WaterFund
Financing the Water Sector

MINISTRY OF FOREIGN AFFAIRS OF DENMARK
Danida

End Term Evaluation of Green Growth and Employment Programme

Draft Evaluation Report

August 2022

Kenya Country Programme 2016 - 2020

Executive Summary

Background

Water Sector Trust Fund (WaterFund) under the support of the Governments of Kenya and Denmark (DANIDA) supported the Green Growth and Employment Programme (GGEP) through development cooperation. This engagement targeted the Arid and Semi-Arid (ASAL) Counties of Northern and North-Eastern Kenya (Tana River, Lamu, Garissa, Wajir, Mandera, Marsabit, Isiolo and Turkana). These dryland counties are home to the poorest population in Kenya, characterized by persistent drought and limited water availability. These Counties constitute 80% of the land area of Kenya and are home to approximately 20% of the population. The engagement addressed the provision of water and sanitation services and the management of water resources. These services are key aspects in addressing poverty reduction, inclusive green growth, rights, and sustainable management of natural resources in the ASALs. The thematic Green Growth and Employment Programme was implemented under the overarching Kenya Country Programme 2016-2020 to support Kenya's "inclusive greener growth with higher employment".

Green Growth and Employment Programme was implemented between July 2016 to December 2020 with an additional no-cost extension to June 2022. WaterFund partnered with implementing agents including Community-Based Organizations (CBOs), Water Utilities (WUs), Water Resource Users Association (WRUA), Water Services Providers (WSPs), and Conservancies to implement water, sanitation, livelihood, and water resources management projects. These implementing agents worked closely with other stakeholders including County governments, the Water Resources Authority (WRA), and Northern Rangeland Trust (NRT) to successfully deliver 23 water and sanitation services projects and 32 water resource management projects in the eight target counties with total financing of Ksh 975 million.

The end-term evaluation assessed the overall results and impact of the GGEP projects and their sustainability, establish lessons learnt and best practices related to planning, design, and implementation of water sector programmes. 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 and 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 GGEP 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 Counties in water planning, implementation, and assessment of implementation capacities of implementing partners including adherence to the financing agreements and other contractual obligations.
iv. Effectiveness and efficiency of capacity-building approaches in the delivery of sustainable water supply and water resources management projects with a focus on programme implementation and Operations and Management (O&M) training.
v. The outcomes and impact of the policy and institutional support structures on WaterFund and at the county level

vi. The programmes' level of influence in promoting Public Private Community Partnerships in water service provision in ASALs.

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). Advance Development Initiative (ADI) developed and employed an array of practical and participatory tools a) qualitative study design, a structured questionnaire was utilized to collect data from primary stakeholders b) quantitative study design, Key Informant Interviews (KII) guides and Focus Group Discussions (FGD) guides were utilized. For secondary data, a desk review was conducted to capture past work and studies on thematic areas under GGEP, this was done in the broader context of the two partnering countries (Kenya and Denmark). This detailed desk review provided the basis for analysis and discussion within the evaluation context. A total of 386 participants were surveyed at the household level consisting of 55% women and 45% men. Also, more than 20 FGDs' and 50 key stakeholders participated in in-depth interviews drawn from Implementing agents, WaterFund, DANIDA, 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 Microsoft Excel and Statistical Package for the Social Sciences (SPSS) for quantitative data, qualitative data was analyzed through coding to capture cross-cutting themes. To establish change, a comparison was done with baseline data and targets set for the programme, also against standards established by stakeholders or other institutions including the Ministry of Health's 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 training delivered.

Key Findings

GGEP achieved the overall Development Engagement (DE) Objective of Enhanced water resources management and investments in selected ASAL counties for improved and sustained access by communities and households to water and sanitation for their domestic and productive needs. An estimated 24,800 new households received water services because of GGEP after successful implementation of water projects in 24 communities spread across the eight Counties, through drilling and equipping of boreholes, construction of distribution mains, raised storage tanks, underground sump tanks, community water points (water kiosks and yard taps), and households' connections. Similarly, approximately 3,350 people have access to improved sanitation services including 2500 school children and more than 450 community members. This was achieved through a combination of sanitation approaches targeting institutions. GGEP supported several interventions including constructing 116 doors of Ventilated Improved Pit (VIP) latrines in schools achieving the Ministry of Health & World Health Organization (WHO) standards of pupils to toilet door ratio (1:25) and 18 doors of VIP latrines in public institutions (Mosque & Dispensary). Hygiene was further enhanced through hygiene promotion, establishing hand washing, and community sensitization.

