use charges as demanded by the WRM 2016 rules was only complied with by NRC, which has installed water meters for groundwater monitoring. Water pans fall in the low to medium-scale risk projects that require a permit and regular supervision thereafter.

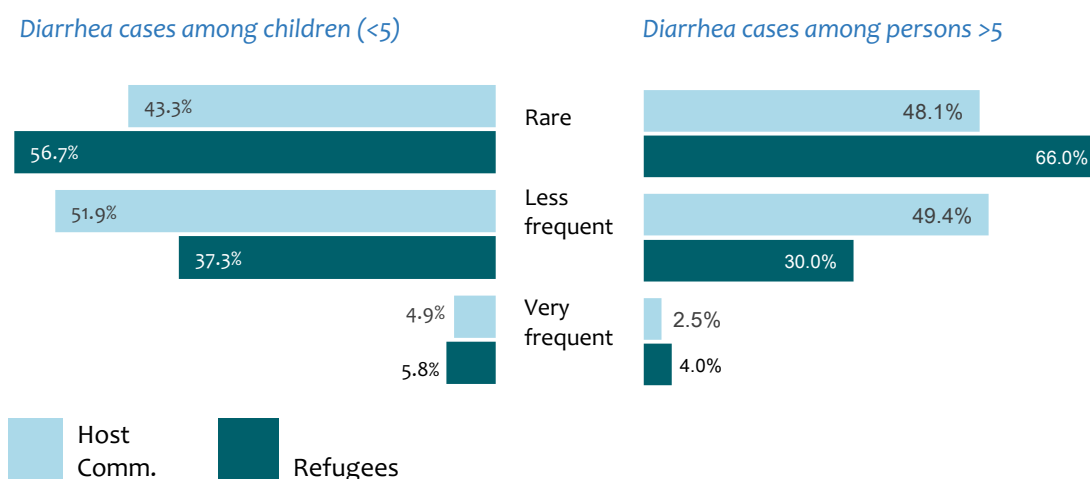
3.6 Impact

Improvement in WASH and flood control

Finding 22: WLP has improved the WASH of both communities and refugees consequently improving health outcomes.

Clean and safe drinking water, sanitation, and hygiene (WASH) are fundamentals in improving the living standards of communities. Evidence shows that access to clean water, improved sanitation, and better hygiene practices lead to improved physical health, improved educational outcomes, improved environmental protection, and gender equality among other positive outcomes. However, poor, and vulnerable communities like the Turkana County population intrinsically have lower access to improved WASH therefore poor associated outcomes. WLP has made significant improvements in WASH and flood control, consequently improving the health of both refugees and the host community. This can be seen in significant drops in diarrhea cases reported after WLP intervention.

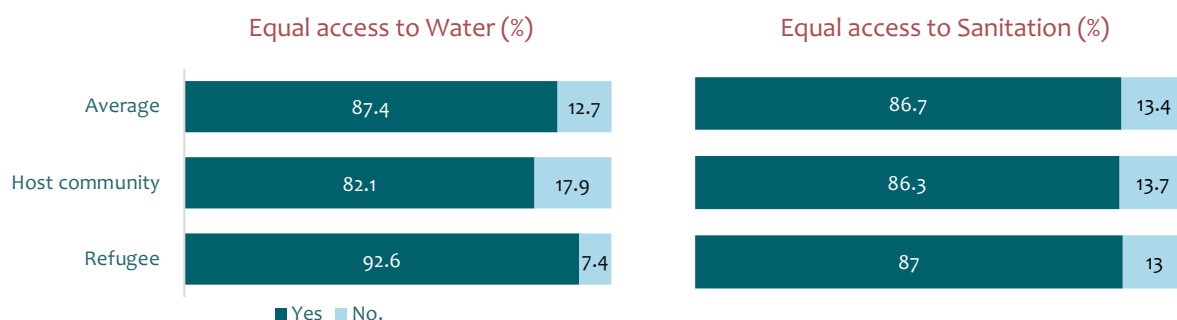
Half of the sampled households reported rare cases of diarrhea among children less than 5 years by both refugees and the host communities. Similarly, in most households, 57% reported ‘rare’ cases of diarrhea among children and adults above 5 years. Despite low cases of diarrhea reported across all respondents’ households, the result still reveals disparities between refugees and the host communities.



Inequality in access to water and sanitation services

Finding 22a: There is a significant reduction in inequality in access to water and sanitation between the host community and refugees. However, a critical proportion of the host community still believes they have unequal access to water services

Generally, 87% of the respondents felt there was equal opportunity for water access. Of the targeted respondents, 93% and 82% of the refugee and host communities respectively held the view that they have equal opportunity to access water services, and 18% of the host community observed that they did not have equal access to water services compared to only 7% of the refugees. Similarly, 87% of the total target population felt they have equal access to sanitation services. A comparable proportion of the refugee (87%) and host communities (86%) held a similar position. On the contrary, an equal proportion of both the refugee (13%) and host communities (14%) perceived that there is inequality in accessing sanitation services in their locality.



