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WaterFund
Financing the Water Sector
WATER SECTOR TRUST FUND

MINISTRY OF FOREIGN AFFAIRS
OF DENMARK
Danida

WATER AND LIVELIHOOD PROGRAMME

End of Programme Evaluation

2022

Green Growth and Employment Thematic Programme (GGEP)

WaterFund
Financing the Water Sector

MINISTRY OF FOREIGN AFFAIRS
OF DENMARK
Danida

Final Report

for,

End of Programme Evaluation of Water and Livelihood Programme (WLP)

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Submitted by:

adi ADVANCE DEVELOPMENT INITIATIVE
RESEARCH | TECHNICAL ASSISTANCE | PROJECT MANAGEMENT

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The Authors.
Nairobi, December 2022

Executive Summary

Background

The Water and Livelihood Programme was funded by the Government of Kenya and the Royal Danish Embassy (DANIDA) as additional funding to the Green Growth and Employment Programme (GGEP) 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 International Non-Governmental Organization (INGO) Implementing Partners (IP) namely, Action Africa Help International (AAHI), Amref Health Africa, Norwegian Refugee Council (NRC), Oxfam Great Britain and World Vision

The end-term evaluation assessed the overall results and impact of the WLP projects and their sustainability, and established lessons learnt, 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.

Methodology

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 structured questionnaire was utilized to collect data from primary stakeholders, Key Informant Interviews (KII) guides and Focus Group Discussions (FGD) guides were utilized for qualitative data. For secondary data, a desk review was conducted to capture past work and studies on thematic areas under WLP, 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 DANIDA, WaterFund, IPs, UNHCR, Turkana 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 were done using Statistical Package for the Social Sciences (IBM-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 established standards 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, Creditworthiness Index and Kirkpatrick's model to assess the effectiveness of capacity building approaches

Evaluation Findings

Achievement of overall Development Engagement (DE) Objectives

WLP achieved the overall 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 against a target of 6000 households 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 against a target of 4000 households had access to sustainable sanitation services. This was achieved through a combination of sanitation approaches targeting communities, institutions and households including Community Led Total Sanitation (CLTS), hygiene promotion, casting, and distribution of slabs for the household latrine, and construction of Ventilated Improved Pit latrine (VIP latrines). 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.

Under improved water resources management planning, 4 new Water Resource Users Association (WRUA) catchment areas (Kakuma, Tarach, Lotikipi, and Lokichogio) with a total combined area of 11,929.6 Km^2 were planned through the development of Sub-Catchment Management Plans (SCMPs) for coordinated management of the resources. Further, 667.89 km^2 of rangeland was also mapped and put under community management.

The overachievement of the overall DE targets in terms of numbers of households accessing water and sanitation services because of WLP Programme could be explained by the high population density in most of the project target areas e.g., Lokichogio and Kakuma are major urban centers with high population, both refugee camps at Kakuma and Kalobeyei are clustered settlements. Secondly, the projects, both water and sanitation attracted people who settled in proximity thereby increasing population above the targeted population at design. For instance, population drastically increased around the biosanitation facility in Kakuma Market with the area now becoming a major market center. Finally, this success can be attributed to capacity and experience of NGOs in project imlementation and management

Relevance and Coherence

WLP was 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, Overall, 86% of the respondents had access to water services whereas 67% 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, Similarly, 81% of the respondents felt their sanitation needs were met to a large extent. The programme was also found to be well aligned with key stakeholder policies, priorities, and strategic objectives including DANIDAs' The Right to a Better Life strategy, Constitution of Kenya 2010, Vision 2030, Kenya Water Master Plan, Water Sector Trust Fund Strategic Plan (2018–2022) and Turkana County Integrated Development Plan (CIDP 2018-2022)

WLP programme design was coherent both internally and externally. The DE was modeled around existing WaterFund financial and operational mechanisms on Rural Investment and Water Resources Investment. The design and implementation were informed by lessons learnt from previous programmes and support- including support from DANIDA for example, the strategic shift to partner with INGOs. WLP also utilized WaterFund's established delivery mechanisms and partnerships with counties, ensuring aligned and harmonized support between WaterFund and County efforts. For instance, WLP projects included rehabilitating and augmenting existing water and sanitation infrastructure within Kakuma and was aligned with the Kalobeyei Integrated Socio-Economic Development Programme (KISEDP) WASH component.

Effectiveness

WLP largely achieved the expected results across the five output areas as outlined in the Development Engagement Document (DED). The evaluation also determined unexpected results realized from the intervention.

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

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. An implementation policy framework is in place in form of Water Act 2019, 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. The relevant county departments are continuously involved in planning for new water, sanitation, and water resources management programmes by different donors. However, the evaluation revealed a lack of meaningful involvement of the Sanitation Department (Department of Public Health) by

either the County, WaterFund, or the IPs. This might have contributed to lower success rates in sanitation and hygiene components like CLTS and is predicted to affect sustainability.

Output 2: Water and Sanitation needs of Turkana West Refugee camps and host community addressed including livelihoods.

WLP greatly impacted on access to water and sanitation in Turkana West by increasing the number of households accessing water (10,900 new households) through drilling and solarization of 6 boreholes, rehabilitation of 9 boreholes, installation of storage tanks (1625m^3 capacity) i.e., new storage tank (elevated steel tank and ground tanks) 930m^3, rehabilitation of elevated steel tank 400m^3 and masonry tank 295m^3, 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.

On sanitation, approximately 4050 new households had access to sustainable sanitation services due to WLP. This was achieved through a combination of sanitation approaches targeting communities, institutions, and households. WLP supported several interventions including CLTS within the host communities and promotion of latrine construction within refugee camps through casting and distribution of slabs to households. The programme also implemented hygiene promotion. CLTS was implemented in 58 villages, with a total of 29 villages certified ODF. Over the same period, 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 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). 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.

Both refugees and the host communities within WLP target areas were 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 (80%). The evaluation also revealed that 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%, a good percentage 84.8% reported collecting enough water for their domestic use (20-25 liters per person per day- UNDP/ WHO) and 68% of respondents (84.6% refugees and 51.45 host community) accessed water within a distance that meets Sphere standards (Less than 500m)

Output 3: Sustainable and community-based management of water resources and rangeland improved

WLP improved Sustainable and community-based management of water resources in Turkana West by significantly increasing water storage capacity, 200,000m^3 water storage was successfully developed through water pans and putting up of water storage tanks in the project areas both for livestock and domestic water use and expanding the area under improved water resources planning, 12,597.5km^2 of new catchment was planned through the development of SCMP including 667.89 km^2 of rangeland mapped and implemented under community

management.

Output 4: Improved capacity and engagement by Implementing Partners for planning and efficient water service delivery

Capacity-building approaches were highly effective and contributed to successful implementation, improved service delivery and sustainability of the investment. Nearly all (96%) of WLP projects were successfully implemented, indicating the improved capacity of Implementing Partners (IP), projects management committees and targeted communities to implement and manage WLP projects. Two of the main supported projects (Kakuma Town Water Supply and Lokichogio Water Supply) were found to be creditworthy. However, Creditworthiness Index (CWI) of 53.8% did not meet the WLP target of 70%

Output 5: Strengthened institutional performance of WaterFund

WSTF institutional performance was improved by WLP investment as evidenced by improved capacity in programme management, improved efficiency, and accountability in project implementation, for example no WLP investment cost was questioned. The evaluation also revealed that the Fund is in the process of developing an Integrated Project Management Information System to map and manage supported investments. Currently, mapping is done under Joint Annual Operations Monitoring Exercise (JAOME)

Efficiency

WLP projects utilized resources efficiently, the programme utilized public finance management system 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 communities. 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. 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 among other challenges.

Regulatory, structural, and administrative requirements did not hinder WLP implementation. However, it was discovered that some projects did not comply with existing regulatory requirements; 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 and regulations was only complied with by Norwegian Refugee Council (NRC), which installed water meters for groundwater monitoring.

Impact

a) Improvement in WASH: WLP improved the WASH of both communities and refugees consequently improving health outcomes. Half of the sampled households reported very few cases of diarrhea among children less than 5 years by both refugees and the host communities

b) Inequality in access to water and sanitation services: There was a significant reduction in inequality in access to water and sanitation between the host communities and refugees.

However, statistical evidence suggests refugees still had more access to sanitation than the host communities. 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, statistical evidence however did not support differences in access to both water and sanitation for Kakuma and Kalobeyei refugee settlements.

c) Living standards: WLP was perceived to have improved the living standards of communities living in Turkana West (Both refugees and host communities), improved health (67%), increased household income (60%) and food security (55%) were the top three areas impacted. Also, 37% of survey respondents heralded new employment opportunities from WLP

d) Improvement in natural resources management: WLP implemented activities that reduced communal conflicts and destruction of natural resources, 63% of respondents reported that WLP had reduced intercommunal conflicts through increasing access to water, pasture and providing alternative livelihood activities.

e) New livelihood opportunities: Livelihood opportunities from WLP had improved the lives of both refugees and the host communities, about 64% of respondents were engaged in new livelihood activities, and 81% had experienced an increase in farm produce over the past one year

Sustainability

WLP put robust mechanisms to ensure sustainability of the investment including 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 UNHCR for continued support.

The programme also adopted Rural Water Provision Service Delivery Models and guidelines developed by Water Service Regulatory Board (WASREB) in partnership with Caritas International, Gatsby Africa and WaterFund to ensure sustainability of the investment after handing over to the County Government and other stakeholders as per the Memorandum of Understanding (MoUs)

The evaluation revealed a high sustainability index (SI), above 70% for all thematic projects i.e., water, sanitation, water resources management, and livelihood projects had sustainability indexes of 78.6%, 78.9%, 84%, and 74.8% respectively

Mainstreaming of Cross-cutting issues

a) Adaptation to Programme Context: WLP implementation context largely remained the same throughout the implementation, for example, security risks were minimal to change the contextual approach. COVID-19 outbreak, and the restrictions thereafter was the only major challenge on programme context at the early stages of implementation.

b) Gender, Equality and Social Inclusion (GESI): WLP mainstreamed GESI throughout the programme design and implementation, participation of women, youth and people living with disability (PLWD) was given priority, and most facilities were designed to cater for PLWDs including having a ramp for VIP latrines, toilet seat and grab bar. For example, tenders for Kakuma

town water kiosks, pump house and masonry tank rehabilitation were set aside for the special category

c) Partnerships and Stakeholder Cooperation: Effective collaboration between partners contributed to efficient and effective implementation of WLP. Collaboration between stakeholders was demonstrated throughout implementation. For example, 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 project's appraisal with UNHCR support in review of the refugee support activities.

d) Environment, Social and Governance (ESG) risks and Opportunities: The evaluation revealed few ESG risks: Unpredictable weather changes, conflicting political interests among local administration, low community participation, slow behavior change, delayed follow-ups and verification of the triggered villages, lengthy procedures that led to slow implementation e.g., Public Procurement and Asset Disposal (PPADA), approval of payment certificates, decision making etc. There exist opportunities that can be exploited to mitigate ESG risks identified through collaboration and partnership, and utilization of existing resources within the county.

e) 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

f) 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. Some of the innovations included Installation of smart meters at boreholes, Installation of Automated Water Kiosk, Training in modern farming techniques among others

WLP Implementation Strategies/Mechanisms

a) WaterFund's shift to strategic partnership with NGOs to design and finance bigger projects enhanced WLP's success. This strategy improved both the quality and efficiency of implementation. All the IPs had 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 for administrative costs during the lengthy no-cost extension, build partnerships and mobilize resources owing to their presence in Turkana County

b) An integrated approach to refugee settlement improved the perception and relations between refugees and the host community. WLP projects 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 communities and the refugees to a 'greater extent'

c) Investment in broader catchment planning for sustained impact improved water resources management, four SCMP were developed to prioritize water resources management. The plans were community-driven to identify water needs and gaps. Also, investment in 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.

Lessons learnt

i. The widening of scope in relation to implementing agents through partnering with NGOs has produced verifiable results and provided WaterFund with valuable lessons for future programming

ii. Project implementation under the WLP programme had a strong reliance on community engagement from the design stages which facilitated good governance at the local level, financial management, and proper project implementation.

iii. Sustained monitoring and follow-up of projects are essential ingredients for effective and efficient implementation of activities and sustained investment.

iv. Provision of water for domestic and livestock production, integrated water resources management, and rangeland management significantly reduce intra- and inter-communal conflicts.

v. The involvement of the Turkana County Government is central to the success and sustainability of the investment.

vi. Implementation of activities at the County level demands a well-established institutional framework. In Turkana County, water service provision was undertaken by various providers with a bias toward urban centers

vii. The Implementing Partners could leverage on strengths among them for a more efficient/effective implementation of activities.

viii. 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.

ix. Proper community sensitization is essential in adoption of innovative sanitation solutions that are often faced with cultural and local practices barriers such as Urine Diverting Dry Toilets (UDDTs) and biodigester.

Recommendations

i. There is a need to establish sustainable partnerships between WaterFund and IPs and the communities served through long term collaboration and engagement to facilitate post implementation follow-ups and continuous support

ii. WaterFund should partner with County Government through co-financing to support IPs in form of an increased monitoring budget for County Government officers. While the County Governments' budget allocations have progressively increased, the allocations are still below the requirements hence the need for counties to enhance partnerships to bridge the gap. To sustain partnerships, Turkana County Government should lead in co-creation of projects and allocate financial and technical resources as part of co-financing for all programmes.

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 the current 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 PPADA should not be viewed as tedious and time-consuming process but as a tool 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 ground water resources.

viii. WLP piloted some promising technologies that can be upscaled or replicated specifically for sanitation service delivery. For instance, UDDT provide a sustainable solution to challenges facing sanitation in unstable or hard soil formations, biodigesters provide a host of other benefits both health and economic.

ix. There is need to improve programme design through developing clear ToC that indicates all the critical components: highlighting the programme logic, results pathway, causal link, interventions, and underlying assumptions.

x. There is need to expand partnerships and collaboration with all integral National Government institutions for effective implementation of climate change adaptation components. For example, partnering with Kenya Forestry Research Institute (KEFRI) and Kenya Agricultural & Livestock Research Organization (KALRO) to support climate change adaptation interventions

xi. The County Department of Agriculture should continuously train and sensitize the local communities on the importance of alternative economic activities to change their preferences to adopt new practices like crop farming as a livelihood activity. Further agronomic support is necessary to ensure sustainability of these new practices.

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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 Exercise
JICA	Japan International Cooperation Agency
KII	Key Informant Interview
KPI	Key Performance Indicator
KISEDP	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

Tables and Figures

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, 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 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 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 5 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

WLP was financed by the Government of Kenya and the Royal Danish Embassy (DANIDA) as an addendum to the five-year Green Growth and Employment Programme (GGEP) implemented under the overarching Kenya Country Programme 2016-2020 to support Kenya's "inclusive greener growth with higher employment". This engagement targeted Turkana West within Turkana County which was found to be in a specific difficult situation with a significant influx of refugees in the area that aggravated the water and sanitation crisis. Consequently, DANIDA provided additional funding added to the GGEP Development 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. The engagement addressed the provision of water and sanitation services and the management of water resources. These services are key aspects in

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

addressing poverty reduction, inclusive green growth, rights, and sustainable management of natural resources in the ASALs.