Under improved water resources management planning, GGEP worked with 27 WRUAs and 5 conservancies. A total of 14 Community based resource management catchment areas covering 2,010.83 km^2 were planned through the development of sub-catchment management plans (SCMPs) and Conservancy Development Management Plan (CDMP) for coordinated management of the resources, of this total area, 561 km^2 has been implemented through conservation activities including mangrove restoration, planting of indigenous trees and Construction of water pans for aquifer recharging. Further, a

significant number of community members benefited from water resource management, livelihood, and resilience activities including beekeeping, planting of indigenous fruits, rangeland management, etc. Water storage was significantly increased through the development of water pans and putting up of water storage tanks in the project area for both livestock and domestic use. An estimated 184,072m^3 water storage was successfully developed through construction of 2No. berkads, 5No. djabias, 27No. rainwater harvesting tanks, 7No. sand dams and 5No. water pans of various sizes ranging from 30,000 to 50,000m^3.

Summary of Key Findings

Evaluation Criteria (OECD)	Key Findings
Relevance	GGEP is relevant to the water, sanitation, and Water Resources Management (WRM) needs of primary beneficiaries. The project's implementation structures ensured appropriate responses to community needs. The programme was also found to be well aligned with key stakeholder policies, priorities, and strategic objectives. The design and Theory of change were found to be robust with shortcomings at the level of causal assumption
Coherence	GGEP programme design is internally and externally coherent. The design was informed by lessons learnt from previous programmes and harmonized with existing efforts in ASAL
Effectiveness	**Output 1: ASAL counties' capacity and engagement in integrated water, sanitation, and water resources-related planning improved** The GGEP Counties' capacity and engagement in integrated water, sanitation, and water resources-related planning have been improved through partnerships. All Counties have water and sanitation data but are not regularly updated. Five of the Counties have water legislation (Not supported by GGEP) in place which is effectively used to govern water and sanitation investment within the counties. **Output 2: Water and sanitation access and deficit in the ASALs addressed.** GGEP has greatly impacted access to water and sanitation in the 8 counties by increasing the number of households accessing water (24,800 new Households) and sanitation (3500 people) services. Communities within GGEP target areas are satisfied with water (78.5%) and sanitation (56.6%) services. The evaluation reveals that 70.8% of the households in the target areas now have access to a safe water supply while 63.5% have access to sanitation. Also, 73.4% collect enough water (20-25 liters per person per day- UNDP/ WHO) for their domestic use. GGEP has also reduced distance to water point, 34% of respondents access water within a distance that meets Sphere standards (Less than 500m). All the GGEP investments were climate-proofed and mainstreamed green approaches The GGEP projects had a high sustainability index (SI), above 70% and 80% SI for WatSan and WRM respectively by 2022 **Output 3: Sustainable and community-based management of water resources improved** GGEP has improved Sustainable and community-based management of water resources in the target counties by significantly increasing water storage capacity (184,072m^3) and expanding the area under improved water resources planning 2,010.83 km^2 **Output 4: Capacity of Implementing Partners/ agents (WRUA, CBO and WU/WSP, CSO and NGO) improved** Nearly all (94.8%) of the GGEP projects were successfully implemented, indicating an improved capacity of implementing agents to manage and implement ASAL climate change

Evaluation Criteria (OECD)	Key Findings
	resilience projects. Capacity-building approaches were highly effective and contributed to successful implementation and improved service delivery Sampled (N=7) GGEP projects are creditworthy (Creditworthiness Index of 71%), Two projects had a Creditworthiness Index (CWI) below the target of 70% **Output 5: Experience generated from public private partnerships in water provision in the ASALs** Public Private and Community Partnership (PPCP) has not been fully leveraged in Water and Sanitation provision in the ASAL despite capacity building. No leveraged funds were established from piloted PPCP projects. **Output 6: Strengthened institutional performance of WSTF** WSTF institutional performance was improved by GGEP investment as evidenced by effective utilization of Management Information System (MIS) system to map and manage supported investments and improved capacity in programme management Improved efficiency and accountability in project implementation. Less than 1% of investment cost was questioned.
Efficiency	GGEP projects utilized resources efficiently, ensuring value for money for the intended primary beneficiaries. Local expertise was effectively utilized, and the County Government provided most of the technical backstopping. However, the programme was not implemented within the design period of five years leading to a no-cost extension. WaterFund's internal structures and systems enhanced implementation of the projects hence achievement of the results while few external procedures created bottlenecks in implementation.
Impact	GGEP intervention has contributed to improved hygiene practices, improved resilience, and green growth, improved socioeconomic status, a better learning environment, and significantly reduced human-animal conflict
Sustainability	GGEP has put robust mechanisms to ensure the sustainability of the investment: Ensuring community participation in the project design from proposal writing, appraisals, supervision of works, monitoring, and evaluation. Training on programme implementation, governance and, operation and maintenance for water committees Linkage and partnership with County Governments Green Growth approaches mainstreaming contributing to a reduction in O&M costs in addition to increased adaptation and mitigation of Climate Change impacts
Cross-Cutting Issues	Adaptation to Programme Context: GGEP implementation context largely remained the same throughout the implementation period Gender Equality and Social Inclusion (GESI): GGEP mainstreamed GESI throughout the program design and implementation Partnerships and Stakeholder Cooperation: Effective collaboration between partners contributed to the successful implementation of GGEP projects