A chi-square test of independence was performed to examine the relationship between the status of the respondent (Community member or refugee) and perception of equal access to water and sanitation. There is no significant relationship between the two variables: Water $X^2(1, N = 131) = 0.44, p = 0.50$, Sanitation $X^2(1, N = 133) = 0.17, p = 0.68$. However, actual access to water and sanitation indicates that there is significant evidence suggesting that refugees have more access to sanitation than the host communities, $X^2(1, N = 135) = 12.3, p = <0.05$

Finding 22b: Respondents from Kalobeyei Integrated settlement reported higher levels of equality in access to water and sanitation services among refugees and host communities compared to respondents at Kakuma. However, statistical evidence did not support differences in access to both water and sanitation

All the refugees in the Kalobeyei settlement and 91% in the Kakuma camp opined that they have equal access to water. Majority (90%) of the host community in Kalobeyei and 72% in Kakuma believe that they have equal opportunities in accessing water services. The community in the Kalobeyei is more optimistic in terms of accessing water than their counterpart in the Kakuma camp, 90% of both the refugee and host community perceived to have an equal opportunity to access sanitation services in the Kalobeyei integrated settlement scheme. Among their counterparts in the Kakuma scheme, 86% and 93% held the view that they have an equal chance to access sanitation services. Though the optimism is high among both communities in terms of accessing sanitation services, the Kalobeyei community is more optimistic than those in Kakuma. Chi-square test of independence indicates that there is no significant difference in access to both water and sanitation between respondents at Kakuma and Kalobeyei settlements; Water $X^2(1, N = 107) = 0.1, p = 0.76$, Sanitation $X^2(1, N = 107) = 0.02, p = 0.89$. Therefore, it can be concluded that WLP has significantly addressed inequality in access to water and sanitation between refugees and host communities within the two study areas (Kakuma and Kalobeyei).

Results from the KII indicate that the WLP deliberately provided Water and sanitation services to both communities, for instance, NRC did water tracking to provide clean water to the host community in Kakuma. This holistic approach to service delivery under the WLP significantly reduced conflicts by providing water for multipurpose use.

Table 11; Equality in access to water and sanitation

	Water				Sanitation			
	Kalobeyei integrated		Kakuma		Kalobeyei integrated		Kakuma	
	Count	%	Count	%	Count	%	Count	%
Refugee	10	100.0	40	90.9	9	90.0	38	86.4
Host community	18	90.0	21	72.4	18	90.0	27	93.1
Average		95.0		81.7		90.0		89.8

Living Standards

Finding 22c: WLP is perceived to have improved the living standards of communities living in Turkana West (Both refugees and host community)

Implementation of WLP projects in the Turkana West sub-county significantly improved the living conditions of both the refugees and host communities. For instance, 58% of all respondents (N=165) observed that their health has improved, 51% suggested they experienced increased household income, 53% experienced increased access to food, and 30% commended the new employment opportunities that arose. Equally, 26% of respondents reported an increased opportunity to access education while better housing was cited by 20% of the total communities targeted. Among the refugee community, 67% associated the WLP programme with improved health, 60% with increased household income, 55% with increased access to food; 37% with new employment opportunities; 28% with increased access to education and 20% were associated with better housing. The host community prioritized increased access to food (51%); increased household income (41%); improved health (40%); new employment opportunities and increased access to education at 23.8% with better housing perceived by 19% of the host communities.

Information from Key informants shows that the WLP programme improved water supply infrastructure and the addition of water sources system resulting in improved access to water and hygiene conditions in the served communities. This has in turn decreased cases of water-borne diseases reported. For instance, no cholera cases were reported in the camp since March 2022. This was attributed to the provision of latrine slabs for the construction of household latrines and enhanced dissemination of hygiene and health messages. Decommissioning of communal latrines to pave way for CLTS and innovative sanitation solutions like UDDT toilets substantially improved sanitation in the camps. Sanitation in schools was also enhanced with the construction of VIP toilets, provision of hand washing stations, and refresher training to the health clubs in schools while taking into consideration pupils living with a disability. For instance, 65% and 70% of secondary schools in the Turkana sub-county have access to sanitation and water service respectively thus improving the level of concentration at school. According to the Sub County Water Officer, the implementation of the WLP projects accounted for about 60% of the households who have access to water currently compared to 16% before. Over 50% of the community members in the villages have access to water service due to an increase in the number of water points such as boreholes, water pans, and extension of water pipelines with increased tap stands and nozzles.

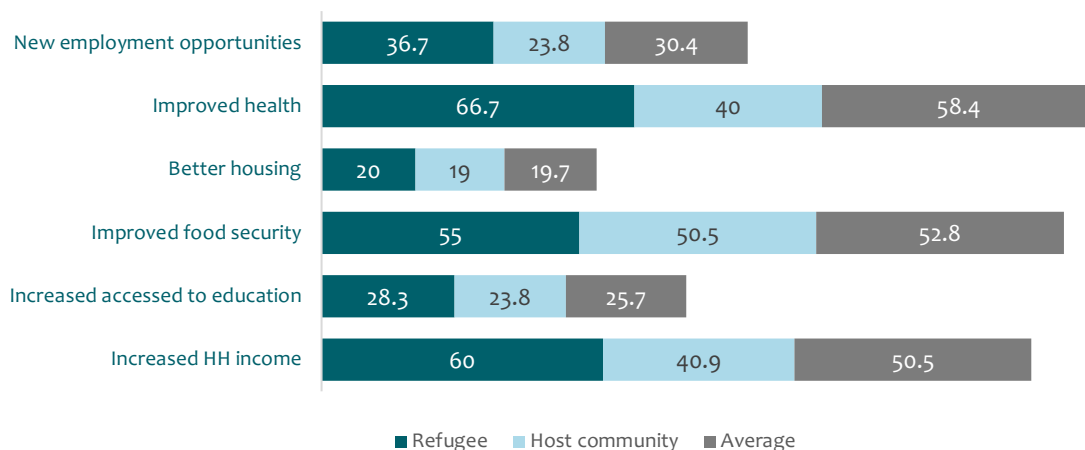
“In Ebitwosin Village, Lonyuduk sub-location a water pan provides drinking water not only for livestock but also for domestic use. During the dry season, women can now easily access water to cook the traditional indigenous fruits by draining the poison and reduce the bitterness thus reducing hunger.” KII, AAHI.

A deliberate move targeting women for livelihood projects (such as Ebenezer, Lokora, and Kangura women groups) by supporting them with shade nets and provision of startup kits (i.e., certified seeds and agro-chemicals for pests and diseases management for agricultural

activities) has enabled these groups to increase household income, improve health conditions from highly nutritious food products. A few women groups have ploughed back to expand their projects.