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	20th 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 (Ksh 600 million at time of DE[2])
Disbursed amount	DKK 37,696,111 (Ksh. 617, 432,608.20)
Spent amount	Ksh. 604,330,402.00

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 partnership with five International 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)

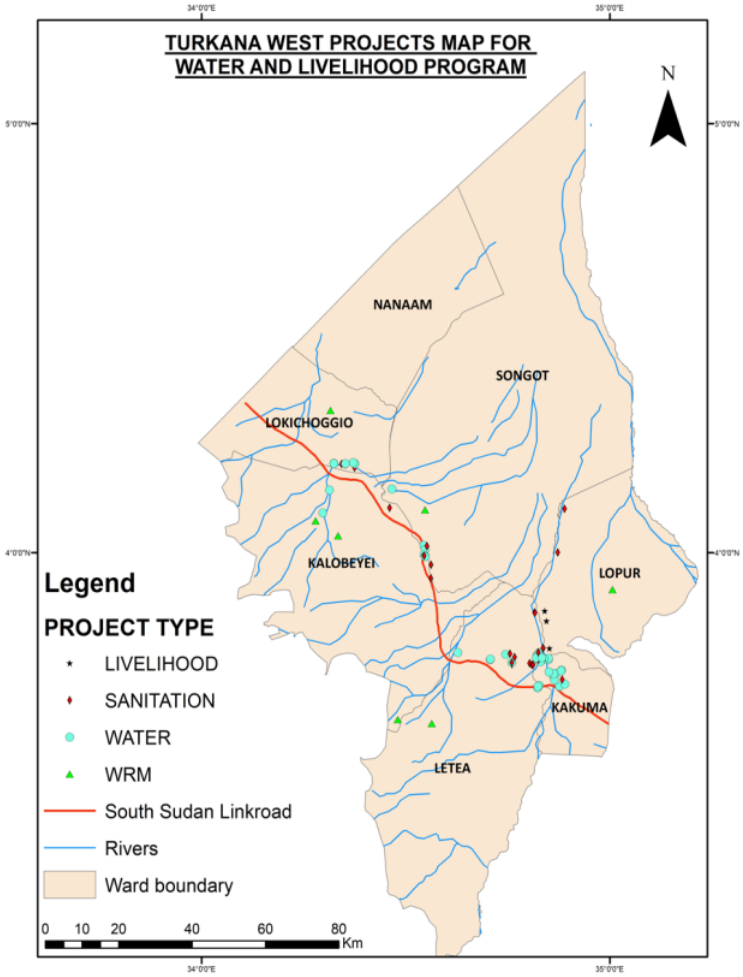
Implementing Partner	Project Name/Objective	Location targeted
Action Africa Help International (AAHI)	Enhancing Livelihoods Through Water and Sanitation (ELIWAS)	Lopur and Kalobeyei wards
Amref Health Africa	Turkana West Water, Sanitation and Livelihood (TWASWALI) project	Songot Ward
Norwegian Refugee 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

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 learnt and best practices related to the planning, design, and implementation of water sector programmes in similar contexts.

[2] Exchange rate of 1: 15



Areas

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

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 investment.

The Specific objectives of this evaluation were to assess:

a) The extent to which the intervention has 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

1.5 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 (DED). 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 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)[3] poverty is likely to grow unless major investments are made in services and productive sectors.

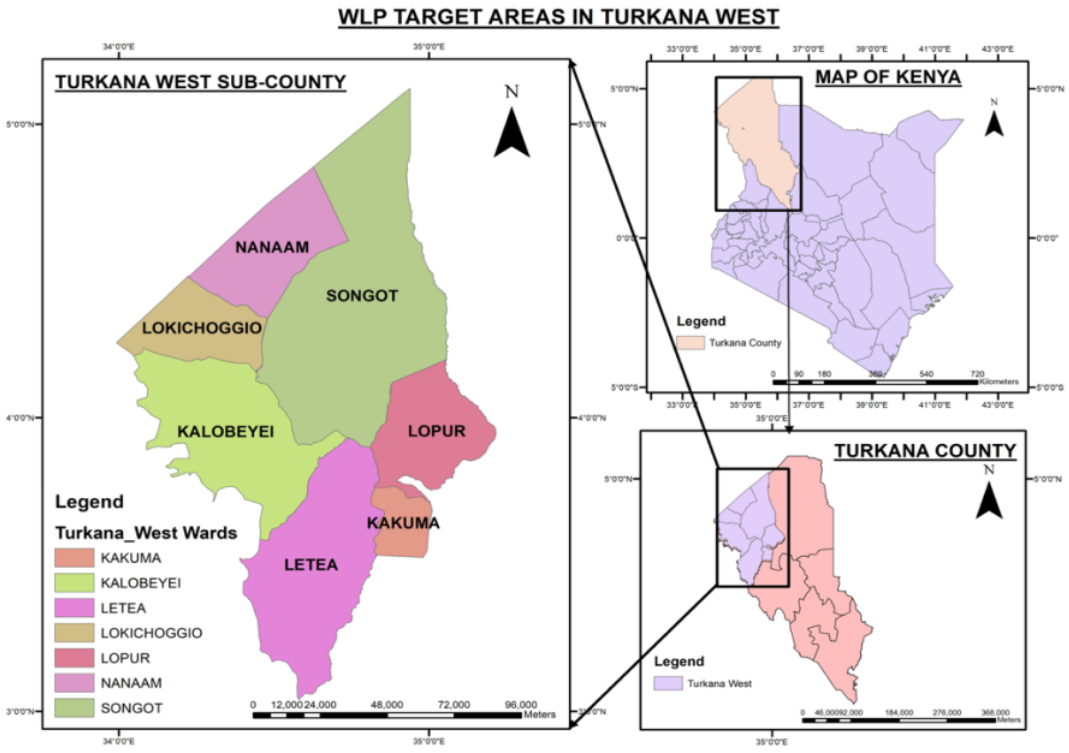


Figure 2: Map showing WLP Target areas in Turkana

[3] Kalobeyei Integrated Socio-Economic Development Plan, KISEDP 2018

1.6 Logic of the Intervention (Programme Theory)

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". 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)

Chapter 2: Evaluation Methodology

2.1 Evaluation Design and Approach

The Evaluation of the WLP programme utilized a theory-based approach. 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 years[4]. 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 therefore adopted 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 and tools.

2.2 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) quantitative study design, a structured questionnaire was utilized to collect data from primary stakeholders with households as the unit of analysis. The Survey was designed to answer questions specific to various project outcomes, impact, and sustainability, and b) qualitative study design, Key Informant Interviews (KII) guides and Focus Group Discussions (FGD) guides were utilized. (Annex 9_ Data collection tools).

For secondary data, desk review was conducted to capture past work and studies on thematic areas under WLP, 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 reports 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 7_Documents Reviewed)

2.3 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

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

promotion. Secondly, participants for household surveys were sampled systematically using stratified random sampling. A total sample of 153 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

$n \geq (Z\text{^}2.p.q)/d\text{^}2$ $n \geq (\ 〚1.96〛\text{^}2\ x0.1x0.9)/\ 〚0.05〛\text{^}2$ =138.2 Adding 10% for design effect: n = 139 + (139 x 10/100) = 139 + 14 = 153 Sample size (n) ≥ 153	*Where:* *n= desired sample size* *z= standard normal deviation at the required confidence level* *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.

2.4 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 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.

2.5 Evaluation Questions

To achieve the evaluation objectives and purpose, the evaluators formulated and endeavored to answer key evaluation questions based on the OECD-DAC criteria:

Table 4: OECD- DAC Evaluation Criteria

Evaluation Criteria	Description in relation to WLP
Relevance	The extent to which the programme objectives and design responded to ASAL communities, counties, DANIDA, WaterFund and GoK needs, policies, and priorities
Coherence	The compatibility of the programme with other interventions within the selected communities by WaterFund, County Government and other key stakeholders.
Effectiveness	The extent to which the programme achieved its objectives, and its results, including any differential results across groups.
Efficiency	The extent to which the intervention delivered results in an economic and timely way as compared to other feasible alternatives.
Impact	The extent to which the programme has generated significant positive or negative, intended, or unintended, higher-level effects among the beneficiaries.

Evaluation Criteria	Description in relation to WLP
Sustainability	Gauges the extent to which the net benefit of the programme continues to the beneficiaries after the project is terminated.

The key evaluation questions were synthesized into 37 sub-questions for a focused evaluation (Annex 1_Evaluation design matrix). 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.

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

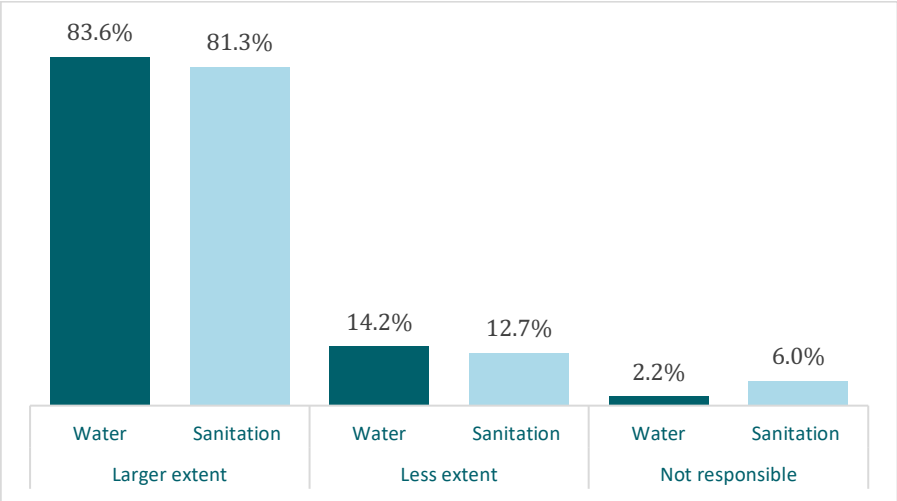
3.2 Relevance

3.2.1 WLP Relevance to primary beneficiaries' needs and priorities

Finding 1: WLP was 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, 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	*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.* *'The Right to a Better Life' Strategy for Denmark's Development Cooperation, 2012*
Government of Kenya	*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, 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.* *Constitution of Kenya 2010, Vision 2030, Kenya Water Master Plan*

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 ToC was found to be generally well grounded by clearly outlining the underlying multidimensional challenges facing ASAL Communities in Kenya. The DED 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, efficient and provides enough opportunity for stakeholder involvement and participation.

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. Some baseline data were not available from the results framework whereas other cases indicated absolute values, this presented a challenge as there was no proper benchmark against which to measure progress towards achieving outputs and results expected, compromising effective M&E strategy and programme performance reporting.

However, the use of the results framework, in the absence of a well-developed Theory of Change with assumptions underpinning the theory, and a clear causal pathway presented significant challenges to creating an overall vision of change for the programme. This inhibited the programmes' ability to effectively link results expected (outcomes) in a causal chain, and to develop more appropriate results and indicators for monitoring and evaluation (M&E) and reporting purposes. (Annex 2_WLP Revised ToC)

The evaluators however did not conduct an extensive Quality of Design Assessment.

3.3 Coherence

3.3.1. WLP Coherence in Design and Implementation

Finding 4: WLP programme design was internally and externally coherent. The design was informed by lessons learnt 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 learnt from previous support (including support from DANIDA) to water resources management and water and sanitation services to the ASALs.

The DE was modeled around existing WaterFund financial and operational mechanisms a) Rural Investment: This mechanism develops rural communities' capacities to access funding, implement and maintain water and sanitation facilities. Under this mechanism, ASALs have been targeted for purposes of focusing financing on water and sanitation projects. The focus recognizes and appreciates the need for water and sanitation in the ASALs, as well as their unique characteristics, 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 learnt 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 had 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 DE 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 Kalobeyei 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 Banks' 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.

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'. The DE 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. This effort was also aligned with the Kalobeyei Integrated Socio-Economic Development Programme (KISEDP) 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%.

3.4 Effectiveness

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		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	6,000 households reached with sustained water services	The target was 100% achieved. Approximately 10,900 households received 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	4,000 new households reached with sustained sanitation services	The target was 100% achieved. Approximately 4,050 households had 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	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

Five major projects consisting of several investment schemes of varying sizes in water and sanitation provision were implemented by various NGO's targeting both refugees and host communities. Consequently, 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 (1625m^3 capacity) i.e., new storage tank (elevated steel tank and ground tanks) 930m^3, rehabilitation of elevated steel tank 400m^3 and masonry tank 295m^3, 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 had access to sustainable sanitation services due to WLP. This was achieved through a combination of sanitation approaches targeting communities, institutions, and households. WLP supported several interventions including CLTS within the host communities and promotion of latrine construction within refugee camps through casting and distribution of slabs to households. The programme also implemented hygiene promotion. CLTS was implemented in 58 villages, with a total of 29 villages certified ODF. Over the same period, 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). 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.

Under improved water resources management planning, four WRUA catchment areas (Kakuma, Tarach, Lotikipi, and Lokichogio) with a total combined area of 11,929.6 Km^2 were planned through the development of SCMPs for coordinated management of the resources. Further, 667.89 km^2 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.

The overachievement of the overall targets in terms of numbers of households accessing water and sanitation services because of WLP Programme could be explained by the high population density in most of the project target areas e.g., Lokichogio and Kakuma are major urban centers with high population, both refugee camps at Kakuma and Kalobeyei are clustered settlements. Secondly, the projects, both water and sanitation attracted people who settled in proximity thereby increasing population above the targeted population at design. For instance, population drastically increased around the biosanitation facility at Kakuma Market with the area now becoming a major market center. Finally, this success can be attributed to capacity and experience of NGOs in project imlementation and management

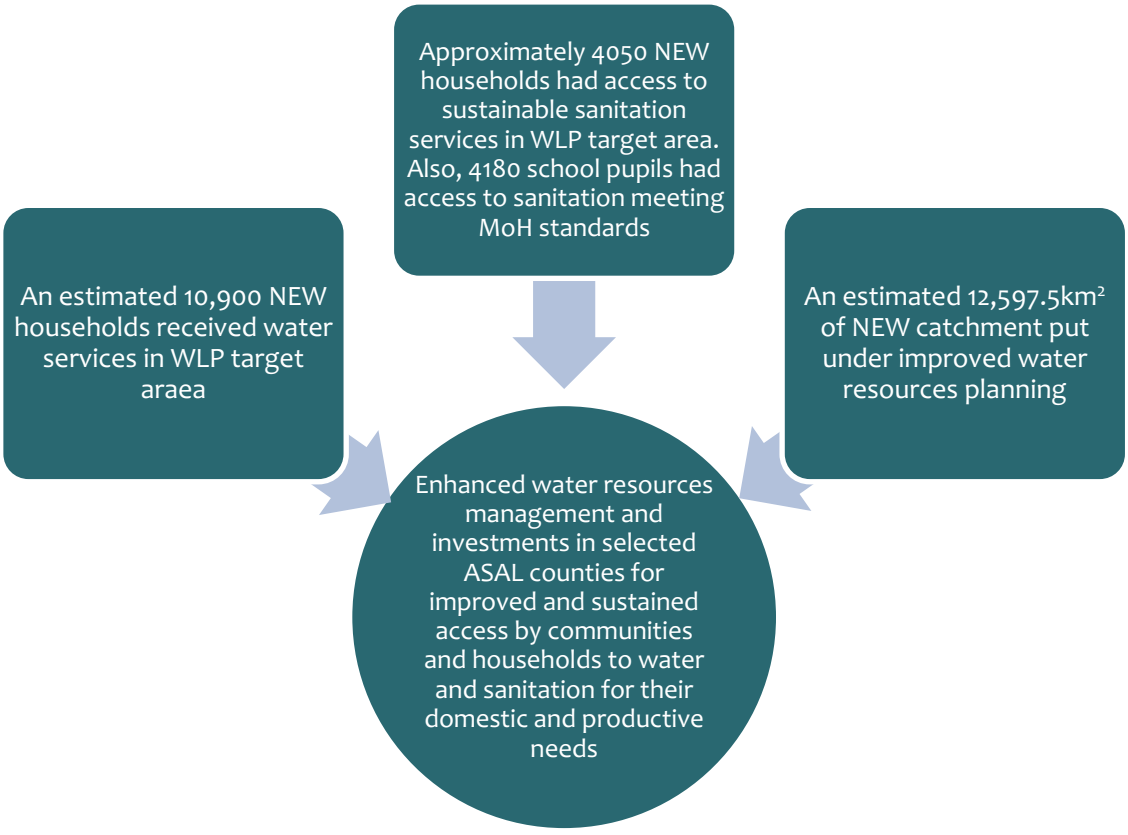


Figure 3: Achievement of overall DE Objective

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 their regulatory functions	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 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. 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 for example, Oxfam mapped out the entire Kakuma water supply system and developed a georeferenced asset register, this 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 650km^2 catchment in Kanameseck, Nauwontos, Kaawoi, and Nakeruman zone to support monitoring and effective management of natural 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 are 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.