Evaluation Criteria (OECD)	Key Findings
	Environment, Social and Governance (ESG) risks and Opportunities: There exist opportunities that can be exploited to mitigate ESG risks identified Innovation and Learning: GGEP implementation tested and adopted promising technologies to promote the reduction of non-revenue water (NRW), improving water quality, and natural resource management.

Lessons learnt

WaterFund is a learning institution and has a proven record of designing its programmes based on lessons learnt from previous interventions. The recruitment of County Resident Monitors/Engineers is a good example of improving efficiency and output. Working with other Implementing Partners such as Conservancies and International Non-Governmental Organizations (INGOs) has yielded verifiable outputs. The GGEP implementation has a few lessons learnt by the implementers, WaterFund, and evaluators.

a) Working with WSP' has capacity gaps since most of them are focused on major towns within the Counties with inadequate resources to traverse the vast ASAL counties.

b) Working with WRUAs has management and reporting challenges brought about by different setups between WRA and WaterFund and implementing agency and financier respectively.

c) Project implementation under the GGEP had a strong reliance on community engagement from the design stages. The existing community management structures played a vital role in ensuring meaningful community participation.

d) Sustained monitoring and follow-up of the projects is an essential ingredient to effective and efficient implementation of activities and sustainable investment.

e) Provision of water for domestic and livestock production, integrated water resources management, and rangeland management significantly reduce the intra- and inter-communal conflicts in ASAL counties.

f) The involvement of ASAL County governments is central to the success and sustainability of the investment.

g) Implementation of activities at the County level demands a well-established institutional arrangement.

h) Investing in capacity building of Implementing agents and primary beneficiaries contributes to an efficient implementation of ASAL projects and improves participation and local ownership

Recommendations

Evaluation offers an opportunity for cross-learning and giving credit where it is due from an independent perspective. The GGEP final evaluation interacted with the project documents, collected primary and secondary data from a wide range of stakeholders, 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.

Recommendations for WSTF

a) Capacity Building of Implementing Agents: Capacity building is a process and needs to be multi-dimensional. WaterFund needs to carry out an initial Capacity Assessment to identify all the capacity gaps in key areas of Governance, Policies Development, Human Resources, Project Implementation, Financial Management, Resource Mobilization, and Sustainability mechanisms before carrying out the capacity building.

b) Data capture and sharing: WSTF should build the capacity of Counties' departments to be able to capture data, validate, synthesize, disseminate, and effectively use the data for decision making.

c) Impact survey or research: WaterFund should research carbon footprints for the Pate Island and Lower Tana Delta jiko/biogas projects to understand the economical savings in terms of fuel consumption, pollution, and health status of the beneficiaries and the County government.

d) Results Framework: Make all project indicators clear and have indicator definitions/reference sheet to aid in data collection, analysis, and presentation.

e) Project designing: WaterFund's experience in rural Kenya is a strength and could be leveraged to inform better designing of projects in terms of timelines, practicability, and cost. Projects that include policy or legislation influence or working with County Governments need to be timed with the political timelines in the country.

f) Emerging trends: Identifying emerging trends, such as how water scarcity generates new forms of exploitation is important. WaterFund should invest in assessments to determine emerging trends affecting water resources in hard-to-reach areas.

g) Gender and Inclusion: It is essential to continue applying a gender-transformative approach with gender and inclusion indicators.

Recommendations for Implementing Agents

a) Work through partnerships: The Implementing agents should embrace working with partners as an opportunity to reach past their limitations.

b) Leverage funding opportunities to build efficiency: The implementing agents should self-develop using opportunities they have to be more attractive to donors and achieve more in their implementation.