Provision of water in the grazing areas, control and management of tsetse flies, and training of Kraal leaders on pasture management such as rotation grazing of livestock ensures a well-fed stock and hence improved output throughout the year.

WLP improved the living standards of Turkana West communities, health and food security are the two most impacted areas



Improvement in Natural Resources Management

Finding 23: WLP has implemented activities that have reduced communal conflicts and destruction of natural resources.

Turkana West Sub-County experiences inter-communal conflicts as evident from 70% of respondents who confirmed the occurrence of these incidences. The conflicts are a result of water scarcity as confirmed by 95% of the WUA members, 76% cited access to fodders, and banditry was blamed by 14% of the respondents. The challenges have negatively impacted the socio-economic well-being of the people in the sub-county. The situation is compounded by the frequent occurrence of floods and droughts thus increasing the vulnerability of the communities to the impacts of climate change.



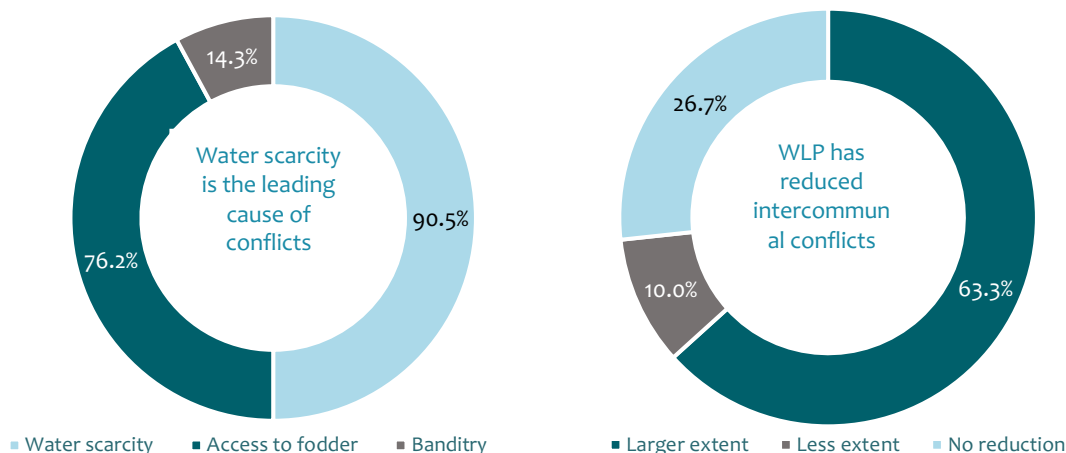
Installation of Biconical traps for tsetse flies' management in Nawuontos

“... development of pans to provide water significantly reduced both intra- and inter-communal conflicts over water. Lack of pasture and Tsetse flies’ infestation along the Oropoi border forces pastoralists to move to Uganda to graze hence contributing to resource-based inter-communal conflicts.”
World Vision KII.

The implementation of WLP projects is perceived to have reduced the conflicts to a great extent as reported by 63% of the respondents while 10% felt the interventions reduced to a ‘less extent. However, about 27% of the targeted community held the view that the projects did not reduce these conflicts. This is a good pointer to the communities’ acceptance of the interventions undertaken under the WLP programme with almost a third (27%) still skeptical of the benefits drawn from the project’s outcome.

This information is corroborated very well with information obtained from the KII. It was noted that

improvement in natural resources management significantly reduced competition for and destruction of resources within the refugee camp and the host community to ensure sustainable resources use. Rangeland's management strategy not only ensured the availability of pasture and water for livestock but also food crops for humans.



Key Activities that have the potential of reducing conflict and destruction of natural resources

- a) Community ownership of planted trees and pastures in Turkana West will ensure better utilization and management of the natural resources. For instance, over 15,000 indigenous trees planted in Nakuguro, Namon, and Napeichom with an estimated survival rate of 70% would provide medicine, and pasture for animals, prevent soil erosion, and create a conducive micro-climate for settlements of people and wild animals and water resources management activities.
- b) Biogas production projects by use of prosopis, kitchen waste, and bio-digester latrines enhance environmental conservation by producing biogas used for cooking. These supplements use of firewood for fuel thus saving money for schools and hotels. The use of biogas will improve waste management and decrease deforestation and the emission of greenhouse gases within the area. The bio-digesters also generate slurry useful for crop farming
- c) Support for pasture/feed production and management activities and training of trainer farmers on goat management in Lopuski has the potential to prolong the availability of pasture to supplement feeds for livestock. If this approach is sustained, it will go a long way in supplementing feeds for livestock hence reducing overgrazing and conflicts in the area.
- d) Availability of water through climate proofing of four boreholes under threat of collapse using gabions and planting of neem trees, drilling, and rehabilitation of boreholes, and extension of pipeline enhances refugees and host communities' access to potable water. For instance, in Kalobeyei Ward, rehabilitation of a borehole enabled 500 households and 5,000 livestock to access water thus reducing conflict between the refugees and the host communities.

Livelihood opportunities

Finding 24: Livelihood opportunities from WLP have improved the lives of both refugees and the host community.

Majority (64%) of respondents are engaged in new livelihood activities within the project areas. About 70% of the respondents are engaged in crop farming, 45% in livestock (pastoralism), 3% in livestock under rangeland, and about 34% are engaged in different forms of employment. About 82% and 52% of the refugees practice crop farming and engaged in different forms of employment respectively. However, the host community is engaged in a variety of new livelihood activities as well. About 58% are engaged in crop farming, 46% in livestock (pastoralism) 3% in livestock (rangeland), and about 17%

in employment. The local host community is predominantly pastoralist therefore, acquisition of crop farming is significant. This could be due to learning from their refugee counterparts who had practiced farming in their native countries, the availability of water for farming, and the need for food in the emerging climate changes characterized by the increased frequency of droughts in the region. The arising opportunities have brought about employment opportunities for the refugees and host communities, but more refugees have seized the opportunities than the host communities.