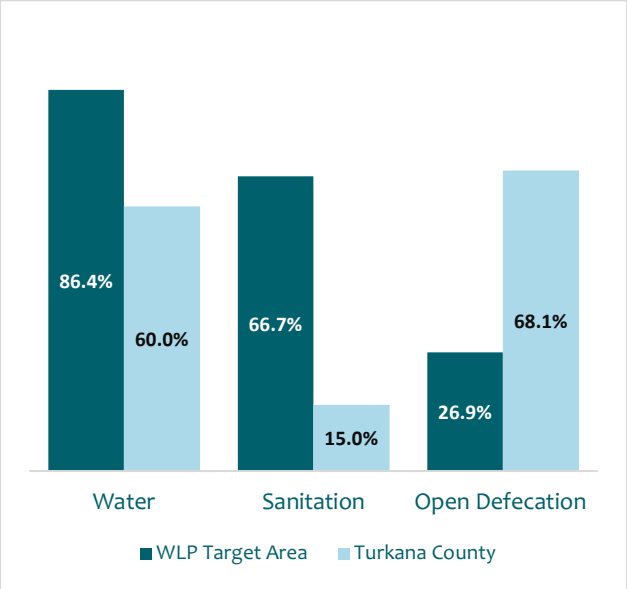
Output Indicators		Target	End Term
Indicator 3.1	Increase in number of households with water services from WaterFund in this engagement in in Turkana West Sub County	At least 6,000 new households reached with water services in Turkana West Sub County with at least six projects	The target was 100% achieved. 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 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 had 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

Output Indicators		Target	End Term
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 received 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 (1625m^3 capacity) i.e., new storage tank (elevated steel tank and ground tanks) 930m^3, rehabilitation of elevated steel tank 400m^3 and masonry tank 295m^3, 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.

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

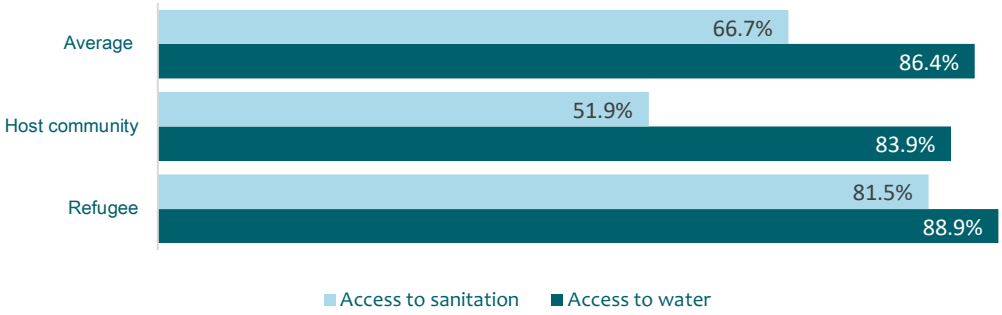


Similarly, approximately 4050 new households have access to sustainable sanitation services due to WLP. This was achieved through a combination of sanitation approaches targeting both communities and institutions. WLP supported several interventions including Community Led Total Sanitation (CLTS) and 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). 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 51.9% as compared to refugee households at 81.5%. 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 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 15km[5] 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. Evidence shows that spending too much time fetching water can exacerbate water insecurity and be a barrier to sustainable development[6].

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 Kenya National Bureau of Statistics (KNBS, 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.

[5] Mati, B. M. *etal* ;. 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)
[6] 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

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

Bio sanitation facility at Kakuma Market

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 condition[7]. 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 measures[8]. 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 5)

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.

[7] Water Fund Annual Rural Harmonized Report, FY 2017/2018
[8] Joint Annual Operations Monitoring Exercise (JAOME, 2016)

Table 6: Sustainability Index[9]

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

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 sanitation[10]. 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 for hard grounds, the lining of latrine pits, and bio-San facilities in public places

[9] Behaviour change projects like CLTS were not included in Sustainability Index
[10] Climate Adaptation & Resilience for Food & Water Security, USAID

Projects category	Climate proofing and green approaches mainstreaming
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

Satisfaction with Water and Sanitation Services

Finding 10: Both refugees and host communities within WLP target areas were 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. 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.

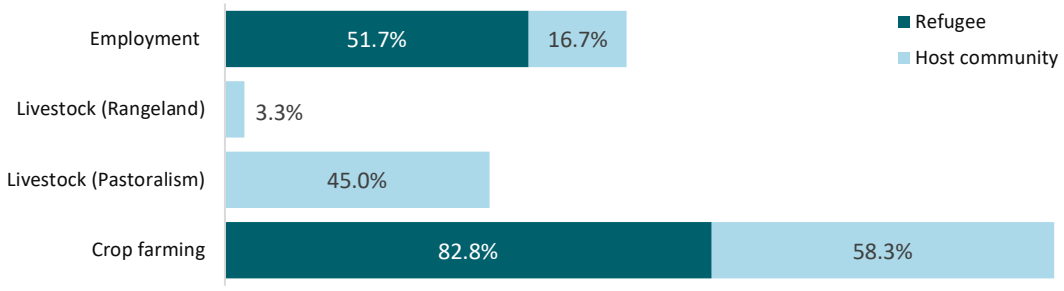
The majority (64%) of respondents are engaged in new livelihood activities within the project areas. About 70% of the respondents are engaged in crop farming, 45% in livestock (pastoralism), 3% in livestock under rangeland, and about 34% are engaged in different forms of employment. About 82% and 52% of the refugees practice crop farming and engaged in different forms of employment respectively. 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 200,000m^3 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 km^2 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 was 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[11] implemented projects by Implementing partners under this engagement	96% of WLP projects successfully implemented
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 IPs in implementing similar projects in ASAL areas significantly contributed to the observed success in project implementation.

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

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 operation and maintenance 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. 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 projects were creditworthy. However, CWI of 53.8% did not meet the WLP target

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 performance[12]. 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 aggregation of the weighted scoring with a maximum score of 100. A score of 85-100 would depict the highest credit quality.

The two sampled water and sanitation projects: Kakuma Town Water Supply Project and Lokichogio Water Supply Project had creditworthiness index (CWI) of 65% and 42.5% respectively, averaging CWI 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. (Annex 6_Creditworthiness Index)

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 support, and monitoring is improved.	WaterFund is constrained in aspects of project identification, implementation support and monitoring	WaterFund reports improved capacity to undertake project identification, provide implementation support and do project monitoring	WaterFund staff have reported and demonstrated improved capacity to undertake project identification, provide implementation support, and do project monitoring

[12] Kenya Water Service Provider Creditworthiness Index Report, World Bank-WASREB, 2015

Output Indicators		Baseline	Target	End Term
Indicator 6.3	Proportion of questioned costs funded through the DE 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 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. The evaluation also revealed that the Fund is in the process of developing an Integrated Project Management Information System to map and manage supported investments. Currently, mapping is done under Joint Annual Operations Monitoring Exercise (JAOME).

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 10: 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 26months, Oxfam 24 months, AMREF 25months, and AAHI 26months 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 the 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 projects
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 pans. Hydrogeological studies were undertaken for many of the groundwater projects e.g., Kangura borehole. However, the requirements for borehole supervision, authorization, and water permit were not complied with. 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.

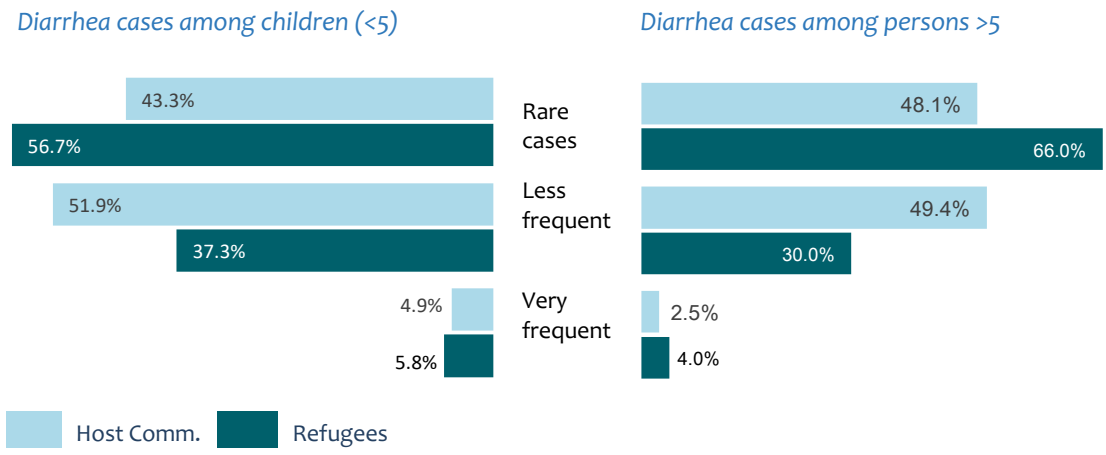
3.6 Impact

Improvement in WASH

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.

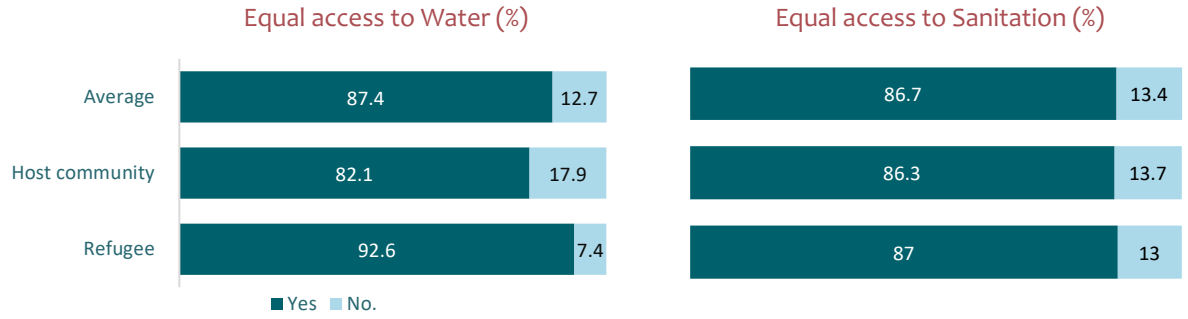
Half of the sampled households reported rare cases of diarrhea among children less than 5 years by both refugees and the host communities. Similarly, in most households, 57% reported 'rare' cases of diarrhea among children and adults above 5 years. Despite low cases of diarrhea reported across all respondents' 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 view. 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 services 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 had 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 10; 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 was perceived to have improved the living standards of communities living in Turkana West (Both refugees and the host communities)

Implementation of WLP projects in the Turkana West sub-county significantly improved the living conditions of both the refugees and the host communities. For instance, 58% of all respondents (N=165) observed that their health had 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.

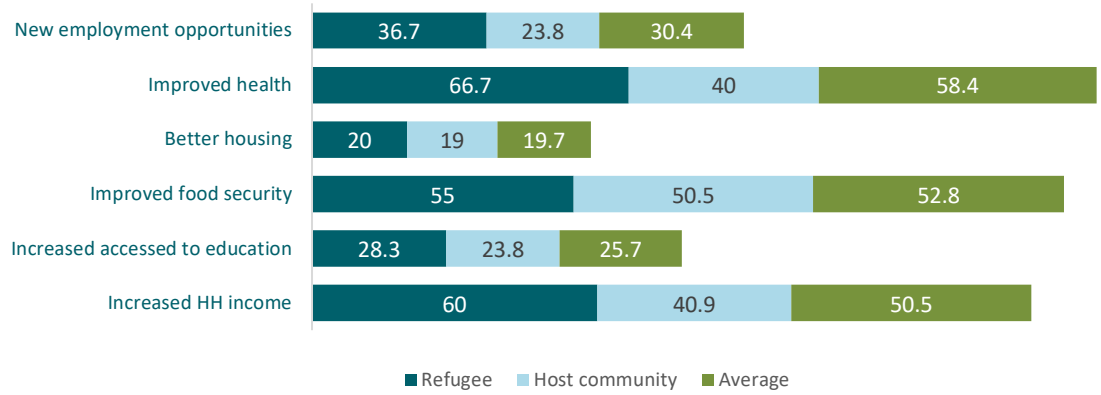
Information from Key informants shows that the WLP programme improved water supply infrastructure and the addition of water sources system resulting in improved access to water and hygiene conditions in the served communities. This has in turn decreased cases of water-borne diseases reported. For instance, 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. 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.

> *"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.*

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



Box 1: Kangura Women Group

The issue that brought us together was unemployment and idleness. We were felling trees for charcoal and firewood, but it wasn't enough to meet our needs. We had trouble getting water for drinking and cooking at home. We were overjoyed when World Vision delivered the water tank and kiosk. The Kangura Women group was formed by the women to pool our resources for economic empowerment. There are both young and mature women in the group. We had small projects at home to meet our needs, but there was no surplus to sell. Then World Vision stepped in to help with the shade nets project. The project augmented the women's existing vegetable project. The availability of water increased vegetable production, resulting in improved nutrition and health. We can now offer soft loans among members through table banking, have organized local women as a CBO, and use water from the supply scheme for farming. We also received training in crop planting, fertilizer application, pest control, product marketing, irrigation skills, and project management. We have since applied our knowledge to kitchen gardens. Since we have some savings made and can buy seeds, fertilizer, and pesticides, as well as pay for water, if necessary, the CBO has the capacity to manage the project for continuity. We are ready to fight for our project's continuation of activities now that we are registered as a CBO and fully own it. The sale of vegetables generates revenue, and we also save as well as provide soft loans to increase income and community empowerment. We plan to grow other crops like watermelons, maize, cowpeas, and millet.

Kangura Women Group Chairperson

Improvement in Natural Resources Management

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

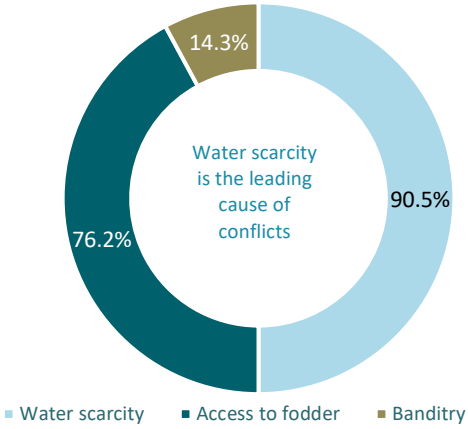
Turkana West Sub-County experiences inter-communal conflicts as evident from 70% of respondents who confirmed the occurrence of these incidences. The conflicts are a result of water scarcity as confirmed by 95% of the WRUA members, 76% cited access to fodder, and banditry was blamed by 14% of the respondents. 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. 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.

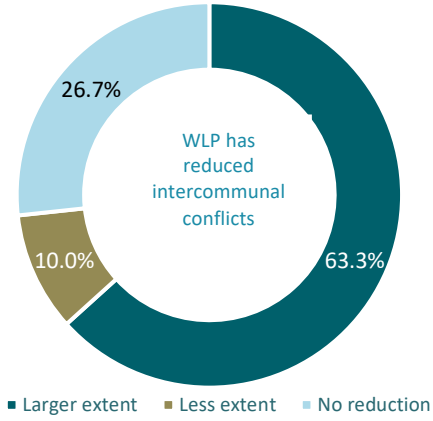
Installation of Biconical traps for tsetse flies' management in Nawuontos

> *"... 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.*

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 natural resources within the refugee camp and the host communities 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.





Box 2: Key activities that had 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 one year. 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 one year. 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

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 650km^2 catchment in Kanameseck, 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 County Government and UNHCR will ensure 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 farm, due to lack of water in the area, the group is relying on water from the nearby 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 90,000m^3 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 SCMPs thereof through a collaborative approach by stakeholders namely 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 Lokichogio 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.