Recommendations for County Governments

a) Water Master Plan: The Counties are semi-autonomous and must project into the future of their constituents in terms of water resources and management of the same. Each county should have detailed County Water Master Plans and budgets for funding.

b) Water Data: The County Department of Water needs a hub equipped with staff and a system for water sources, quality, access, and functionality of real-time information for sustainability.

c) County budgets for water and sanitation: The counties should continue allocating resources for water and sanitation including supervision, monitoring, and reporting costs.

d) Water Service Providers: Service provision should be sustainable and commercially sound. The Counties must put measures in place to enable Water Utilities to function like smart

commercial private companies with results-driven staff, well-motivated, well-funded with targets set as part of performance appraisal.

e) Transboundary water cooperation: There is a strong need for Counties to work with experts from different fields to find solutions for climate-smart security. Transboundary water cooperation and water diplomacy offer two promising avenues for peace and conflict resolution.

Recommendations for DANIDA

a) Encourage growth through competition: Funding projects in Counties offer an opportunity to motivate through creative funds. The donor could set aside funds for replicating or upscaling innovative projects within the areas under the ongoing funding.

b) Set aside funds for both impact and sustainability assessment 2 years after programme completion

Conclusion

Climate change is increasingly becoming a real threat multiplier with far-reaching impacts on global security causing droughts and floods, which make access to water much more unpredictable. There is also increasing pressure on water resources from rapidly growing populations, rising demand, and unsustainable land use. All these factors have triggered water scarcity, hunger, and conflict. WaterFund's Green Growth Strategy is aligned to contributing to solutions to make water accessible to all in line with the Sustainable Development Goals (SDGs) and the Country's policies. It is therefore a major conclusion of this evaluation that GGEP programme was successful and met expectations.

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List of abbreviations and acronyms

ADI	Advance Development Initiative
ASAL	Arid and Semi-Arid Lands
CBA	Cost Benefit Analysis
CBO	Community-Based Organization
CBNRM	Community-Based Natural Resource Management
CDMP	Conservancy Development Management Plan
CIDP	County Integrated Development Plan
CLTS	Community Lead Total Sanitation
CRM	County Resident Monitor
COVID	Corona Virus Disease
CWI	Creditworthiness Index
DAC	Development Assistance Committee
DANIDA	Danish International Development Agency
DE	Development Engagement
DED	Development Engagement Document
DERP	Drought Emergency Response Project
ESG	Environment, Social, and Governance
EU	European Union
FGD	Focus Group Discussion
GESI	Gender Equality and Social Inclusion
GGEP	Green Growth and Employment Programme
GoK	Government of Kenya
GPS	Global Positioning System
HH	Household
IFAD	International Fund for Agricultural Development
ILAC	Institutional Learning and Change
INGO	International Non-Governmental Organization
IP	Implementing Partners
JAOME	Joint Annual Operations Monitoring
KII	Key Informant Interview
KPI	Key Performance Indicator
M&E	Monitoring and Evaluation
MD	Managing Director
MEAL	Monitoring, Evaluation, Accountability, and Learning
MERL	Monitoring, Evaluation, Research, and Learning
MIS	Management Information System
MoH	Ministry of Health
MOU	Memorandum of Understanding
MTAP	Medium-term ASAL Programme
NADIMA	National Policy for Disaster Management
NEMA	The National Environmental Management Authority
NRC	Norwegian Refugee Council
NRT	Northern Rangeland Trust
NRW	Non-Revenue Water

INGO	International Non-Governmental Organization
NEPAD	New Partnership for Africa's Development
NGO	Non-Governmental Organization
OECD	Organization for Economic Co-operation and Development
O&M	Operations and Maintenance
PPADA	Public Procurement and Asset Disposal Act
PPP	Public Private Partnership
SCMP	Sub Catchment Management Plan
SDG	Sustainable Development Goals
SI	Sustainability Index
SMART	Specific, Measurable, Achievable, Relevant and Time-bound
ToC	Theory of Change
TOR	Terms of Reference
UNHCR	United Nations High Commission for Refugees
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
USAID	United States Agency for International Development
WASH	Water, Sanitation, and Hygiene
WASREB	Water Services Regulatory Board
WDC	WRUA Development Cycle
WHO	World Health Organization
WLP	Water and Livelihoods Programme
WRA	Water Resources Authority
WRM	Water Resources Management
WRUA	Water Resource Users Association
WSP	Water Service Provider
WSTF	Water Sector Trust Fund
WU	Water Utility
WUA	Water Users Association

List of Tables and Figures

See separate file

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

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

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

1.2 Description of the GGEP Intervention

Water Sector Trust Fund, under the support of the Governments of Kenya and Denmark (DANIDA), supported the Green Growth and Employment Programme (GGEP) through development cooperation. This engagement targeted the Arid and Semi-Arid (ASAL) Counties of Northern and North-Eastern Kenya (Turkana, Marsabit, Mandera, Wajir, Garissa, Isiolo, Tana River, and Lamu). These dryland counties are home to the poorest population in Kenya, characterized by persistent drought and limited water availability. These Counties constitute 80% of the land area of Kenya and are home to approximately 20% of the population.