About 81% of respondents (N=165) had experienced an increase in farm produce over the past 5 years, 16% held a contrary opinion while 3% felt that their produce remained the same over the same period. The host community was more optimistic about the change as indicated by 84% of the respondents compared to 77% of the refugee community members. On the other hand, 19% of the refugee community reported no increase in farm production in the last 5 years. The results show a considerable contribution the WLP projects have had on both the refugees and host community members in food production.

Overall, 86% of the respondents attributed the increase in farm production to WLP interventions. A whopping 88% and 85% of the refugees and host community respectively credited the WLP interventions as responsible for the increase in crop farm production. On average, 12% of the respondents felt that WLP interventions were responsible for the increased crop production to a lesser extent. This was acknowledged by 15% of the host community and 8% of the refugees.



A woman inspecting her crops at a Shade net in Lokichogio

3.7 Sustainability

Sustainability assessed the extent to which the net benefits of the WLP will continue or are likely to continue after termination of the programme. The analysis included an examination of the financial, economic, social, environmental, and institutional capacities of the systems needed to sustain net benefits over time.

Finding 25: WLP put robust mechanisms to ensure the sustainability of the investment.

Mapping is a basic step in the effective management of natural resources. Under the WLP, data collection for various resources was undertaken and archived for use in the planning and management of the water resources in Turkana West. For instance, Oxfam undertook a topographical survey, detailed engineering designs, and hydraulic design of the Kakuma water system to map out the entire water supply system and develop a georeferenced asset register. The information is critical for water system improvements to meet long-term water requirements for Kakuma town (to the year 2040). World Vision Kenya undertook a similar exercise by mapping out resources in a 650km² catchment in Kanamesek, Nauwontos, Kaawoi, and Nakeruman zone to support monitoring and effective management of natural resources.

Capacity building of recipient communities was an integral part of the WLP project's implementation. Involvement of CBOs, community management committees, PHOs/CHEWs/CHVs throughout project implementation of activities shored up the capacity to sustain and maintain development infrastructure and services. Similarly, sanitation campaigns/actions planned post-ODF created additional awareness on latrine usage and related health benefits by the Sub County team. Provision of digging tools by IPs such as NRC will make certain digging of new latrines in the villages once the old ones are filled up. Likewise, handing over completed projects to UNHCR and County will ensure the sustainability of the projects.

Institutional structures were put into place to ensure projects go beyond the WLP life cycle. This included training of community management committees such as Water Users Committees on technical and financial management, efficient revenue collection and use, some of the committee members engaged as casual labourers, and provided security at the water projects. Similarly, project management was handed over to relevant County departments and WRA for further capacity building, on-job training, and monitoring.

Targeting women and other vulnerable groups in society ensured inclusivity in the project implementation and hence sustainability. For instance, the support given to women for economic empowerment of 60 members of Kangura and Ebenezer Green Farmers Women groups in Kalobeyei and Lokichogio respectively; they were supported with shade nets for farming high-value horticultural crops. These women were also capacity built on crop farming methods and improving nutrition at the household level. The groups realized good harvests and good returns that have since been ploughed back. Kangura Women Group has since registered as a CBO and started a merry-go-round to empower members among other empowering activities for sustainability. Similarly, the Ebenezer Green Farmers women group has acquired new land and set up a new garden. Due to lack of water in the area, the group is relying on water from Loki Secondary school

Construction of water pans to increase water storage coupled with rangeland management in the project area is critical in building community resilience. For instance, the construction of cumulative 90,000m³ water pans at Kanamesek, Nakeruman, and Kaawoi to serve more than 30,000 livestock units and 2700 people considerably increased water access. Similarly, provision of fodder for livestock through

rangeland management strategies and capacity building of the community on tsetse fly control such as the deployment of standard targets, Ngu traps, and biconical traps and the use of sticky panels guarantees a sustained local economy lifeline. The active community participation in the identification and management of water pans and rangeland management strategies ensures ownership of the projects and hence sustainability. This will help to foster peace along the border that has been occasioned by resource-based conflicts among neighboring pastoralist communities.

Formation of Water Resource Users Associations (WRUAs) where none existed and development of sub-catchment management plans (SCMP) thereof through a collaborative approach by stakeholders namely Water Resource Authority (WRA), Turkana County's Ministry of Water, and Ministry of National Resource Management and Ministry of Agriculture, Fisheries and Livestock for Turkana County will ensure sustainable catchment management. Four WRUAs were formed namely Lotikipi, Kakuma, Tarach, and Lokichoggio, and supported to develop their constitution and Sub Catchment Management Plans (SCMPs). The SCMP development process capacity built and supported the WRUAs to identify water access gaps and possible interventions. It also served as a platform to develop a proposal for donor funding and build their capacity to manage water projects. The all-inclusive and collaborative procedure in interaction among the participants contributes to widespread ownership of the SCMP Plans.

Considerable investment was put in capacity building of water service providers (WSPs) and Water Users Associations (WUAs) on water and natural resources management, operation and maintenance of the infrastructure, water governance, water system model, stakeholders, and compliance, among other relevant topics. Under the WLP, Kangura WUA and Lokichoggio WSP were facilitated to register as legal entities with WASREB. Similarly, the organizations were sensitized on the National Water Act 2016 and Turkana County Water Act 2019 and the requirements thereof. These will make certain effective operations and management of projects under their jurisdiction within the laid down procedures such as suing in case of infringements of the law or disputes.