WLP adopted Rural Water Provision Service Delivery Models and guidelines developed by Water Service Regulatory Board (WASREB) in partnership with Caritas International, Gatsby Africa and WaterFund to ensure sustainability of the investment after handing over to the County Government as per the MoUs – The "Guidelines for provision of water and sanitation in rural and underserved areas" was embedded in the Water Act 2016 and published in December 2019 by WASREB

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 engaged contractors who did not have the capacity to execute projects causing wastage of time and resources.
- The County did not have adequate resources (funds, human and logistics) to support IPs in executing mandates causing some delays in implementation for example through delayed approvals and supervision. Only one County Resident Engineer was available to provide technical backstopping to projects.

Mainstreaming GESI issues

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

Interior of a PLWD-friendly latrine in Kakuma with a sit and support bars

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, youth and persons living with disability (PLWD) in management committees with adherence to the 2/3 gender rule and involvement of youths (<35 years). For instance, a) the Water management committee for the Lokora water project had 12 (6 male and 6 female) members identified through community participation and b) tenders for Kakuma town water kiosks, pump house and masonry tank rehabilitation were set aside for the special category

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
Environmental	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
Social	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'
Governance	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 learnt. 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. Ecosan toilets/ Urine Diverting Dry Toilets (UDDT) helped address challenges of latrine digging in hard soil formations. Community sensitization was critical in the adoption of these innovative sanitation solutions. However, there is need for more sensitization to overcome cultural barriers. For instance, some bio-digester latrine owners changed business model from hotel using biogas for cooking to hardware business due to low acceptance from community members.

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

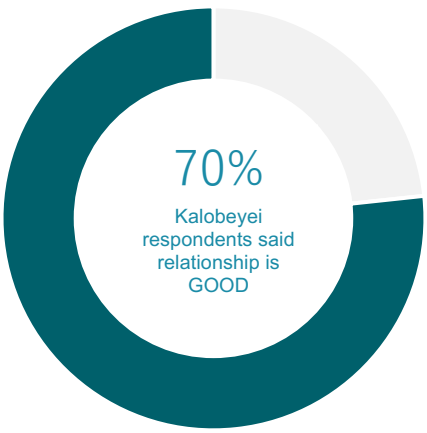
Effectiveness of WLP Implementation Strategy/Mechanisms

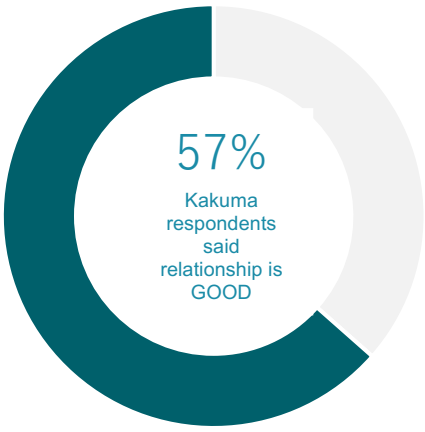
Finding 30a: An integrated approach to refugee settlement has improved perception and relations between refugees and the host community

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.

Kalobeyei Integrated Settlement





Kakuma

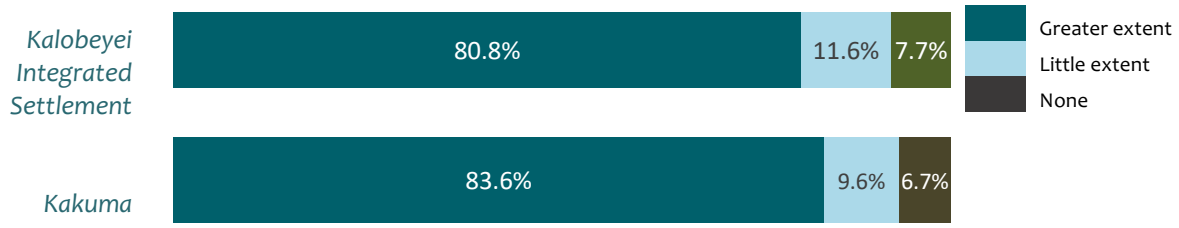
In the Kakuma camp, 57% of the targeted population indicated that a good relationship existed between the host and the refugee communities. The refugee community was more optimistic about the good relationship between the communities as expressed by 68% compared to the host community's response of 46% 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



Box 3: Choro farm

Choro Farm is a Lopur Ward based integrated refugee and host community settlement. According to the cooperative's current chairperson, Lugazi, the famers are drawn from both the refugee and local communities. Prior to the WLP project, farmers faced water shortages for both domestic and agricultural use.

Floods and droughts both affect farming in the area. We had shallow wells from which we drew water by hand to irrigate our small plots. It was insufficient for our farms, and conflicts between the refugees and the host community were common. AAHI, with the assistance of WaterFund, rehabilitated the eight vandalized wells and dug and equipped two additional wells. We formed a committee for each shallow well to coordinate well management and report problems. To avoid conflicts with pastoralists, we developed rules and regulations and provided security for our farms. Farmers have received training in water conservation, drought-resistant crop planting, moringa tree planting for shade, water pump operation, and financial management. Training aided production and investment, as well as mobilization and the formation of a cooperative of approximately 60 farmers to date.

The farm has expanded from 5 acres to 15 acres. Because of our organization, some institutions have promised the group more funding, and the process is underway. Since then, there have been no conflicts between refugees and the host communities.

For local consumption, we grow early maturing vegetables that have high nutrition value, such as cowpeas, murenda (*Corchorus olitorius*), watermelons, amaranth, kales, and pumpkins.

Chairperson, Mr Abdulaziz Lugazi,

Finding 31: WaterFund's shift to the strategic partnership with INGOs 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 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 SCMPs 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 reduced conflicts that arose 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 Learnt

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 was 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 framework (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 Lessons learnt

WaterFund has a proven record of designing programmes based on lessons learnt from previous interventions. The recruitment of County Resident Monitors/Engineers and partnering with INGOs are good examples of improving efficiency and output. The WLP implementation has a few lessons learnt by the implementers, WaterFund, and evaluators.

a) The widening of scope in relation to implementing agents through **partnering with NGOs** has produced verifiable results and provided WaterFund with valuable lessons for future programming. Evidence shows that the NGOs leveraged their established systems, experience,

technical expertise, and resources to improve both quality and efficiency of implementation despite the existing challenges.

b) 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.

c) **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.

d) Turkana West faces frequent security challenges in form of inter-communal conflicts due to competition for 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.**

e) **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.

f) 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.

g) **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.

h) **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.

i) **Proper community sensitization is essential in adoption of innovative sanitation solutions** that are often faced with cultural and local practices barriers such as UDDTs and biodigester.

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 through long term collaboration and engagement to facilitate post implementation follow-ups and continuous support for instance behaviour change interventions like CLTS requires long term for the impact to be felt.

b) WaterFund should partner with County Government through co-financing to support IPs in form of an increased monitoring budget for County Government officers. While the County Governments' budget allocations have progressively increased, the allocations are still below the requirements hence the need for counties to enhance partnerships with communities, National Government, and partners to bridge the shortfall. To sustain partnerships, Turkana County Government should lead in co-creation of projects and allocate financial and technical resources as part of co-financing for all programmes.

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.

h) WLP piloted some promising technologies that can be upscaled or replicated specifically for sanitation service delivery. For instance, UDDT provide a sustainable solution to challenges facing sanitation in unstable or hard soil formations, biodigesters provide a host of other benefits both health and economic.

i) There is need to improve programme design through developing clear ToC that indicates all the critical components: highlighting the programme logic, results pathway, causal link, interventions, and underlying assumptions. This is integral to give programme a clear overall vision of change and facilitates learning, adaptive management, accountability and Monitoring and Evaluation through developing appropriate results and indicators for M&E and reporting purposes.

j) Even though the evaluation revealed extensive stakeholder partnerships and collaboration, there is need to expand this aspect to bring on board other integral National Government institutions for effective implementation of climate change adaptation components. For example, partnering with Kenya Forestry Research Institute (KEFRI) in rangeland management and partnering with Kenya Agricultural & Livestock Research Organization (KALRO) to improve on resilience components e.g., drought resistant crops and livestock

k) The County Department of Agriculture should continuously train and sensitize the local communities on the importance of alternative economic activities to change their mindset and adopt new practices like crop farming as a livelihood activity. Further agronomic support in pest and diseases control, weed management, post harvesting and possible value addition are also necessary for local groups that have embraced farming to increase their earnings, enhance sustainability and ownership.

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.

Annexure

Annex 1: WLP Evaluation Design Matrix

Evaluation Criteria and Key Evaluation Question	Sub-questions	Indicators	Tools & data sources
Relevance **How are the objectives of the intervention consistent with the beneficiary needs and Stakeholders' policies and priorities?**	1.1 Are the objectives and strategies of the intervention relevant to the Water, Sanitation, and WRM needs/priorities of intended beneficiaries? 1.2 To what extent are the intervention objectives relevant to WaterFund, DANIDA, Turkana County, and National Government policies and strategic objectives?	• Strength of the link between results and the needs of primary stakeholders. • Existence of a clear relationship between the programme objectives and DANIDA/ WaterFund/County priorities Coherence with existing County and National legal framework	• Review of programme documents • Interview with primary stakeholders • Household surveys
Coherence **How compatible is the programme with other interventions within the counties?**	2.1 What are the synergies and interlinkages between the intervention and other interventions carried out by DANIDA/ WaterFund /IP 2.2 How consistent is the intervention with other actors' interventions in the same context (ASALs')	• Harmonization between WLP and other county-based interventions and previous programmes by DANIDA/ WaterFund/IP • Evidence of interlinkage within objective hierarchy (Programme logic)	• Document review (ToC, Results framework) • Interviews with Key WaterFund /DANIDA/IP staff
Effectiveness **To what extent have the expected outputs of the intervention been achieved?**	Output 1: Turkana County's' capacity and engagement in integrated water, sanitation, and water resources-related planning improved. 3.1 Is Turkana County effectively using water and sanitation data for planning and performing its regulatory functions? 3.2 Does Turkana County have an effective water sector legislative and policy formulation framework to support planning and implementation?	• Evidence of updated database on water and sanitation • Turkana County using the database for planning and regulatory functions • Evidence of effective county water sector policies and legislations • Turkana County effectively utilizing existing water sector policy and legislation to support planning and decision making • Turkana County capacity to engage in water and natural resources management	• Interview with county staff • Review county policies and planning documents • Review of programme documents e.g., Midterm and end of programme report Interview with IPs

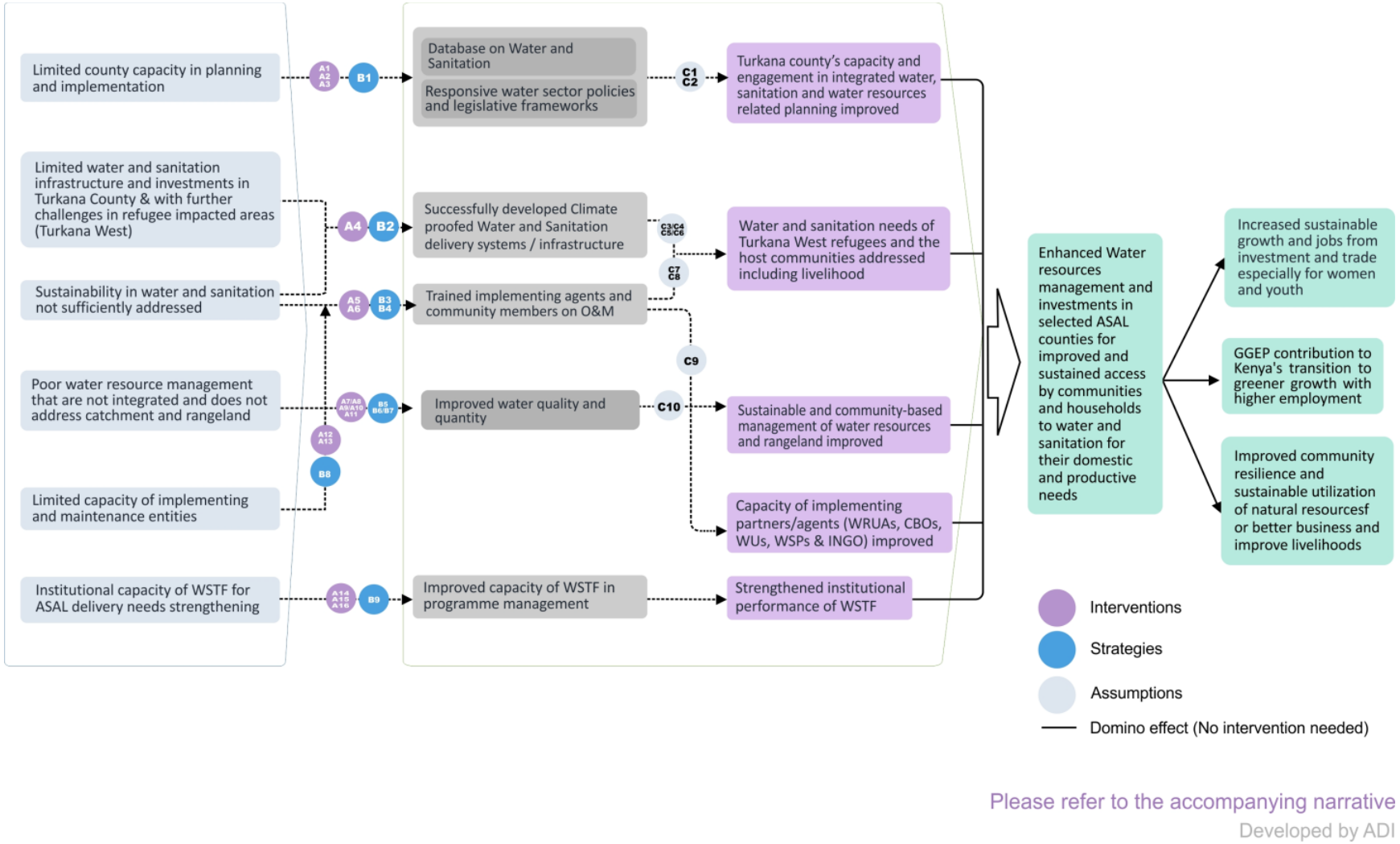
Evaluation Criteria and Key Evaluation Question	Sub-questions	Indicators	Tools & data sources
	3.3 To what extent is Turkana County involved in the planning and implementation of integrated water and natural resources management?		
	Output 2: Water and sanitation needs of Turkana West Refugees and the host communities addressed including livelihood 3.4 Has the number of households with access to water services increased? 3.5 Has the number of households with access to sanitation services increased? 3.6 Has the intervention improved water and sanitation services? 3.7 Has the intervention increased livelihood opportunities for both refugees and host communities?	• % Increase in number of households accessing water services • % Increase in number of households accessing sanitation services • % Of households in both host community and refugee camps reporting satisfaction with the water and/or sanitation services • % Of households engaged in new livelihood activities	• Household survey • Interview with implementing partners • FGD with primary stakeholders • Observation
	Output 3: Sustainable and community-based management of water resources and rangeland improved 3.8 Has the intervention improved Community-Based Natural Resource Management (CBNRM)	• Increase in geographic area with improved planning for water resources including range management in Turkana West • Progress in implementation of sub-catchment or other management plans for Tarach River Basin • New catchment protection activities implemented by CBNRM • % Increase in total water storage capacity	• Interview with CBNRM organizations and IP • Documentation Review • Observation
	Output 4: Capacity of Implementing Partners/ agents (WRUA, CBO, and WU/WSP, CSO, and NGO) improved 3.9 Has the capacity of implementing partners improved?	• Effectiveness of capacity building approaches • Number of successfully implemented projects • % Number of service agents reporting improved service provision • Credit worthiness index of the projects funded	• Kirkpatrick model • Interview with CBNRM/WUA/WSP/NGO organizations and other IP • HH Surveys • Documentation Review (Audited Accounts)