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

The engagement addressed the provision of water and sanitation services and management of water resources. These services are key aspects in addressing poverty reduction, inclusive green growth, rights, and sustainable management of natural resources in the ASALs. The thematic Green Growth and Employment Programme was implemented under the overarching Kenya Country Programme 2016-2020 to support Kenya's "inclusive greener growth with higher employment".

Table 1: Programme Development Engagement Summary

Title of the DE (Development Engagement)	Green Growth and Employment Thematic Programme (GGEP)
Implementing partner or partners	Water Sector Trust Fund
Date of the DED (Development Engagement Document) agreement	1st July 2016 – 31st December 2020
Planned period of implementation	From: 1st July 2016 to 31st December 2020
Actual period of implementation	From: 1st July 2017 to 30th June 2022
Total grant as per DED	DKK[2] 65,000,000
Disbursed amount	DKK 57,986,866.67
Spent amount	DKK 54,258,464.88

1.3 GGEP Implementation

Green Growth and Employment Programme implementation began in July 2017 with the planning activities that included county engagement activities, mobilizations for proposals development, calls for proposals, and appraisals. The projects were implemented through to December 2021. Due to non-completion, the projects had a no-cost extension of 6 months to June 2022.

The main objective of GGEP was to enhance 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. The GGEP targets were revised after the mid-term review undertaken in September 2018 that also included an addendum to the Programme -Water and Livelihood Sub-Programme in Refugee, Host and Other Vulnerable Communities of Kenya implemented in Turkana West Sub County. The revised targets were as highlighted in the table below:

Key outputs for the project included: -

Table 2: Output indicator table vs revised DED targets

Output	Original DED	Revised DED
Output 1:	ASAL counties' capacity and engagement in water-related planning improved	ASAL counties' capacity and engagement in water-related planning improved
Output 2:	Water and sanitation access and deficit in the ASAL addressed through support to 56 new and county prioritized water and sanitation services delivery systems	Water and sanitation access and deficit in the ASAL addressed through support to 24 projects

[2] 1 Danish Krona = Ksh 15

Output	Original DED	Revised DED
Output 3:	Sustainable and community-based management of water resources improved through support to 56 WRUAs	Sustainable and community-based management of water resources improved through support to 27 projects
Output 4:	Improved capacity and engagement by implementing agents (WRUAs, CBOs, Water Utilities) for planning and efficient water service delivery	Improved capacity and engagement by implementing agents (WRUAs, CBOs, and Water Services Providers) for planning and efficient water service delivery
Output 5:	Enhanced experience for promoting Public Private Partnerships in water provision in the ASALs	Enhanced experience for promoting Public Private Community Partnerships in water provision in the ASALs
Output 6:	Strengthened institutional performance of WSTF	Strengthened institutional performance of WaterFund

The GGEP Programme was implemented by different organizations and institutions under partnership with Water Sector Trust Fund in each of the 8 Counties. These included Community Based Organizations (CBOs), Water Utilities (WUs), and Water Services Providers (WSPs) supported and monitored by the County Government Department of Water, implemented water and sanitation projects. The Conservancies and Water Resource Users Associations (WRUAs) implemented the water resource management projects supported by Water Resources Authority (WRA) and Northern Rangeland Trust (NRT). The following were the project implementers in each County.

Table 3: GGEP Implementing Partners[3]

No.	County	Implementing Agents
1.	Tana River	Tana Water and Sewerage Company, Madogo WRUA, Kigaruni WRUA, Lagha Tula WRUA, Ndera Community Conservancy, Lower Tana Delta Conservancy
2.	Lamu	Lamu Water and Sewerage Company, Amu Island WRUA, Kiunga Community Conservancy, Pate Marine Community Conservancy, Hanshak Nyongoro Community Conservancy.
3.	Garissa	Garissa Water and Sewerage Company, Ali Kune WRUA, Lagha Madha WRUA, Tawakal WRUA, Anaam WRUA, Kotile Korisa WRUA, Sharaha WRUA, Khansa Hosle WRUA, Gedilum WRUA, Lagha Togwene WRUA, Kasha WRUA and Habarow WRUA.
4.	Wajir	Wajir Water and Sewerage Company, Buriya WRUA
5.	Mandera	Mandera Water and Sewerage Company, Mujtama WRUA and Dahan WRUA
6.	Marsabit	Bubisa WRUA, Turbi WRUA, Shurr WRUA and Wama WRUA
7.	Isiolo	Isiolo Water and Sewerage Company, Kipsing WRUA, Kuro Bisan Owo WRUA and Garfasa WRUA
8.	Turkana	Lorugum WRUA, Kochodin WRUA. Namoru Akwan, Lokichar and Kangirisae WUAs
9.	National	Water Resources Authority and Northern Rangeland Trust