Steady progress was noted in sanitation at the household level due to an increase in the number of constructed new latrines through the supply of implements for digging. As a result, several villages such as Natir 1, Apetet, Market A, Nakwamunyen, Lotorob and lochor ekal villages were certified as ODF. This appreciably increased the number of households/individuals who have access to latrines and hand washing facilities as a direct result of the project intervention. A considerable number of households were also reached with Hygiene promotion messaging thus improving household sanitation and hygiene ladder.

Sensitization of Health Clubs, teachers, and school population on best practices on hygiene and sanitation behaviours improved social behavioural changes in the beneficiary school population. This was evident by improved hand washing and COVID-19 prevention measures in the schools as well as the school community acting as health ambassadors in their local communities.

Monitoring of water resources in a catchment is vital for sustained availability of the resource. This is imperative in Turkana West due to overreliance on groundwater resources. This is guaranteed through the installation of monitoring instruments such as master meters at the point of abstraction. Under the WLP, Smart meters were installed by NRC, not only to monitor real-time groundwater level in the aquifer to alleviate against over abstraction but also in the elevated steel tanks. Monitoring of water use seals the gap to accounting for water per capita, which is still a challenge in water service provision in the County.

3.8 Cross-Cutting Issues

Adaptation to Programme Context

Finding 26: WLP implementation context largely remained the same.

- Within the project implementation period, security risks were minimal to change the contextual approach. However, along the border, the deteriorating security situation caused about 3 months delay in the implementation of activities in Lokichogio ward.
- Covid 19 regulations that minimized movement and meetings also contributed to the delays especially in the early stages of the implementation affecting the procurement process
- Drought within the area did not significantly delay the implementation process but a delay in the onset of rains interrupted the filling up of the pan for usage. This affected the Nariemeto water pan implemented by Amref
- Some implementing partners did not have the capacity to execute projects causing wastage of time and resources.
- The County did not adequately support IPs in executing mandates causing some delays in funds release. Only one County Resident Engineer was available to provide technical backstopping to projects. The IPs had to be capacity built on the new Water Act 2019 on the proposed institutional framework such as the formation of Turkana Water Company to facilitate smooth service provision.

Mainstreaming GESI issues

Finding 26: WLP mainstreamed GESI throughout the programme design and implementation



Interior of a PLWD-friendly latrine in Kakuma

GESI was central to the implementation of activities in the WLP project as manifested from the human-centered designs where a series of community engagements were done at initial stages e.g., during reconnaissance to assess community needs and during feasibility studies. At all stages of project implementation, the WLP projects ensured the participation of women and youth in management committees with adherence to the 2/3 gender rule and involvement of youths (<35 years). For instance, the Water management committee for the Lokora water project had 12 (6 male and 6 female) members identified through community participation. To achieve social inclusion, the programme

promoted basic protection principles and meaningful access, safety, and dignity through siting of facilities and services in a safe and accessible location to all, always, establishing appropriately designed ramps to facilitate physical access and participation of beneficiaries throughout the project cycle irrespective of age, gender, or disability.

Partnerships and Stakeholder Cooperation

Finding 27: Effective collaboration between partners led to optimal utilization of resources

Collaboration between stakeholders was demonstrated throughout implementation. During Programme design, WaterFund collaborated with the County government leadership to identify priority areas of target. The County also participated in the selection of implementing partners as well as priority interventions after a comprehensive joint projects appraisal with the United Nations High Commissioner for Refugees (UNHCR) support in review of the refugee support activities.

During implementation, AAHI and NRC held more than 15 technical working group meetings to discuss project implementation progress. They jointly agreed on the officials to invite and responsibilities. The MOU on PPP was agreed upon between AAHI and the county government of Turkana facilitating better collaboration and partnership for service delivery to the Turkana Community. This collaboration between IPs and the county government led to the identification of knowledge gaps and the training needs of the community.

Joint Project monitoring visits conducted by IPs Project Implementation Team (PIT), WaterFund, and Turkana West Sub County Water Office (SCWO) offered an opportunity to provide technical backstopping of the ongoing works as well as ensure the quality of works. Improved coordination between implementors and MOH especially on CLTS was key in achieving ODF status for the four villages in Kakuma Ward (Naurenregae, Ngirimeto, Akwangat & Awarnaparan). Continuous monitoring and support by the WaterFund team contributed to the success of the project. The collaboration between partners and stakeholders ensured there was no duplication of activities by IPs.

“Initially, there were plans to train WRUAs in Kakuma. However, because WRA jointly with Oxfam had formed and gazetted new WRUAs in the same ward, to avoid duplication, funds were channeled to train water committees & CBOs on water management”. NRC KII



Stakeholder WASH consultative meeting for Turkana west

Potential ESG risks and Opportunities

Finding 28: There exist opportunities that can be exploited to mitigate ESG risks identified

	Risk	Opportunity
<i>Environmental</i>	Unpredictable weather changes e.g., prolonged rains, unprotected excavated shallow wells posing danger to both humans and livestock and loose soil around laghas exposing water pipes	Collaboration with the MET department
<i>Social</i>	Conflicting political interests among local administration, low community participation, slow behavior change that affected CLTS, high staff turnover and inadequate technical knowledge among the local community	Collaboration with county government departments like Public Health to promote behaviour change, full community engagement from project design and building the capacity of the locals to increase sustainability, the existence of community structures e.g., chiefs and CHVs'
<i>Governance</i>	Delayed follow-ups and verification of the triggered villages, lengthy procedures that led to slow implementation e.g., PPADA, approval of payment certificates, decision making, contractor's inability to complete the work in time, and non-compliance with government regulations such as NEMA, WRA, WASREB	Partnering with various county departments, IPs have existing internal systems that can be utilized for effective and efficient implementation e.g., Procurement systems

Monitoring, Evaluation, Reporting, and Learning (MERL) mechanisms

Finding 29: WLP established a robust M&E framework that facilitated reporting and sharing experiences between stakeholders, therefore, facilitating learning and accountability

Monthly meetings were held with local leadership that provided stakeholders (IP) to share progress reports, outputs/outcomes, and lessons learned. This platform enhanced IPs to be result oriented and the challenges shared were overcome through learning from peers. Through such platforms, positive reporting and feedback were shared and improvements were made accordingly. Donor feedback was handy for enforcement and improvement. Monitoring of water services through a digital reporting platform improved service provision to a great extent in the sub-county. For instance, Cobal collects; a phone-based software was used to identify the points visited for repairs and monitoring of the infrastructure and submitted monthly.