Evaluation Criteria and Key Evaluation Question	Sub-questions	Indicators	Tools & data sources
	Output 5: Strengthened Institutional Performance of WaterFund 3.10 How has the intervention impacted WaterFund Project management practice? 3.11 Has the intervention improved WaterFund efficiency?	• Effective use of MIS to map and manage water and sanitation supported investments • Improved capacity of WaterFund to identify, implement, and monitor projects • Proportion of questioned costs funded through the DED against total WaterFund investments	• Interviews with WaterFund • Review of financial documents
Efficiency **How efficient was the programme implementation?**	4.1 Was project implementation as cost-effective as budgeted? 4.2 Has the intervention been implemented within the scheduled time? 4.3 Could financial resources have been used more efficiently (Value-for- money)? 4.4 To what extent did the programme implementation utilize existing expertise 4.5 To what extent has the programme governance structure contributed to or hindered the achievement of outputs	• % Variation of planned vs actual project costs • Timeliness and adequacy of implementation • Value for money • Existing and outsourced skills • Measures put in place to mitigate delays and cost overruns	• Analysis of management tools • Review of documents used to monitor the efficiency and budget monitoring, e.g., updated unit prices and costs. • Interview with project staff and implementing partners
Impact **How effective have the project strategies and approaches in contributing to Overall WLP Objective**	5.1 To what extent has improvement in WASH and flood control improved the health of refugees and the host community? 5.2 Has the intervention reduced inequality in access to water and sanitation services, 5.3 Has improvement in Natural Resources Management reduced competition for natural resources? 5.4 How has the livelihood opportunities improved the living standards of refugees, host community, and other vulnerable communities?	• % Reduction in cholera and OD cases • Proportion of refugees and host community reporting equal access to services • Reduced intercommunal conflict • Improved access to education, food, housing, and healthcare • Increase in household income • Evidence of unintended consequences (positive or negative) attributable to the WLP intervention.	• HH Survey • Interview with IP, County staff • Documentation Review • Observation • FGD with primary stakeholders

Evaluation Criteria and Key Evaluation Question	Sub-questions	Indicators	Tools & data sources
Sustainability **What is the likelihood that results will continue once Programme funding and assistance have ended?**	6.1 How sustainable are the intervention results (socio-political, climatic, economic, and institutional point of view) 6.2 Can the programme be up scaled or replicated?	• Existence of enabling conditions e.g., wide-spread stakeholder buy-in and local ownership • % Of facilities funded through the engagement that are climate proofed • Willingness of stakeholders (Turkana County, UNHCR and other partners) to continue support and investing in the projects • Effectiveness of the programme design/ implementation strategies and/or mechanisms to realize successful replication or up scaling	• Review of project financial records • Interviews with WUA, WSP and CBNRM Staff • Interview Key IP • Sustainability index,
Cross-cutting issues **What are the key crosscutting issues that considered in the programme?**	7.1 To what extent has the programme adapted to its **context?**	• Extent to which the programme context has changed: contextual risk (security and conflict, droughts), programmatic risks (uncoordinated developments, unclear devolution mandates) and institutional risks (capacity, planning and funding • Mechanisms in place to mitigate or respond to changing implementation context	• Interviews with Key SH • Document review
	7.2 How has the **GESI** issue been considered throughout the programme?	The extent to which: • GESI is reflected in participation at formulation/design, implementation and distribution of costs and benefits • GESI issues are considered in programme management.	• Interviews with Key SH • Document review • FGD with primary SH • Observation
	7.3 To what extent did partnerships and stakeholder cooperation, affect the achievement of results?	• Evidence of quality collaboration between partners • The degree to which partners have been involved in planning and implementation.	• Interviews with partners

Evaluation Criteria and Key Evaluation Question	Sub-questions	Indicators	Tools & data sources
	7.4 What are some of the potential Environment, Social and Governance (ESG) risks and opportunities in GGEP investments?	• Environmental responsibility through compliance with all relevant environmental laws, standards, and regulations • Social responsibility through labour relations, human rights, diversity, and inclusion • Governance: compliance, ethics, controls, and procedures	• Interview with Key stakeholders • FGD with primary stakeholders • Observation
	7.5 To what extent were the results of the intervention influenced by Monitoring, Evaluation, Reporting and Learning (MERL) mechanisms?	• Existence of MERL framework • M&E information is used for decision making to improve programme performance	• Interview with Key stakeholders
	7.6 Does the intervention provide relevant lessons and experiences for other similar projects in the future? 7.7 Has the intervention identified a new way of working that could be shared with others?	• Lessons learned from project implementation • Novel methods/strategies identified	• Interview with WaterFund/ DANIDA/County • FGD with primary stakeholders • Case study (success stories)
How effective has the intervention strategy/ mechanism been in achieving expected results?	8.1 To what extent has an integrated approach to refugee settlement improved perception and relations between refugees and the host communities? 8.2 How does WaterFund shift to strategic partnership and collaboration with INGOs and the private sector to design and finance bigger projects enhanced the success of the programme? 8.3 To what extent did investment in broader catchment planning for sustained impact improve water resources management? 8.4 Did investment in the rangeland approach improve livestock production?	• Reduced tension and conflict between refugees and host community • Improvement in programme management and delivery • Improved community capacity to manage their own environment. • Reduced effects of water scarcity, flash floods and drought • Reduced loss of livestock • Reduced intercommunal conflicts	• HH survey • Interviews with IP and other key SH including local administrators

Annex 2: WLP Revised Theory of Change



Please refer to the accompanying narrative

Developed by ADI

Interventions		Strategies		Assumptions	
A1	Collaborate with Turkana County to identify priority needs with focus on the CIDP for water and sanitation	B1	Promote better and integrated Turkana County water planning through data, capacity, and ASAL approaches	C1	Turkana County is effectively using water and sanitation data for water planning
A2	Assist Turkana County in water point mapping and data collection	B2	Finance implementing partners including INGOs and CSOs to implement the water and sanitation schemes through oversight by WSTF County Resident Monitors, Programme Officers as well as the Turkana County.	C2	Data is regularly updated
A3	support the formulation of water sector policies and legislative frameworks	B3	Strengthen systems for delivery/ follow-up by building Turkana County capacity.	C3	Risks are negotiated as described in risk management
A4	Support development of water and sanitation delivery systems	B4	Adoption of green technologies in water and sanitation infrastructure development	C4	Targeted refugees and the host communities are accessing water and sanitation, and are satisfied with the services
A5	Climate proofing of infrastructure and mainstreaming of green approaches	B5	Address the catchment planning including the rangelands related to the catchment area of the Tarach river basin or other relevant catchment and rangeland management units.	C5	The WLP funding will be targeted at larger projects and will include NGOs and CSOs as implementing agents.
A6	Capacity building implementing agents and communities on sustainability including O&M	B6	Activities will be implemented in collaboration with the Water Resources Authority (WRA), Turkana County, UNHCR or other relevant organizations/authorities through MOUs.	C6	Effective and timely implementation of programme activities
A7	Promoting and improving the sustainable use of rangelands	B7	Monitor water resources for sustainable exploitation to meet demand	C7	Trained implementing agents are utilizing their skills in O&M
A8	Protection and conservation of water resources and riparian lands through fencing, riparian pegging, tree planting, etc.	B8	Strengthen implementing entities capacity in development and maintenance including ensuring more and better implementing agents involved	C8	There is widespread stakeholder buy-in and local ownership including willingness to pay for services

Interventions		Strategies		Assumptions	
A9	Regulation of water use and equitable distribution through bulk metering; scout activities along sub-catchments to protect against illegal abstractions of water and other destructive practices	B9	Strengthen WSTF capacity in ASALs through county presence and training and institutional support to WSTF	C9	Capacity building approaches are effective
A10	Construction of water storage and conservation infrastructure e.g., sand dams and water pans among other activities			C10	There is smooth collaboration between intergovernmental and other collaborating partners
A11	Supporting small-scale water management investments and natural resources related livelihood activities linked to improved catchment and rangeland management				
A12	Training of implementing agents and partners on issues such as Gender Equality and Social Inclusion (GESI), financial management, procurement, governance, oversight, operation, and maintenance among other				
A13	Training on project management and sustainability				
A14	Posting of WSTF county resident monitors to support counties and communities				
A15	Training needs for programme and monitoring staff of WSTF where these are identified.				
A16	Technical assistance to WSTF may be provided to boost WSTF capacity to operate				

Annex 3: Terms of Reference

FINAL EVALUATION OF WATER AND LIVELIHOODS PROGRAMME.

1.0. Introduction

2.0. Water Sector Trust Fund

The Water Sector Trust Fund (WaterFund) is a Financing Institution established under the Water Act (2016) with the mandate to assist in financing the development and management of water services in marginalized areas or any area that is considered by the Board of Trustees to be underserved including:

a) Community level initiatives for the sustainable management of water resources.
b) Development of water services in rural areas considered not to be commercially viable for provision of water services by licensees.
c) Development of water services in the under-served poor urban areas; and
d) Research activities in water resources management and water services, sewerage, and sanitation.

Water Sector Trust Fund has continued to invest in the implementation of Water, Sanitation Services and Water Resource Management activities through the following financing mechanisms:
Rural Investments- This is an approach applied towards financial support to Implementing Agents in the underserved rural areas to apply for, manage, implement, and maintain their own water and sanitation facilities. The main stakeholders are the Community Based Organizations, Water Utilities and Rural Water Services Providers in collaboration with the County Governments.
Urban Investments is an approach applied towards improvement of access to underserved Low-Income Areas in Urban Areas of Kenya. The key implementing partners in this approach are the Water Service Providers in collaboration with the County Governments.
Water Resources & Climate Change Investments: is a mechanism for supporting Water Resource Users Association (WRUAs), promoted by the Water Resources Authority, to manage their water resources within sub catchments.
Result Based Financing: This is a mechanism where Water Services Providers and Community Based Organizations obtain project loans from commercial banks against bankable proposals. WaterFund then subsidizes the implementer for the loan at an agreed percentage once deliverables are attained. WaterFund is responsible for ensuring that the fiduciary risks are minimized through effective operationalization of a compliance monitoring system. WaterFund engages in appraisal of proposals and ensuring that the investments are sound and sustainable in water supply, Water Resource Management and Sanitation activities.
Research and Innovation Financing: support towards financing of research and innovation initiatives within the sector. The outputs of these initiatives are geared towards generation of new knowledge in the sector, provision of innovative, practical, and cost-effective solutions in the realization of sustainable provision of water, sanitation, and sewerage services in addition to water resources management as well as addressing gaps through collaborations and adaption of innovative models for better service delivery.

1.3. Water and Livelihoods Sub Programme Brief

WaterFund and the Government of Denmark through DANIDA, signed a financing agreement on 20th December 2017, to support a 'Water and Livelihood Programme (WLP) in Refugee, Host and Other Vulnerable Communities of Kenya.' This is an addendum support of 40 DKK million, in addition to the Green Growth and Employment Programme funding, supporting 8 ASAL Counties in Kenya. The programme targets the Refugee and Host Communities in Turkana West Sub County of Turkana County.

The expected programme outcome is "Enhanced water resources management and investments in Turkana West and selected ASAL Counties, for improved and sustained access by communities and households to water and sanitation for their domestic and productive needs. The programme is being implemented by five selected partner agencies, in five Wards of the target Sub County, addressing both the host community needs and those of the refugee families, in Kakuma and Kalobeyei settlements. The programme core focus areas are in, water access, sanitation, hygiene, and water resources management, with concepts of livelihood through small scale agriculture and social empowerment.

Overall Objective and key outputs of the WLP Programme

The overall objective of the programme is to enhance water resources management and investments in Turkana West Sub County for improved and sustained access by communities and households to water and sanitation for their domestic and productive needs

The programme will achieve the following outputs.

Output 1: County capacity and engagement in water related planning enhanced
Output 2: Water and sanitation access and deficit in the ASALs addressed including those in refugee impacted ASAL areas
Output 3: Sustainable and community-based management of water resources improved
Output 4: Capacity of implementing agents improved for planning and efficient water service delivery.
Output 5: Strengthened institutional performance of WaterFund

2.0. Rationale, purpose, and objectives of the evaluation

The purpose of this final evaluation is to provide independent and objective evidence to WaterFund and DANIDA, the development arm of the Royal Danish Embassy for Foreign Affairs on achieved results in GGEP and WLP projects and their sustainability. The evaluation is also expected to provide lessons learnt and best practices related to the planning, design and implementation of water sector programme that might include similar elements in other countries and the establishment of similar funding mechanisms that WaterFund has in Kenya.
These learning will be utilized to inform and strengthen the 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 Conservancies) and International Non-Governmental Organizations (INGOs). Further, it is expected that, the learning will be utilized by the Ministry of Water, Sanitation and Irrigation and other stakeholders in the Water Sector.
The evaluation will inform DANIDA and Government of Kenya 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 the counties of implementation in addition to the functionality and sustainability of funded water supply, sanitation and water resources management projects that are (or are in final steps of being) handed over to the duty bearers (County Governments, Water Service Providers, WRUAs, and Communities and institutions such as schools and hospitals in terms of sanitation projects).

The Specific objectives of this evaluation are to assess:

1. The extent to which the interventions have brought intended and unintended change to the beneficiary groups in line with the targets of the GGEP and WLP and how well they were achieved.
2. Functionality and sustainability of water supply, water resources management and sanitation projects and where funded projects are found to be non-functional, the reasons and challenges should be well documented.
3. Effectiveness of the established systems of engagement with Counties in water planning, implementation, and assessment of implementation capacities of implementing partners including adherence to the financing agreements and other contractual obligations.

4. Capacity building approaches effectiveness and efficiency in delivery of sustainable water supply and water resources management projects with focus on O&M training.
5. The programmes' level of influence in promoting Public Private Community Partnerships in water service provision in ASALs.
6. The outcomes and impact of the policy and institutional support structures to WaterFund and at county level (outputs 1 and 6 across the two programmes).

3.0. Scope of the evaluation

The evaluation will cover the full GGEP and WLP Programme implementation as detailed in the revised Development Engagement Documents. The recommendations made in the Programme Midterm Review of 2018 and their implementation are to be reviewed. The evaluation should focus on concrete and measurable results and as such, major part of the mission will be accomplished in the 8 programme target counties.
The fieldwork is expected to take place in selected projects in all eight counties as well as in Nairobi. In the inception report of the evaluation, the evaluation team will present a two-tier plan (for GGEP and WLP) showing the sampled projects and the selection criteria. The selection should include at least two thirds of the water and sanitation projects and half of Water resources management projects implemented by WRUAs and Conservancies, and cover both functioning as well as projects showing operational difficulties and sustainability challenges. Drought Emergency Response (DERP) projects funded under GGEP should be well covered.
The stakeholders to be consulted include Royal Danish Embassy (DANIDA), Kenyan government officials (both at National and County level), Programme Technical Advisory team members, beneficiaries of the Programme, WaterFund staff (headquarter and county) and Management, WSPs, CBOs, Conservancies and WRUAs and Institutions involved in sanitation implementation. Specifically, for WLP, the top leadership of the International Non-Governmental Organizations (INGOs) and the programme implementation teams will be consulted in addition to UNHCR and other agencies active in implementation of projects in refugee and host communities. Other development partners active in the sector should also be consulted including, Finland, Sweden, EU, and IFAD.

4.0. Evaluation Criteria and Questions

The Evaluation will be based on the Organization of Economic Corporation and Development (OECD) Criteria of: Relevance, Effectiveness, Efficiency, Impact, Sustainability and Coherence. The details of each criterion and other detailed information is outlined in the OECD/DAC Evaluation Criteria (See Annex 1). The consultant will where possible use the latest criteria of the OECD and develop relevant evaluation questions corresponding to each Criteria. The evaluation questions will form part of the inception report which will be in two parts (for GGEP and WLP).

5.0. Methodology

An external consulting firm with evident expertise on water services, water resources management and sanitation will be competitively be procured to undertake the evaluation for the "Green Growth and Employment Programme to support access to and management of water resources in the Arid and Semi-Arid Lands" **(GGEP Programme)** and "Water and Livelihoods Programme aimed at Enhanced water resources management and investments in Turkana West and selected ASAL Counties, for improved and sustained access by communities and households to water and sanitation for their domestic and productive needs. In this regard, the firm shall provide WaterFund, and DANIDA with a team with clear reporting structure, an inception report, containing an overview of their understanding of the assignment, time schedule, planned activities, suggested methods and potential interviewees as well as any other parties they wish to engage to be approved by WaterFund and Partners.