[3] Counties are arranged according to the gazetted County Codes

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 GGEP 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. This knowledge will be utilized to inform and strengthen various approaches adopted by DANIDA and WaterFund in 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). 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.

Finally, this evaluation was to inform DANIDA and the 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, and water resources management in the counties of implementation in addition to the functionality and sustainability of funded 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:

a) 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 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 Counties 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 programme implementation and O&M training.

e) The outcomes and impact of the policy and institutional support structures on WaterFund and at the county level

f) The programmes' level of influence in promoting Public Private Community Partnerships in water service provision in ASALs.

1.4.2 Scope of the Evaluation

Programmatic Scope

The evaluation covers the full GGEP Programme as detailed in the revised Development Engagement Documents. This involved a review of the programme design, implementation strategies and mechanisms, activities, and contextual factors. The evaluation also reviewed and assessed findings and recommendations made during the Programme Midterm Review (2018) and their implementation

Geographical Scope

Geographically, the evaluation focused on the 8-programme target ASAL Counties. The ASALs in Kenya are spread across 29 counties with varying degrees of aridity. This engagement targeted the critically water stressed ASALs of Northern and North-Eastern Kenya (Tana River, Lamu, Garissa, Wajir, Mandera, Marsabit, Isiolo and Turkana). These drylands are home to the poorest counties in Kenya, characterized by recurrent drought. These areas are sparsely populated with densities ranging from 1 or 2 people per km^2 in parts of Turkana and Marsabit.

The economy of the arid lands is dominated by mobile pastoralism. The areas experience the lowest development indicators and the highest incidence of poverty in the county. In Wajir, Mandera, Marsabit and Turkana, between 74% - 97% of the people live below the absolute poverty line. The cost of providing water and sanitation is very high outside the towns due to the scattered population in the ASALs, approximated at 10-30%, which is way below the national average for rural areas at 49%[4]. With high levels of population growth in the ASALs, poverty is likely to grow unless major investments are made in ASAL services and productive sectors.