Innovation and Learning

Water supply and sanitation and water resources continue to face increasing pressures in Kenya especially Turkana County due to the impacts of climate change and increased population caused by the influx of refugees. All water actors need to increase the sector's resilience and sustainability. Innovation and technology have a vital role to play in scarcity and safety, water efficiency, utility operations, monitoring and treatment, and data and analytics. WLP implementation tested and adopted promising technologies

to promote the reduction of non-revenue water, improving water quality, community resilience, and natural resource management.

Some of the key technological and implementation innovations included:

- a) Training in modern farming techniques like dry land farming techniques, good plant health management, soil fertility improvement, and integrated pest management techniques using dichotomous earth.
- b) Training on Business Incubation Programme by AAHI where farmers gained knowledge and skills in financial literacy to better manage their records and gain more insights into money management
- c) Adoption of solarization of boreholes embraced by both the implementing Partners, agents, and county government of Turkana due to low maintenance cost, this will ensure utilization of clean and sustainable energy and reduction of carbon emissions.
- d) The adoption of Bio-Digester latrines has enhanced environmental conservation by producing biogas which is currently being used for cooking. This has supplemented the use of firewood for fuel and saved the schools money for other uses. With the use of biogas, deforestation within the area has decreased its carbon footprint as well. The bio-digesters also produce a slurry, which is safe for use in farming.
- e) Installation of Smart meters at boreholes under Water Resource Management as part of the aquifer and water level monitoring activity. The devices are meant to ensure real-time monitoring of water produced at the boreholes and the elevated steel tanks by various water supply stakeholders to enhance accountability and optimal usage of water as intended. Monitoring also helps in the management of the aquifers, in collaboration with WRA to mitigate against over-abstraction of water from the boreholes
- f) Introduction and capacity building of Rangeland Management Committees on effective management as well as strengthening of the community by-laws for sustainable management of protected areas has helped reduce livestock losses due to drought and lack of pasture.
- g) Installation of Automated Water Kiosk to help in accountability of sales and boost collection efficiency. This has also ensured all round accessibility of water by communities.
- h) Using butt fusion technology by Oxfam and other IPs in the joinery of high-density polyethylene (HDPE) pipes reduced the time taken for repairs and the number of repairs

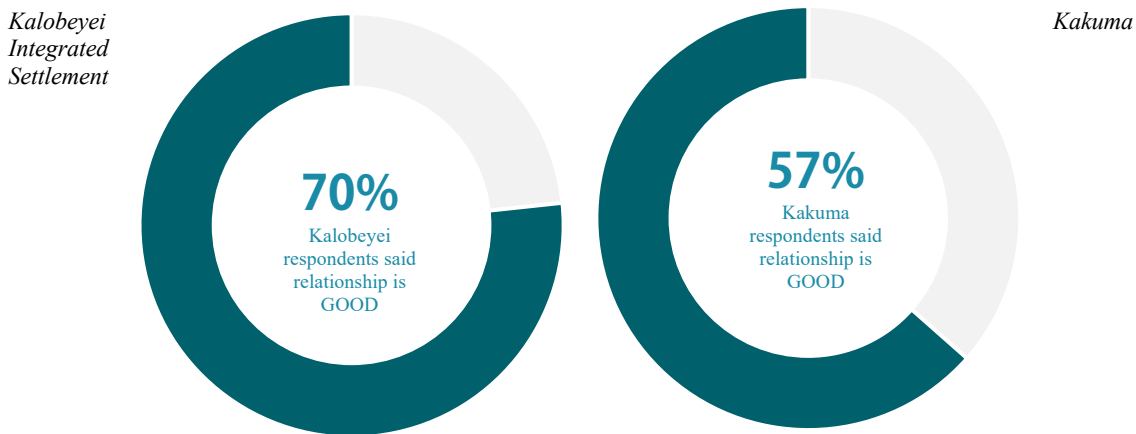
Effectiveness of WLP Implementation Strategy/Mechanisms

Finding 30a: An integrated approach to refugee settlement has improved perception and relations between refugees and the host community

On average, 70% of the respondents in the Kalobeyei integrated settlement scheme expressed the existence of a good relationship between the host community and the refugees while 21% held a contrary view. About 75% of the refugee and 67% of the host community supported the existence of a good relationship between the communities. In contrast, 30% of the host community and 13% of the refugee community indicated a poor relationship between the communities existed.

A chi-square test of independence was performed to examine the relation between refugee settlement type and the good relationship between refugees and the host communities. The test showed that there was no significant association between refugee settlement type and a good relationship between refugees and the host communities, $X^2(1, N = 103) = 0.45, p = 0.50$ (Not significant at $p < .05$). It can

therefore be concluded that WLP through the provision of water, sanitation and new livelihood opportunities to both refugees and host communities have contributed to good relations between the two groups.