To provide a comprehensive analysis, it is expected that the firm will use a balanced range of qualitative and quantitative methods which includes but not limited to the following.

- **Desk Review**: Review of existing secondary information and reports relevant to the programme and to the context of the two countries (Kenya and Denmark). This will provide an analysis and discussion of facts and data within the assignment context. The literature will include among others Development Engagement documents (Initial and Revised), Programme mid-term review reports, baseline survey reports, Programme' progress reports, Results Framework and M&E plan, contextual information, or other projects' information on counties where the programmes are being implemented.
- **Quantitative data collection**; Field visits in the implementation areas for sampling of beneficiaries for interviews/survey, data collection and observations; conduct structured household interviews with sampled programmes' beneficiaries using survey tools; using Participatory Rural Appraisal (PRA) tools, thematic area specialized tools etc.
- **Qualitative data collection**: This will include interviews with key informants and other stakeholders using informant's guides and interviews with field staff; Focus Group Discussions with sampled potential beneficiaries and non-beneficiaries (Randomized Control Trials).
- **Field observations and reflections**; for triangulations of information reflections and feedback sessions with the consortium team members.
- **Cost Benefit Analysis** (CBA) and resilience measurement approaches, to be undertaken by analyzing unique resilience capabilities at Community and individual level. The main aim of CBA analysis will be to help WaterFund, and its partners predict the ability of different households in coping with the changes in climatic conditions (how resilient are the households?), how their participation in water conservation initiatives is influenced by livelihood activities. The extent to which greening of infrastructure has led to cost reduction in operation of water systems.
- **Assessment of the training interventions:** This would involve the use of Kirkpatrick's model and other applicable methods to assess the effectiveness of trainings delivered to direct and indirect beneficiaries of the programmes' interventions.
- **An assessment of the employment opportunities**; presented because of the GGEP programme.

Survey design

WaterFund will support the consultant in the formulation of participatory design where the main programmes' implementers will be involved to give their inputs and views in the evaluation design process, which is key in projects' intervention design. The data collection tools to be used should be able to capture-crosscutting issues particularly on gender, social inclusion, and accountability to the extent possible. The tools will be pre-tested to ensure that enumerators and the study population alike have the same understanding of the evaluation methodologies, topics and revised based on identified shortcomings. This also includes simplifying of the study tools where necessary to reduce interpersonal and other data bias in order ensure quality evaluation data and information.

Sampling plan

The evaluation samples will be done using the beneficiaries' database (WSPs/WUAs/CBOs/INGOs records) which contains all the information for all the beneficiaries reached in the eight counties. As highlighted previously, the qualitative study should use participatory assessment tools such as Focus Group Discussions (FGD's), Key Informant Interview guides (KII's) to both stakeholders and non-stakeholders.

Data collection and analysis

The data collection teams must have required technical and localized knowledge, experience and integrity and show how they will mitigate data collection abuses and make it reliable. This will give the exercise the credibility it requires for wider acceptance of the findings by the stakeholders. Enumerators will be contracted and trained by the consultant on data collect and recording. Analysis of the collected data needs to be done in line with each of the programme logic model. Further necessary statistical tests/analysis should be performed to determine relationships between various factors.
The consultant will decide which management of information system to use, what statistical software to use for data analysis and provide human resource to undertake the data analysis.

Presentation of findings

The consultant will be responsible for writing and presenting the evaluation report to both WaterFund and DANIDA.

Key deliverables/outputs

- Inception report
- Report/ documentation on the following per programme:
  I. The extent to which the programme has achieved its developmental impact goal as per the programme design and logical framework
  II. The test on theory of change results.
  III. The stakeholder's analysis
  IV. Learning in the programme
  V. Opportunities for up-scaling of the programme
  VI. Recommendations based on the findings for Green Growth Mainstreaming in projects and alternative approaches to water resource management in ASALs
- Raw data used for analysis
- Final evaluation summary version to be shared with project participants

WaterFund Responsibilities

- Manage the final evaluation contract on a day-to-day basis including processing funds for disbursement to the consulting firm.
- Support in provision of required secondary data source(s) to the consultant
- Support in facilitating field activities as arranged by the consultant through liaison with key stakeholders.
- Facilitation in provision of operational support in terms of technical inputs necessary and approval where required in consultation with DANIDA.

DANIDA

- Facilitate necessary approval for Funds utilization
- Facilitation in providing operational support in terms of technical inputs and necessary approval where required.
- In liaison with WaterFund support the consultant in acquiring necessary accreditations and access to information in relation to the Programme

6.0. Reporting

The Consultancy firm shall submit 4 colored bound hard copies and soft copies in portable storage (flash disc) with briefing reports for each phase of the assignment, based on the below indicative schedule:

- **Inception Report** (maximum 25 pages). The Inception Report should be produced after 2 weeks from the contract signing date. The Inception Report should outline the evaluation criteria, the approach, scope, detailed methodology, work plan, work tasks within the evaluation teams and plan for site visits and meetings. The report should also highlight initial findings and conclusions of the desk study per programme including brief highlights of the documents reviewed in preparation for the evaluation.
- **Draft Final Report.** The draft report shall be submitted 3 weeks after the field work. The report which combines the desk study, and the field findings should be submitted to WaterFund, DANIDA and other key stakeholders through PowerPoint presentations and submission of draft final report for comments before final submission.
- **Final Report** (Max of 60 pages excluding annexes). The final report shall be submitted to the WaterFund, DANIDA and other key stakeholders in 2 weeks after receiving the comments on the draft final report. The structure of the contents of the reports shall be agreed during the debriefing meeting.
- **Presentation on the evaluation findings:** The consultant is expected to make PowerPoint presentations to WaterFund, DANIDA and other key stakeholders.

Each deliverable is subjected to specific approval. The evaluation team can move to the next phase only after receiving a written statement of acceptance by the WaterFund.
Language
All reports shall be written in English and should be in clear and concise language. The Consultancy Firm will need to be able to have staff that can communicate with the local population in the project communities.

8.0. Duration and Location

Starting Period

The tentative starting date of the assignment is from **April 2022**

Expected Duration

The Consultancy Firm will need to provide the Services requested including final reporting within 3 calendar months from the starting date (including period for submission of comments on reports by WaterFund and DANIDA). As part of the inception report, the Consultant should furnish the WaterFund with a team of experts with clear reporting structure, a clear work plan for the entire exercise.
Foreseen finishing date of the contract is to be determined.

Location of Assignment: Turkana County

Annex 4: Sampling Procedure

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

Table 11: Sampling formula

$n \geq (Z^2.p.q)/d^2$ $n \geq (\ 〚1.96〛^2\ x0.1x0.5)/\ 〚0.05〛^2\ =138.2$ Adding 10% for design effect: n = 139 + (139 x 10/100) = 139 + 14 = 152 Sample size (n) ≥ 152	*Where:* *n= desired sample size* *z= standard normal deviation at the required confidence level* *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 projects areas.

WLP PROJECTS, TURKANA COUNTY			
Ward	**Implementing Partner**	**Project thematic area**	**Activity**
Lopur	**Action Africa Help International Project:** Enhancing Livelihoods through Water Supply and Sanitation (ELIWAS) improvement Project	Water Supply	1. Drilling and equipping of Lopuski borehole; equipping with solar system; fencing of borehole area; installation of 48CM steel elevated tank; 7000m pipeline extension, construction of 2 No. water kiosks and construction of 2 No. animal troughs 2. Rehabilitation of 8 shallow wells- equipping with hand pumps and construction of aprons for domestic and small scheme agriculture water supply; support with portable solar pumping kits to 5 farmers groups in same shallow wells area for crop farming in 15-acre farm; fencing of 15-acre farm. 3. Rehabilitation of additional 2 shallow wells in Choro farm
		Sanitation and hygiene Promotion	1. Community total sanitation (CLTS) activities to 22 villages in Lopur and 8 villages in Kakuma. 2. Supply of excavation tools for latrine construction on sharing; lofty tanks handwashing kits to schools 3. Construction of 6 No. 4 door latrines in 3 schools with bio digester component

			4. Construction of 3 bio digester toilets in Markets for biogas production; hygiene and sanitation campaigns in schools and community.
		Water resources management	1. Construction of 50,000 m3 earth dam at Pelekech with offtake and infiltration system for access; fencing dam area 2. Establishment of 20-acre woodlots and fencing the lots; construction of 60 trapezoidal bunds with cash for work approach, the same will work on woodlots with zaypits 3. Training farmers on the use of propopis for animal feed supplement and biogas production. 4. Supply of Galla he goats to 3 farmers groups for cross breeding to improve local breeds for higher income: support to pasture reseeding and hay bailing with hay/seed store construction
Kalobeyei		Water Supply	1. Rehabilitation of Natira 1 borehole, rehabilitation of Lokora water supply; 2 km pipeline extension, 50CM elevated steel tank, trough, and water Kiosk 2. Undertake rehabilitation of boreholes with hand pump and construction of cattle troughs including fencing in the grazing zones of Natiira and Nalapatwi in Kalobeyei ward 3. Rehabilitation of red cross borehole water supply; 50CM elevated steel tank; 1.5 km pipeline extension, 1 No. Water kiosk, water trough
		Sanitation and hygiene Promotion	1. Construction of 2 No. 4-door VIP Latrines for 132 children (67B, 65G) at Natiira Primary School 2. Construction of 4No. 4-door VIP Latrines for 534 children (280B, 254G) at Lokwanya Primary School 3. Construction of 4No. 4-door VIP Latrines for 799 children (427B, 372G) at St.Kizito Primary School 4. Undertake hygiene promotion in 3 schools in Kalobeyei ward (St Kizito, Lokwanya and Natira Primary Schools)
		Water resources management	1. Promote multiple use of water by supporting Women Economic Empowerment through horticultural farming using shade nets of 30m by 8m for Lokora village 2. Excavation of 1 No. 30,000CM water pans with off take, cattle trough and fencing for the grazing zones Epitiwosin, Community level engagement meetings for Epitiwosin 3. Water Pan Catchment protection (10Km by 20km conservation area using the local resources committee and existing county policies 4. Piloting Tse Tse fly control with low-cost control measures with Traps in the pastoral areas

Songot	**AMREF Health Africa Project:** Turkana West Water, Sanitation and Livelihood (TWASWALI) project	Water Supply	1. Napeikar: borehole improvement/rehabilitation, 8 km Napeikar borehole to Nakururum pipeline extension (village and school and dispensary): Installation of 48CM steel elevated tank, Construction of 2No. Standard Water kiosks with 5CM overhead tanks, construction of school and dispensary tap stands, installation of plastic Storage tanks of 10CM for the two institutions and construction of 2No. Animal troughs 2. Nakulumei: drilled and capped borehole equipping (1 No. targeted after preliminary tests): Installation of solar pumping system, 5km pipeline extension, installation of steel elevated tank of 54CM; construction of 2 No. water kiosks with overhead storage of 5CM; construction of 2 No. animal troughs and fencing of borehole compound.
		Sanitation and hygiene Promotion	1. Construction of 6 No. 4 door VIP latrines in 3 schools 2. Community Led Total Sanitation (CLTS) and hygiene promotion in 14 Villages and schools.
		Water resources management	1. Excavation of 50,000 CM Kochomin Earth dam with offtake system for animal and domestic access 2. Excavation of 30,000 CM Naremieto water pan with offtake system for domestic and livestock access 3. Establishment of 4 natural resource management committees working with Kenya Forest Service 4. Livelihood empowerment support of 4 committees (for boreholes water pan/dam above) for bee keeping project and tree planting around water points developed.
Kalobeyei and Lokichogio	**World Vision Kenya Project:** Turkana West Water, Sanitation and Environmental Management (TWASEMA) project	Water Supply	1. Kalobeyei/Kangura water supply:Rehabilitation (Solarization) of Kalobeyei borehole for Kangura village supply; 3 km HDPE PN12 pipeline extension to Kangura village; installation of 108CM steel elevated tank; construction of 2No. Water kiosk with 5 CM overhead tank; Construction of 2 No. standard cattle troughs 2. Kalobeyei Refugee settlement water supply: 15,200m pipeline extension to 80 units (1120 households); installation of 4No. 100CM steel elevated tanks; construction of 80 yard taps.Lokichoggio town water supply: Hydraulic modelling of Lokichoggio town supply; Rehabilitation of 3 boreholes (Akoros I, Epool and ICRC) and solarization; 7.5 km pipeline extension for rising main and distribution network; Construction of 4No. Water kiosks with 5CM overhead tanks; installation of 2 No. 50m3 Steel elevated tanks and Rehabilitation of 4 No. boreholes and equipping with hand pumps, construction of aprons with animal

			troughs in the grazing zones of; Lochoreamoni, Natumamon I, Natumamon II and Iria.
		Sanitation and hygiene Promotion	1. Construction of Ecosan toilets (UDDT) for 5 blocks (40 households) 2. Sub grant local organization in Kalobeyei ward to undertake Community Led Total Sanitation, Sanitation marketing and hygiene promotion at household level on performance-based approach. Construction of 4 No. 4-door VIP Latrines in 2 schools; Construction of 2No. 8-door latrines with septic system in Lokichoggio mixed secondary; Construction 3No. 4 door VIP Latrines for Lokichogio Girls 3. Undertake Community Led Total Sanitation, Sanitation marketing and hygiene promotion at household level on performance-based approach; Hygiene promotion in schools.
		Water resources management	1. Undertaking Desilting and expansion/construction of Kanamesek Water Pan of capacity not less than 30,000 CM with offtake system and fencing 2. Excavation of 2No. 30,000CM water pans with offtake, cattle trough and fencing for the grazing zones (Kaawoi and Nakeruman). 3. Support Women Economic Empowerment through horticultural farming using shadenets of 30m to 8m for Kangura Borehole system (2 No.) and Lokichogio town Water supply system (2 No.)
Kakuma Refugee-Host and host community	**NRC:** WASH improvements for refugees and host community	Water Supply	1. Drilling and equipping of 3 No. boreholes; solarization of three drilled boreholes to increase production 2. 8km Pipeline extension to overhaul existing and integration to new supply; Construction of 6 No. power houses; Rehabilitate and repaint 4 No. leaking elevated steel tanks (EST) 3. Repair and rehabilitation of 50 tap stands. 4. Water quality/aquifer monitoring; Hydraulic modelling of Kakuma camp water supply.
		Sanitation and hygiene Promotion	1. Production and distribution of 1000 latrine slabs for household latrines construction; Lining of 400 latrine pits in flood prone areas; Construction of 50 disability friendly latrines; Construction of 5 No. 4 door school latrines; Construction of 15 Urine diverting dry toilets (UDDT) latrines; Decommissioning of 50 communal latrines 2. Hygiene and sanitation promotion including Community Led Total Sanitation (CLTS) campaigns in Kakuma refugee camp and host community
		Water resources management	1. Planting of seedlings around borehole compounds and Climate proofing of 4 No. boreholes with construction of gabions and aprons
		Water Supply	1. Hydraulic modelling for Kakuma town water supply

Kakuma Town Water Supply and Public sanitation project	**OXFAM Project:** Support for sustainable and resilient WASH services for Kakuma town		2. Drill and equip 2 No. new boreholes to boost production. 3. Solarization of 3 No. boreholes (2 No. new boreholes and 1 No. rehabilitated (broken down windmill -BH5 or capped borehole at Nakwangat); 4. Construct 3 No. new Steel elevated tanks each of capacity of 200M3; Construct 1 No. masonry tank reservoir 200m3. 5. Overhaul of 14km pipeline extension for rising main and distribution network for Kakuma water supply; Construction of six smart water kiosks within Kakuma town. 6. Establishment of Kakuma water company in line with County water and national government legislations with engagement of third-party partner for capacity building of the company 7. Komudei dispensary pipeline extension
		Sanitation and hygiene Promotion	1. Sanitation Construction of 1 No. public Bio-sanitation facility and 2. Construction of incinerator in Kakuma health facility
		Water resources management	1. Registration of 2 No WRUAs; development and adoption of sub-catchment management plans

The following projects were sampled purposively after in-depth discussion with the implementing partners for further visits and household survey.