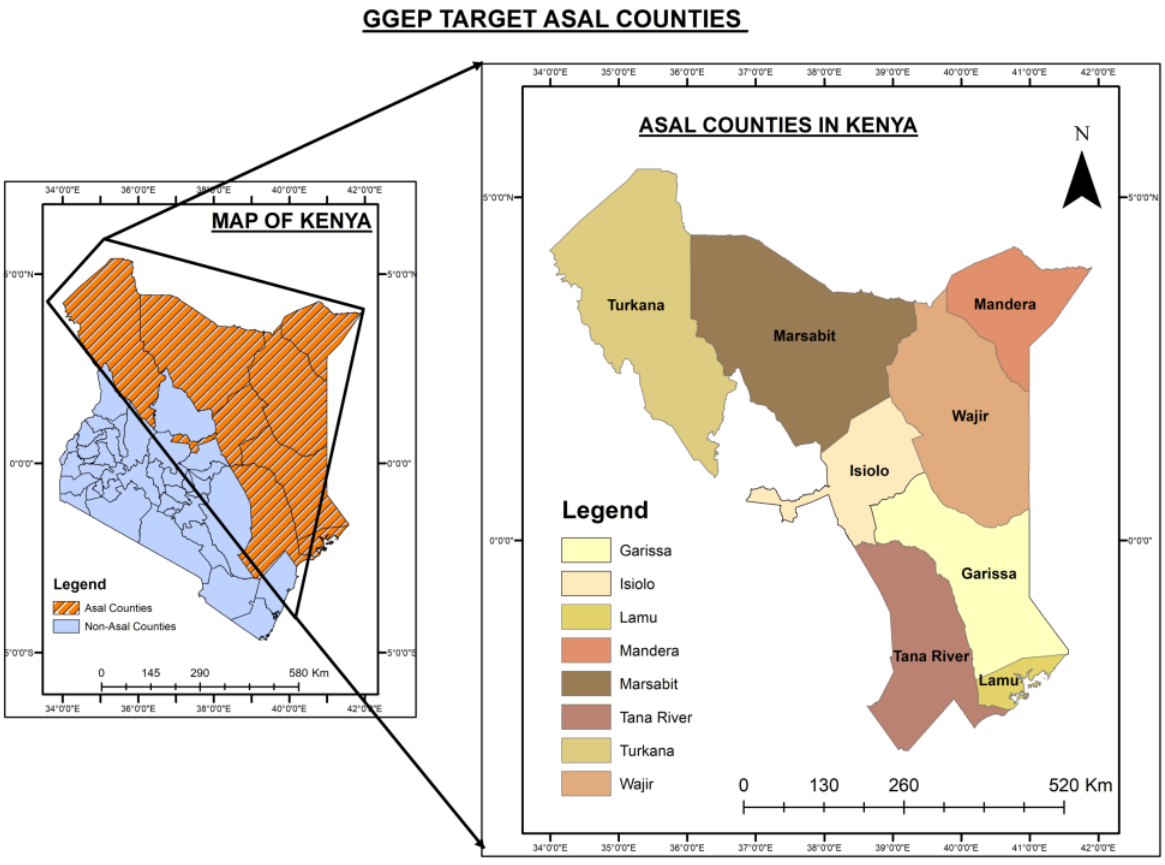


Figure 1: Map showing GGEP target ASAL counties

1.5 Logic of the Intervention (Programme Theory)

The long-term goal of GGEP engagement is captured within the WSTF mission statement of 'assured water resources availability and accessibility of water and sanitation by all' and directed by the WSTF commitment to reach out further to the underserved ASAL counties. The intermediate goal is 'enhanced water resources

[4] State department of development for the ASALs'

management and investments in selected ASAL counties for improved and sustained access by communities and households to water and sanitation for their domestic and productive needs. This includes "increasing access to water and livelihood opportunities in refugee-host and other vulnerable communities, created through enhanced water resources management and investments in Turkana West". This too is the goal and outcome of the additional and new funding for WSTF work. To achieve this goal, several major challenges need to be overcome by this intervention particularly: the specific challenges associated with limited access to water, sanitation, and poor management of water and range resources found in ASAL refugee-hosting areas, where resource strain and competition are of serious scale.