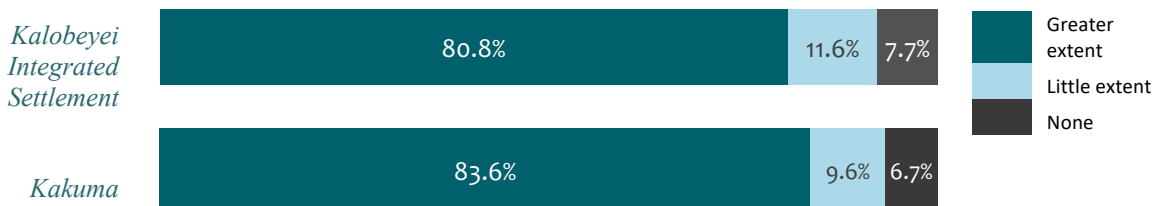


In the Kakuma camp, 57% of the targeted population indicated that a good relationship existed between the host and the refugee communities. The refugee community was more optimistic about the good relationship between the communities as expressed by 68% compared to the host community’s response of 46% in support. On average, 33% of the residents of Kakuma camp felt that a poor relationship does exist between the host and refugee communities. About 39% of the host community and 27% of the refugee community members held the view that a poor relationship is existent in the camp. The results point to an improvement in the relationship between the host community and the refugees in the Kalobeyei integrated settlement scheme compared to the Kakuma camp where the refugees feel a sense of entitlement while the host community felt neglected in their land.

Finding 30b: WLP projects have contributed to improving the relationship between the host community and the refugees

Approximately 82% of the respondents reported that implementation of WLP projects improved the relationship between the host community and the refugees to a ‘greater extent’, 10% to a lesser extent and 5% did not think the projects played a role. Specifically, 82% and 84% of the refugees and host community respectively held the view that the WLP projects improved the relationship to a greater extent while 12% of the refugees and 7% of the host community reported a ‘little extent’ in the improvement of the relationship. This indicates the significance of the WLP projects implementation and its contribution to improving the relationship between the host community and the refugees on one hand and building resilience of these communities to challenges of climate change and sustainable management of the environment

Both respondents from Kalobeyei Integrated Settlement and Kakuma believed WLP projects improved the relationship between refugees and the host community



Finding 31: WaterFund's shift to the strategic partnership with INGOs and the private sector to design and finance bigger projects enhanced WLP's success

The widening of scope concerning implementing agents with the adoption of INGO has provided valuable lessons to WaterFund and other stakeholders including the County government of Turkana. This strategy has improved both the quality and efficiency of implementation. All the IPs have existing better internal structures e.g., financial management systems, internal audit, oversight, human resources (dedicated staff with skills relevant to WLP), and management structures. The IPs were also able to utilize their internal resources to cater to administrative costs during the lengthy no-cost extension, build partnerships and mobilize resources owing to their presence in Turkana County. All these together with IPs commitment contributed immensely to the success of WLP implementation

Finding 32: Investment in broader catchment planning for sustained impact improved WRM

Through WLP, four sub-catchment management plans were developed to prioritize water resources management. The plans are community-driven to identify water needs and gaps for the whole catchment in an integrated manner. It formed a basis for a systematic and prioritized investment to enhance coordinated efforts in catchment management. The SCMP also addresses the provision of water, sanitation, and hygiene services and the management of water resources. This is achieved through capacity building of the committee members and community in general on sustainable investment/livelihood opportunities in the catchment.

Investment in the rangeland approach targeted improving livestock production by providing water in grazing zones through the development of water pans to improve access to water and pastures. This reduces conflicts that arise from time to time due to poor access to water sources on the land. To actualize pasture management strategy, Kraal leaders were trained on a rotational grazing system, anchored on indigenous knowledge to ensure forage availability throughout the year. Similarly, control and management of tsetse flies in the rangeland were significant in the reduction of animal stress not only for increased production but also for a reduction in pastoralists' migration to other areas to avoid the menace. Conservation and restoration of the catchment through the planting of indigenous trees that serve as forage for livestock, medicine, and soil conservation among other benefits ensured a good environment for livestock production, which is the main livelihood activity in the community.



Turkana County livestock officer engaging Nawountos rangeland Kraal on zonal scheduling at Nalapatui



Regenerated pasture after 3 months at Nalapatui

Chapter 4: Challenges and Lessons Learned

4.1 Challenges

- i. Slow uptake of automated water metering system for the local water service providers such as Lokichogio water supply project. This would have had a positive impact on transparent revenue generation and its use
- ii. The community is reluctant to pay for services since water is a God-given resource. Further, vulnerable groups in society face a hurdle to pay for these water services. Nonpayment of water is likely going to affect sustainability due to a lack of O&M resources
- iii. Security challenges and the cost thereof during project implementation were not fully appreciated during project design
- iv. Socio-political issues such as locals' demands to be awarded contracts to implement project activities, which in some cases may be lacking capacity. Engaging with these locals to reach a compromise takes time leading to delays in project completion in project implementation
- v. Short time for project proposal development and implementation to consider all the requisite details for project implementation.
- vi. Frequent droughts in the project area affected the availability of water leading to the drying up of water pans and lowering of the water table, especially in shallow wells resulting in limited access to the water resource. As a result, some community members vandalized the shallow wells to access water using reciprocating foot pumps or motorized centrifugal pumps such as the case in Choro farm in Kalobeyei where only one shallow well was operational at the time of evaluation. Further, Drought affected the achievement of benefits derived from the implementation of livelihood projects such as beekeeping and crop farming.
- vii. Vagaries of weather such as strong winds and floods impede the execution of project activities. For instance, strong winds destroyed 2 shade nets in Kalobeyei, which increased the cost of the project.
- viii. The procurement process through national government procedures (PPADA) proved challenging to most IPs' who found it bureaucratic and time-consuming with many layers of approval. However, it was discovered that IPs who had requisite capacity in government procurement procedures quickly adjusted to these procedures consequently improving efficiency.
- ix. The long no-cost extension delayed implementations as administrative costs were only budgeted for six months. This led to either reassignment of technical staff to other programmes with only intermittent visits to Turkana West or internal funding of administrative costs.