	Projects	**Implementing Partner**
1.	Nariemento Water Project	World Vision Kenya
2.	Kangura Shadenets	World Vision Kenya
3.	Ebenezer Green Farmers Group	World Vision Kenya
4.	Lokichogio WSP	World Vision Kenya
5.	AAR Japan	NRC
6.	Block 15 Community, Kakuma refugee Camp, Zone 1	NRC
7.	Constuction of Biosan Facilty, Kakuma	OXFAM
8.	Nadapal Smart Water Kiosk	OXFAM
9.	Lomesekin	AMREF
10.	Napeikar Borehole	AMREF
11.	Choro Farm	AAHI
12.	Lokora Water Supply Project	AAHI

Annex 5: Sustainability Index

As defined by WaterFund, sustainability index is a key quantitative performance measure to facilitate the assessment and monitoring of sustainability of investments in the Counties to support progress evaluation over time and the development of appropriate response measures. For the purposes of this assessment, sustainability was defined as the ability of an investment to realize the objectives within 5 years of its operation. This definition is purely based on outcomes and outputs of the investments.

Methodology

The projects were assessed and aggregated by counties. The assessment is based on the guideline created by WaterFund in 2016. 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.

The function is specified as:	Where:
SI=f (FR, RC, AS, GC)	SI is the Sustainability Index FR is the Functionality of the investment RC is the Revenue Collection (ability to cover O&M) AS is the Age and Survival (and operational) rate of an investment GC is whether the investment is in Good Condition (and operational)

Criteria for scoring

1. Revenue collection (ability to cover O&M) = (50%), the highest weight was given with the idea that without revenue collection, the investment does not have long term sustainability. However, considering the nature of GGEP investments, this criterion will focus on capability to cover O&M cost
2. Functionality, i.e., the operational status, is a key attribute to describe the status of the services and is given the weight of 25%.
3. The age and survival rate of the investment is given a weight of 15%.
4. The condition of an investment is given a smaller weight (10%) since the condition is, while important, not essential for the usability and sustainability of the facility.

Decision Criteria

The Sustainability Index score is between 0 - 100%, with 100% depicting a high sustainability rate of the investments.

Sustainability Index Calculations

PROJECT	Functionality	Ability to cover O&M Cost	Age and Survival Rate of the Investment	Good condition	Total
Water					
Drill and equip 3 New boreholes: 12m3/hour (Borehole 18), 72m3/hour (borehole 5B) and 31m3/hour (borehole 4E). Solarisation of the three boreholes BH 4E- 15KW, BH5 -30KW, BH 18- 4KW	21	41	13	8	83
Construction and rehabilitation of 6 power control houses (Kukuma 1 camp in, zone 1, zone 3, zone 4 and zone 5 (BH 4E), Kakuma 2 GSU zone, Kakuma 3 BH 18)	19	46	13	8	86
8km Pipeline rehabilitation and extension for existing and new borehole water supplies within camp	18	46	12	8	84
4 No. 1000 m3 Elevated Steel tank rehabilitation at HongKong , fuji, reception and Booster 5	19	46	14	9	88
Rehabilitation of 50NOS tapstands at Kakuma 3 and Kakuma 2	16	46	10	7	79
Kalobeyei refugee settlement water project	17	45	12	8	82
Kakuma Town Water supply project	16	45	9	6	76
Loitakori Water Supply project	16	44	9	6	75
Napeikar Water supply project	17	44	8	7	76
Nakulumei Water project	17	44	8	6	75
Lokichogio Water Supply project	18	41	7	8	74
Kangura Water supply project	18	42	7	8	75
Lokorawater supply , kalobeyei.	15	39	8	7	69
Red Cross Water supply Project	17	44	8	8	77
Lopuski water supply project	21	42	8	8	79
Rehabilitation of 10 choro farm shallow wells	16	47	8	8	79
78.56					
Sanitation					
VIP Latrines: Construction of 6 No. 4 door VIP latrines in 3 schools;	20	46	11	7	84
Construction of 7 blocks of 4 door VIP latrines in 2 schools (Lokichoggio), Construction of 2 blocks of 4 door septic latrines in one school	19	45	11	8	83
Construction of 20 UDDTs at Kalobeyei refugee settlement	10	23	10	8	51
1000 slabs casting and distribution for Household latrines	15	48	13	9	85
Construction of 50 disability friendly latrines at Kakuma 1, 2, 3 and 4	20	46	12	7	85
Latrine pit lining of 400 Latrines within the	23	47	7	7	84

PROJECT	Functionality	Ability to cover O&M Cost	Age and Survival Rate of the Investment	Good condition	Total
Camp					
Construction of 5 No 4 door VIP latrines at schools 2 No. at Vision Secondary School and one No. each for Hope, Turkwel and Gilo Primary Schools	20	46	11	7	84
Construction of 15 No. UDDT latrines in hard soil formations	13	38	10	8	69
Construction of latrines 6 No. 4 door VIP/biodigester latrines in Lochore Edome, Lopur and Namon primary schools.	15	40	10	8	73
Construction and equipping of the incinerator at the Kakuma Sub-County Hospital incinerator	18	45	12	9	84
Construct a Bio-sanitation facility to improve access to sanitation in a public space	20	46	13	7	86
78.91					
Water resources management					
Protection of 4 boreholes under threat of being washed away with aprons and gabions and tree planting in the catchment areas of the boreholes (BH 9, 10,11 &15)	23	44	13	9	89
Rehabilitation of boreholes with hand pump and construction of cattle troughs including fencing in the grazing zones of Lochoreamoni, Natumamon I, Natumamon II and Iria in Lokichogio ward	21	43	12	8	84
Undertake Desilting and expansion of Kanamesek Water Pan to 30,000 CM with offtake and fencing	23	47	14	9	93
Excavation of 1 No. 30,000CM water pans with offtake, cattle trough and fencing for the grazing zones at Kaawoi	19	41	10	6	76
Excavation of 1 No. 30,000CM water pans with offtake, cattle trough and fencing for the grazing zones at Nakeruman.	23	46	14	9	92
Excavation of 1 No. 30,000CM water pan with offtake, cattle trough and fencing for the grazing zones (Epitiwosin)	23	46	14	8	91
Construction of 50,000CM Kangiteseroi water pan	23	47	14	8	92
Establishment of 3 No. 20-acre woodlots at Namon, Nakuguro and Napeichom	16	46	14	9	85
Cash for construction of 3 NO. 10 arces each trapezodial bunds and farming at lochoreadome, Lopuski and Namon	17	39	9	6	71
Excavation of 1 No. 30,000CM water pan with offtake, cattle trough and fencing for the grazing zones (Naremieto)	16	42	12	8	78

PROJECT	Functionality	Ability to cover O&M Cost	Age and Survival Rate of the Investment	Good condition	Total
Excavation of 50,000 CM Kochomin Earth dam with offtake system for animal and domestic access	18	43	12	8	81
4No. community water supplies. Establishment of 4 natural resource management committees working with Kenya forest service; Livelihood empowerment support of 4 committees (for boreholes water pan/dam above) for bee keeping project and tree planting around water points developed.	18	43	13	8	82
84.50					
Livelihood Interventions					
Provision of 2 No. shade nets to Ebenezar Women group (Lokichoggio)	21	38	9	9	77
Provision of 2 No. shade nets to Kangura women group	19	38	9	9	75
Establishment of the 3 No. communal green biodigetsers at three enterprises in Kakuma camp, shade, Santos and Youngstar hotels	17	42	12	8	79
Distribution of 9 He Galla goat for breed improvement and suppply to 3 farmers groups within Lopur	14	32	6	7	59
Establishment of 2 hay stores linked to support pasture/feed production and Lopuski and Lopur	22	41	9	9	81
Purchase and supply of 5 No. portable Solar pumps for water extraction to choro farmers	21	46	9	9	85
Fencing a 15-acre of the community garden using concrete poles and chain link	23	43	7	9	82
Purchase of initial startup kit (drought tolerant seeds; Amaranth, Cow peas, Sorghum and Spinach,tools) and Dicotomus Earth	21	38	9	8	76
Piloting Tsetse fly control with low-cost control measures with Traps in the pastoral areas at Lokichoggio and Kalobeyei	14	32	7	6	59
Average					**74.78**

Annex 6: Creditworthiness Index

Creditworthiness Index combines annual financial and operational data into a snapshot metric to estimate a WSP's creditworthiness[13].

Methodology

The Creditworthiness Index methodology used to calculate the individual ratings was adjusted from the initial WSP/WASREB shadow rating methodology previously used. It relies solely on data from the financial statements and operating statistics as reported by the WSPs. Qualitative inputs (Management capacity, Human resources, Stakeholder support, Governance issues, Legislative & regulatory framework, and Strength of the economic Base) cannot be automated and are therefore not included in the Creditworthiness Index results. The index is calculated from 6 broad and weighted indicators that are tailored from the interviews with the WSPs and the county administration.
The scores were adopted from "African Water Utilities Regional Comparative Utility Creditworthiness Assessment Report: Individual credit assessment reports for seven African water utilities"

Scoring

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[14]. The Creditworthiness Index result is therefore an aggregation of the weighted scoring with a maximum score of 100. A score of 85-100 would depict a highest credit quality.

Decision Criteria

Score	Indicative Creditworthiness Level	Description
41 to 50	Low-Creditworthy	Indicates an elevated vulnerability to default risk, particularly in the event of adverse changes in business or economic conditions over time; however, business, or financial flexibility exists which supports the servicing of financial commitments. In a credit rating this definition is equivalent to a BB rating.
51 to 60	Creditworthy	Indicates that expectations of default risk are currently low. Capacity for payment of financial commitments is considered adequate but adverse business or economic conditions are more likely to impair this capacity. In a credit rating this definition is equivalent to a BBB rating.
61 to 70	Creditworthy	Denotes expectations of low default risk. Capacity for payment of financial commitments is considered strong. Capacity may, nevertheless, be more vulnerable to adverse business or economic conditions than is the case for higher ratings. In a credit rating this definition is equivalent to an A rating.
70 to 85	Highly Creditworthy	Denotes expectations of very low default risk. Very strong capacity for payment of financial commitments. Not significantly vulnerable to foreseeable events. In a credit rating this definition is equivalent to an AA rating.
>80	Very High creditworthy	Denotes the lowest expectation of default risk. Assigned only in cases of exceptionally strong capacity for payment of financial commitments. Highly unlikely to be adversely affected by foreseeable events. In a credit rating this definition is equivalent to an AAA rating.

[13] Creditworthiness Index Report, 2015
[14] 2015 WASREB/World Bank

Creditworthiness Indicators and Scoring

Indicator	Definition	Reason for inclusion	Weighting in index (%)	Scoring of Indicators
Cost	% Of Maintenance costs of total O&M costs	Indicates whether utility spends sufficiently on maintaining infrastructure	10	4: >8% | 3: 6-8% | 2: 6-4% | 1: 0-4% | 0: 0
	% Of energy costs of total O&M costs	Indicates whether is susceptible to changes in energy cost	10	4: <10% | 3: 10-15% | 2: 15-20% | 1: 20-25% | 0: >20%
	% Of staff costs of total O&M costs	Indicator of efficiency	10	4: <25% | 3: 25-30% | 2: 30-35% | 1: 35-40% | 0: >40%
Revenue	% Difference between collected Revenue and expected Rev.	Efficiency	10	4: >80% | 3: 60-80% | 2: 60-40% | 1: 0-40% | 0: 0
	O&M Coverage (%Revenue of O&M Cost)	Creditworthiness	10	4: >130% | 3: 120-130% | 2: 110-120% | 1: 100-110% | 0: <100%
Technical	% Of people with water supply/population of the area	Indicates size of future challenges	4	4: 100 | 3: 90-100 | 2: 80-90 | 1: 70-80 | 0: <70
	% Estimation of NRW	Efficiency and credit quality	4	4: <20% | 3: 20-30% | 2: 30-40% | 1: 40-50% | 0: >50%
	Number of staff/ 1000 people served	Efficiency	4	4: <5 | 3: 6 | 2: 7 | 1: 8 | 0: >8
Governance	Availability of Management committee	Accountability	4	4: Yes | 0: No
	Diversity of Management Committee (Gender, Youth, PWD)	Inclusion	4	4: Diversified | 2: Not Diversified
Systems	Availability of Management systems e.g., Consumer records, financial management, HR, Stores & Investment plan	Efficiency	10	4: All 5 systems | 3: 4 | 2: 3 | 1: 2 | 0: 1 or none
Liability	% Total debt/ Revenue Collected	Determine debt service ability of the utility	10	4: <25% | 3: 25-30% | 2: 30-35% | 1: 35-40% | 0: >40%
	Grant Dependency Proportion of O&M cost financed through grants	Indicator of utility's' ability to cater for its costs and remain solvent without External assistance	10	4: 0 | 3: 0-10% | 2: 10-15% | 1: 15-20% | 0: >20

Creditworthiness Index Data

Indicators		Kakuma Town Water supply project	Lokichogio Water Supply project
Annual Cost	Total O&M Cost	9,360,000	3,060,000
	Maintenance Cost	2,400,000	900,000
	Energy Cost	2,400,000	720,000
	Staff Cost	4,560,000	1,440,000
Annual Revenue	Expected Revenue	18,000,000	12,000,000
	Collected Revenue	10,800,000	1,560,000
Technical	Population in coverage area	140,000	52,000
	Population served	15,395	10,980
	Estimation of NRW	17%	13%
	No. of staff	29	23
Governance	Availability of management Committee	N/A	Yes
	Composition of Management Comm. Yes/No and Diversified	N/A	3 W, 7 M
Systems	Availability of management systems (Financial, Consumer records)	Yes	Yes
Liabilities	Debts	N/A	N/A
	Grants	0	1,500,000

Indicator weighted scores and CWI

Indicator		Weight	Kakuma Town Water Supply Project			Lokichogio Water Supply Project		
				Score	Weighted score		Score	Weighted score
Cost	% Of Maintenance costs of total O&M costs	10	25.6	4	10	29.4	4	10
	% Of energy costs of total O&M costs	10	25.6	0	0	23.5	0	0
	% Of staff costs of total O&M costs	10	48.7	0	0	47.1	0	0
Revenue	% Difference between collected Revenue and expected Rev.	10	60	3	7.5	13	1	2.5
	O&M Coverage (%Revenue of O&M Cost)	10	115.4	2	5	51	0	0
Technical	% Of people with water supply/population of the area	4	11	0	0	21.1	0	0
	% Estimation of NRW	4	17	4	4	13	4	4
	Number of staff/ 1000 people served	4	1.9	4	4	2.3	4	4

Governance	Availability of Management committee	4	Yes	4	4	Yes	4	4
	Diversity of Management Committee (Gender, Youth, PWD)	4	Yes	3	3	Yes	3	3
Systems	Availability of Management systems e.g., Consumer records, financial management, HR, Stores & Investment plan	10	4	3	7.5	4	5	5
Liability	% Total debt/ Revenue Collected	10	No debt	4	10	No debt	10	10
	Grant Dependency, Proportion of O&M cost financed through grants	10	0	4	10	50	0	0
CWI					65			42.5
Average								53.75

Annex 7: List of Documents Reviewed

1. Addendum to Development Engagement Document - Access to and Management of Water Resources (Water Sector Trust Fund – WaterFund)
2. Annual Rural Harmonised Report; WaterFund, 2017/2018
3. Draft Mid-Term Review Report, December 17th, 2018
4. End of Project Report– Water and Livelihood Programme – Kenya, Water Sector Trust Fund.
5. Inception Support to Water Sector Trust Fund – Water and Livelihood Programme – Kenya. Inception Report
6. Kalobeyei Integrated Socio-Economic Development Plan (KISEDP), 2018 – 2022
7. Kenya Country Programme 2016–2020 Green Growth and Employment Thematic Programme—Access to and Management of Water Resources in the Arid and Semi-Arid Lands Development Engagement Document
8. Kenya Vision 2030
9. Kenya Water Service Provider: Creditworthiness Index Report. A publication of the Water Services Regulatory Board in collaboration with the World Bank Water Practice, November 2015
10. Kenya National Housing and Population Census, KNBS,2019
11. Kirkpatrick's Four Levels of Evaluation, Susan Croes
12. Kirk Patrick and Beyond:A review of Models of Training Evaluation, P Tamkin, J Yarnall and M Kerrin, 2002
13. OECD/DAC Network on Development Evaluation: Revised Evaluation Criteria Definitions and Principles for Use, 2019
14. Programme Evaluation through Kirkpatrick's Framework, Omer Gokhan Ulum, July 2015
15. Sustainability Assessment of Rural Water Service Delivery Models: Findings of a multi-Country Review. The World Bank, August 2017
16. The Constitution of Kenya, 2010
17. The National Water Master Plan 2030