4.2 Lesson learned

WaterFund is a learning institution and has a proven record of designing its programme based on lessons learned from previous interventions. The recruitment of County Resident Monitors/Engineers is a good example of improving efficiency and output. Working with other Implementing Partners such as Conservancies and INGOs had yielded verifiable outputs. The WLP implementation has a few lessons learned by the implementers, WaterFund, and evaluators.

- a) Project implementation under the WLP programme had a **strong reliance on community engagement** from the design stages. The existing community management committees played

a vital role in community engagement. Where no management committees existed, new ones were formed, and capacity was built to take up the role. Similarly, due to security challenges existing in the programme area, the local community proved to be indispensable by providing relevant security information and providing security services during project implementation. Engagement of pastoralists in siting projects using local knowledge is imperative to the successful implementation of project activities. Thus, reliance on the community as a resource facilitated good governance.

- b) **Sustained monitoring and follow-up of projects are essential ingredients for effective and efficient implementation of activities and sustained infrastructure.** WaterFund maintained close communication with the implementing partners for technical support and guidance. This was coupled with the scheduled joint monitoring visits to project sites. Holding regular/monthly, quarterly, and annual reviews kept the stakeholders in check for a sustained meeting of implementation milestones promptly. This was also key in reporting on implementation status and adaptive management of WLP projects.
- c) Turkana West faces frequent security challenges in form of inter-communal conflicts due to sharing of natural resources and cultural values that negatively impact project implementation and sustainability. **Provision of water for domestic and livestock production, integrated water resources management, and rangeland management significantly reduce intra- and inter-communal conflicts.**
- d) **The involvement of the County government is central to the success and sustainability of the investment.** Coordination of stakeholders at the county level coupled with joint monitoring and evaluation goes a long way in realizing the benefits of the projects to the intended communities. This will ensure alignment of activities with County Government priority areas for budgetary consideration and allocation, coordinated development of the county, and efficient use of resources that avoids duplication of activities. Due to the devolution of functions especially for water, sanitation, and catchment conservation, the completed projects are handed over to the county government for sustainability after their completion. Similarly, the County government maintains important data required for planning and development gap identification.
- e) Implementation of activities at the County level demands a **well-established institutional arrangement.** In Turkana County, water service provision was undertaken by various providers with a bias toward urban centers. However, the County with the support of the WLP enacted the County Water Act 2019 which brought into existence urban and rural water companies. This will enhance water and sanitation services, especially in disadvantaged rural communities. Similarly, registration of community organizations to acquire legal status is important for structured engagement with county government and donor community.
- f) **The IP could leverage on strengths among them for the implementation of activities.** For instance, AAHI collaborated with NRC to implement WASH activities in the host community and leveraged NRC's capacity and experience in drilling boreholes. Stakeholder engagement forums provide a platform for sharing experiences, and challenges and identifying areas of collaboration for leveraging.
- g) **The integrated model** used in the implementation of WLP projects targeting refugees and host communities as well as the provision of water, sanitation, and hygiene with a livelihood component significantly improved the relationship between the two communities.

Chapter 5: Recommendations and Conclusion

5.1 Recommendations

Evaluation offers an opportunity for cross-learning and giving credit where it is due from an independent objective. The WLP final evaluation interacted with the project documents, collected primary and secondary data from a wide range of stakeholders in the field, and physically accessed the project sites for observation. Analysis of these data and processes, therefore, gives the evaluators confidence in giving the following pertinent recommendations.

- a) There is a need to establish sustainable partnerships between WaterFund and IPs and the communities served
- b) WaterFund should partner with County Government through co-financing to support IPs in form of an increased monitoring budget for county government officers. Note that the County government does not budget for donor-funded projects
- c) The county government to have a front seat to drive stakeholder engagement in project implementation. This will lead to enhanced budgetary allocation after handing over ownership of the projects to ensure sustainability.
- d) There is a need to revise upwards the cost allocation for project administration from 10% to incentivize IPs for participation in the programme. Similarly, increase the budget for the provision of software components of the programme such as support for CLTS and community engagement.
- e) WaterFund to enhance IPs' capacity on the government procurement procedure (PPADA) for acceptance and uptake. The PPADA should not be viewed as tedious and time-consuming but to ensure value for money to the targeted communities.
- f) A shift to the use of technology in monitoring project implementation, water use, and groundwater level monitoring is likely to save on project costs and promote efficiency in service delivery. The use of smart cards (Automated dispensing systems) at water kiosks promotes accountability, ensures water availability throughout the day, and reduces non-revenue water. Smart metering to monitor abstraction rate and water use is key for sustainability. This could be extended to real-time chlorine dosing in the field that can be monitored on phone. Community members are to be trained on management and use. A dashboard allows the Sub County Water Officer to monitor the amount of water dispensed, and revenue collected through a live dashboard that provides information on consumption patterns to inform rationing during low consumption hours.
- g) Compliance with laid down provisions of Law in form of rules and regulations is vital for sustained enjoyment of benefits derived from the programme. EIA/ESIA informs on the sustainability of the environment, and hydrological and hydrogeological surveys assess the availability of water resources.

5.2 Conclusions

- a) A combination of approaches such as rights-based approach, pro-poor based interventions, community-based natural resources management, and green growth and employment strategies works well to ensure natural assets deliver full economic potential on a sustainable basis to enhance the community's resilience.
- b) The adoption of an integrated approach to community challenges is a step in the right direction to meeting the needs of the host community and refugees to reduce conflicts and build resilience to mitigate against poverty and emerging climate change challenges.
- c) Enhanced water resources management and investments in Turkana West for improved and sustained access by communities and households to water and sanitation for their domestic and productive needs were achieved through improving access to sustainable sources of water and sanitation and improving water resource management in Turkana West Sub County.