18. The N'gor Declaration on Sanitation and Hygiene, 2015
19. The Sustainable Development Goals for Water and Sanitation Services Interpreting the Targets and Indicator, Colette Génevaux (pS-Eau) 2018. www.pseau.org/en/agenda-2030
20. The Water Act 2016
21. Turkana County Integrated Development Plan (CIDP), 2018 – 2022
22. Turkana County Water, Sanitation Services Sector Strategic Plan, 2017 – 2021
23. United Nations High Commission for Refugees (UNHCR) Kenya Fact Sheet, August 2017
24. Water Sector Trust: Fund Strategic Plan 2018 – 2022
25. Water Sector Trust Fund: County Engagement Strategy

Annex 8: List of Key Evaluation Participants

NO.	NAME	DESIGNATION	ORGANIZATION
1.	Nancy Njenga	Water Programmes	DANIDA
2.	Willis Ombai	Ag. Chief Executive Officer	WaterFund
3.	Eng. Rose Nyikuri	Manager, Water Resources and Climate Change	
4.	Peter Koech	Manager, Water and Sanitation	
5.	Elly Ochere	Ag. Manager, P, R, M&E	
6.	Angeline Were	Principal Finance Officer	
7.	George Muhia	Programmes' Technical Advisor	
8.	Violet Mucheni	GGEP Programme Team Leader	
9.	Nicodemus Onunga	WLP Programme Coordinator	
10.	Jackson Mwangi	Snr. Community Engagement Officer	WRA
11.	Wathome Stephen	Programme Manager, Agriculture, Job creation and Resilience	Delegation of the EU to Kenya
12.	Lisa Andersson	Snr. Programme Manager, Environment and Climate Change	Embassy of Sweden
13.	Adama Zongo	Senior Programme Officer	UNHCR, Kakuma
14.	Eng. Oscar Nabiswa	Assistant WASH Officer	UNHCR, Kakuma
15.	Moses Natome	CEO Water	County Government of Turkana
16.	Tito Ochieng	Director Water	County Government of Turkana
17.	Maiyo Elphas	SCPHO	County Government of Turkana, Turkana West
18.	Reuben Kibiego	CWASH Coordinator	County Government of Turkana
19.	Peter Mitunda	PHO	County Government of Turkana, Turkana Central
20.	Emmanuel Echapan	Sub County Water Officer	Count Government Turkana, Turkana West
21.	James Loseny	Sub County Administrator	County Government of Turkana
22.	Patrick Eyapan Naboikut	County Resident Monitors	WaterFund, Turkana
23.	Faustin Ochunga	Programme Social Scientist	WaterFund
24.	Herman Kiruaye	Sub Basin Area Coordinator	Water Resources Authority, Lodwar
25.	Eric Mathenge	Project Coordinator	AAHI
26.	Agnes Lokoro	Agribusiness Officer	AAHI

27.	James Ayacko	Project Engineer	AMREF
28.	Joan Mwiti	WASH Officer,	NRC, Kakuma
29.	Bundu Mohamed	Area Manager Kakuma	NRC
30.	Eng. Francis Magondu PHE	Resident Engineer	OXFARM
31.	Kennedy Ayua	Project Engineer	World Vision, Kenya
32.	Ayantu Bizune	Owner	Biodigester project
33.	Abdulaziz Lugazo	Chairman	Choro farm farmers' cooperative
34.	Lydia Nakwamur	Chairperson	Ebenezer Green Farmers Women Group
35.	Lomotei Yongoma	Chairlady	Kangura Women Group
36.	Jeremiah Ekoel	Chairman	Lokichogio WSP
37.	Moses Kavita	Deputy Head Teacher	Lokichogio AIC Girls Primary School
38.	Rev. Fr. Linus Musumba	Chairman	Lokora Water Project, Kalobeyei
39.	Ekusi Johnson	Community Leader	Nadapal Smart Water Kiosk
40.	Jonas Epas	Assistant Chief, Lokudule S. Loaction. Songot	Napeikar Project
41.	Lukas Epong' Ekai	Chairman	Narameto Water Pan
42.	John Ekai Epure	Secretary	Narameto Water Pan

Annex 9: Data Collection Tools

Key Informant Interview Guides

1. How is the Water situation in terms of Water coverage, Water quality and households' access?
2. How is the Sanitation situation in terms of access to improved sanitation, OD, CLTS?
3. What are the major priorities/mandate of the institution/community? Is water, sanitation, and water resources management among them? (Prob program relevance to these priorities)
4. What data or statistics on water or sanitation or hygiene does the county have and how does it use it? (How frequent is this data collected, validated, disseminated, MIS availability and effective usage)
5. Which county legislations exists that govern water, sanitation, and hygiene issues in the County? and how are they enforced? (Probe if and how it enables private sector involvement)
6. Are there institutional annual public financial commitments to water commensurate with meeting needs/ targets?
7. What is spent per capita on water separately and sanitation separately by the County – Capex (3-year average)? Capex only e.g., on toilet/latrines development, CLTS, wastewater treatment works, water infrastructure, water treatment, advocacy, and hygiene promotion.
8. Are there procedures and processes applied on a regular basis to monitor water and sanitation access and WRM and the quality of services in the county and is the information disseminated?
9. Does the institution have plans for expanding water or sanitation services? What are the plans for Turkana County?
10. Were you involved in the design and implementation of the GGEP/WLP project? If yes, (Probe involvement of different departments and beneficiaries and community needs at the design stage)
11. How did the intervention address the County needs? (Probe gaps existing after implementation)
12. How does the county government collaborate with WASH/WRA actors in the county?

13. Which other interventions related to water, sanitation and environment were being carried out in the same area by the County Government or other development partners? (Probe for coherence between GGEP/WLP and these interventions in terms of interlinkage, complementarity, harmonization)
14. How did WSTF's intervention relate in terms of coordination and reporting/sharing lessons with other interventions?
15. What are the major achievements of the GGEP/WLP project? (Probe positive and negative impacts including unintended)
16. How was the coordination of partners during this project? How would you have liked the coordination to be done better?
17. Are the results accomplished by the GGEP and WLP programs likely to be sustainable? (Probe local ownership and likelihood for continued operation or benefits)
18. How did the program incorporate Environment, Social and Governance (ESG) issues? Probe a) Environmental responsibility through compliance with all relevant environmental laws and regulations b) Social responsibility through labor relations, human rights, diversity, and inclusion and, c) Governance: compliance, ethics, controls, and procedures
19. Have you piloted a new water and sanitation PPCP funded project within the last 5 years? (Probe finance leveraged by the piloted PPCP models and lessons learned), **See below**
20. What could concretely be recommended to ensure sustainability of the action and linkages with other programs?
21. What would have been done better during the implementation of the project to make it more beneficial or sustainable? Probe about involvement of the most vulnerable and persons with disabilities.
22. Has the support contributed to the development of a sustainable community-based management of water resources structures/system?
23. Have the programs efficiently used resources e.g., local expertise, time, and funds? Is or was there potential for resources to be used more efficiently?
24. How well did the partnership and management arrangements work and how did they develop over time?
25. How well did the financial systems work to support project delivery?
26. Did your organization receive any specific trainings? (Probe for type of training, relevance, and satisfaction)
27. Has your organization demonstrated improved capacity and organizational performance? Explain. (To what extent is this attributed to the training above)
28. What unforeseen outcomes were caused by or contributed to by the intervention, and why did these occur? How were these addressed?
29. Do partners (WRUAs/WUAs/CBOs) have the financial capacity to maintain the program and/or its outputs/outcomes after program termination? (Probe for capacity, skills, revenue, and expenditure)
30. How has the program context changed throughout the implementation of GGEP/WLP programs? (Probe a) contextual risk (security and conflict, droughts), b) programmatic risks (Uncoordinated developments, unclear devolution mandates) and c) institutional risks (capacity, planning and funding) and adaptation
31. Was the program innovative and/or what are the main lessons learned?
32. How was the green growth characteristics of resilience (adaptation and mitigation) and resource efficiency using the 7Rs namely: reduce, reuse, recycle, rethink, redesign, refuse and recreate mainstreamed in the projects
33. What was the overall approach and how is it related to the theory of change?
34. To what extent have the relevant National Ministries and County Departments been involved in the information sharing and value adding

35. To what extent have measures been taken during planning and implementation to ensure efficient utilization of funding, staff, time, and other resources without compromising on the attainment of quality results? Are measures in place to ensure resources are used appropriately?
36. How were local implementing partners involved in project management and how effective was this and what have the benefits or difficulties been with this involvement? Input delivery, synergy among stakeholders etc.
37. How does WSTF shift to strategic partnership and collaboration with NGO's and private sector to design and finance bigger projects enhanced the success of the program?
38. How has the partnership with DANIDA in GGEP/WLP improved the capacity of WSTF in program management (Identification, implementation, and monitoring)?
39. Has the project supported partners in their ability/capacity and engagement in water related planning and advocacy initiatives with Government, INGOs and donors?
40. To what extent was the overall approach adopted by WSTF to address the identified needs in the intervention areas for both the WRUAs/WUAs/CBOs/Conservancies and the communities achieved?
41. How was the organization selected for partnership in the GGEP/WLP project?
42. Have your organization demonstrated improved capacity and organizational performance? Explain.
43. What unforeseen outcomes were caused by or contributed to by the intervention, and why did these occur? How were these addressed?
44. How has the WLP programme addressed inequality in access to water and sanitation between host community and refugees?
45. How possible is it for the continuation of the impact achieved and of the delivery mechanisms following the withdrawal of donor support? What are the prospects for the benefits of the project being sustained after the funding stops?
46. To what extent has an integrated approach to refugee settlement improved perception and relations between refugees and host community? (Probe reduced conflict and tension)
47. To what extent did investment in broader catchment planning for sustained impact improve water resources management?
48. Did investment in rangeland approach improve livestock production? Explain
49. What are the Key opportunities in terms of water and sanitation investment, management in these Counties? What are the challenges experienced by the Board in meeting its objectives in these Counties and mitigating strategies?
50. How are the WRUAs registered, supported, regulated, and monitored? Probe on how many exists especially in the 8 counties.
51. Why did the donor agree to re-allocation of funds meant for building capacity of the counties to enact water and sanitation legislation and how will this affect sustainability of the GGEP/WLP project gains?
52. What are the institutional/organization capacity gaps that hinder effective implementation of water/sanitation plans in the counties?
53. What is the major achievement of the private sector in the county in terms of research, development and improving access to water and sanitation in the County?
54. What would you as the private sector want improved to enhance your efforts in meeting the water/sanitation gaps? Probe in terms of National/County government support.

FGD Interview Guide

1. What kind of livelihood activities do men and women carry out in this area to provide them with income?
2. Where do households get water that they use and how far away are these points? What is the cost of water in the area?
3. How frequent is water available from each source during the day or days in a week?

4. What do you think are the key challenges faced in water and sanitation access in these areas?
5. What roles do women play or need to play in ensuring access to safe water and adequate sanitation?
6. What are the common Hygiene practices exhibited in this area? (Probe on use of toilets, hand washing, personal and environmental hygiene, menstrual hygiene, and OD)
7. Which organizations and institutions are involved in provision of water, sanitation, and hygiene education in the area and WRM?
8. Do you know about GGEP/WLP projects in the area? How were the locals involved in the project? (Probe GESI)
9. How has the projects benefitted the locals? (Probe for increased access to sanitation, water, livelihood, and employment opportunities)
10. Which communication platform do communities access information on water, sanitation, hygiene promotion and WRM?
11. What are the challenges and Barriers to participating in key decision making in relation to WASH facilities and services? (Probe by gender, disability, youth, and other vulnerable groups)
12. What could be done better and by who to improve water and sanitation access and WRM to the people in this area?
13. When was the WRUAs/WUAs/CBOs/Conservancies established? How many members are registered and how many are active?
14. What is the name and area of the catchment area the WRUA oversees?
15. Who are the water resource users, riparian landowners, and other stakeholders in your sub-catchment area?
16. Does the WRUA have an updated SCMP? What are your functions as a WRUAs/WUAs/CBOs/Conservancies?
17. How long has the Sub-Catchment Management Plan been implemented? What has been the achievements so far?
18. How was the WRUAs/WUAs/CBOs/Conservancies selected for GGEP/WLP project?
19. What are the achievements of the WRUAs/WUAs/CBOs/Conservancies based on the implementation of the WaterFund GGEP/WLP project?
20. What were the glaring needs of the communities that were being addressed by this program?
21. To what extent is there a sense of local ownership of the program?
22. To what extent was the overall approach adopted by WSTF to address the identified needs in the intervention areas for both the WRUAs/WUAs/CBOs/Conservancies and the communities achieved?
23. Which activities showed greater relevance for the different groups of beneficiaries? Why?

Annex 10: WLP Financial Utilization

Implementing Partner		AAHI	Amref	Oxfam	NRC	World Vision	Sub total
Project Budget		90,482,748.74	66,720,925.00	90,279,503.00	76,401,000.00	140,000,000.01	463,884,176.75
Payment category	Programme costs	76,177,326.00	57,657,051.00	76,992,137.17	66,714,333.00	110,512,349.80	388,053,196.97
	Community awareness, survey, and design costs	680,000.00	3,870,189.00	3,068,942.47	90,641.70	3,445,542.32	11,155,315.49
	O&M costs	83,650.00	574,666.00	0.00	535,820.00	1,540,000.00	2,734,136.00
	Monitoring and Evaluation	221,700.00	506,314.00	2,164,288.60	202,570.00	1,496,964.08	4,591,836.68
	Capacity building	494,000.00	893,186.00	256,929.40	305,050.00	2,689,401.24	4,638,566.64
	Project branding, launch and commissioning	320,000.00	427,780.00	855,804.22	730,702.90	1,840,860.10	4,175,147.22
	Administration costs (includes IR)	9,228,324.00	2,791,740.00	6,548,846.13	7,640,741.99	18,474,882.47	44,684,534.59
	Applicable taxes	60,000.00	0.00	0.00	181,140.00	0.00	241,140.00
Total spent		87,265,000.00	66,720,925.00	89,886,947.99	76,401,000.00	140,000,000.10	460,273,873.09
Balance		3,217,748.74	0.00	392,555.01	0.00	0.00	3,610,303.75

Annex 11: Evaluation Team

The following five consultants participated in the Evaluation as shown below.

	Consultants Name	Position	Key roles in the evaluation
K-1	Benard Oronje	Lead Expert M&E	Lead designing the evaluation plan including conceptualizing the study, literature review, training of research assistants, and preparation of reports and, overall management of the assignment
K-2	Francis Wadegu	Environmentalist	Lead the designing of data collection instruments and data collection of water, sanitation and climate change resilience and adaptation components of the evaluation including analysis and reporting
K-3	Lilian Omondi (PhD)	Sociologist	Conducting socio-economic analysis including formulation of evaluation questions, data collection tools and conducting FGD
K-3	Denis Masika (PhD)	WRM Expert	Lead assessment of integrated water resources management and planning including livelihood and climate proofing
K-4	Joyce Nyaboga	Governance Expert	Lead the integration of governance considerations into the evaluation e.g., compliance, administrative support, institutional structures, legal frameworks, relevant policies, management and water sanitation and resources management
N-1	Nelson Nyunja	Field coordinator	Mobilization of field study participants, field study planning, data collection and data analysis

adi ADVANCE DEVELOPMENT INITIATIVE

RESEARCH | TECHNICAL ASSISTANCE | PROJECT MANAGEMENT

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