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

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

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

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

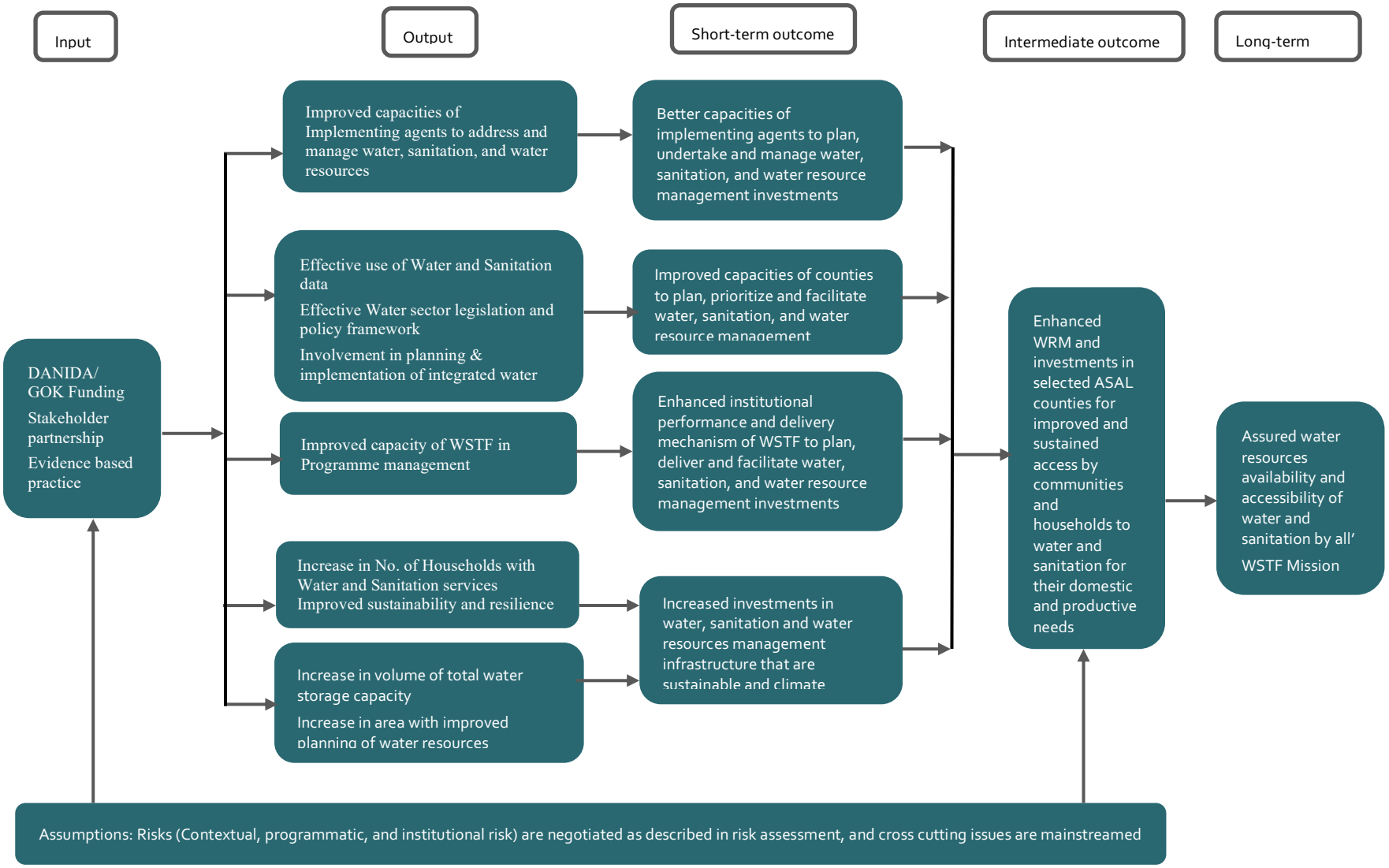


Figure 2: GGEP Programme Theory (Logic Model)

Chapter 2: Evaluation Methodology

2.1 Evaluation Design and Approach

The Evaluation of GGEP programme utilized a theory-based approach to evaluation. The inherent societal complexity of interventions has seen theory-based evaluation move into the mainstream of thinking and practice about how interventions are designed, described, measured, and evaluated within the last 20 years[5]. Theory-based evaluation establishes evidence to a) test the assumptions underlying the chain of causality that leads from output to intermediate outcomes, and contributions towards impact and b) test the theory to see if it holds and draw conclusions about whether and how an intervention contributed to observed results. This evaluation will therefore adopt Theory of change (TOC) evaluation and contribution analysis. The evaluation was guided by the ToC as explicitly outlined in Development Engagement Document and further illustrated in the Results Framework to guide a) formulation of evaluation questions and, b) selection of various evaluation methods.

2.2 Description of Methods

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

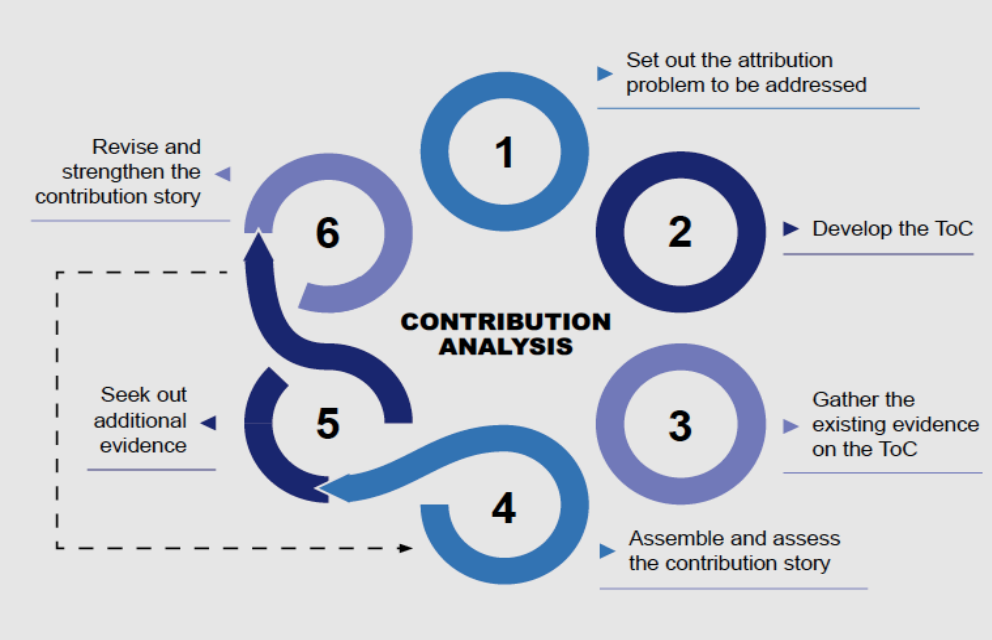


Figure 3: Contribution Analysis

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

1.2.3 Methods for Gathering the Evidence

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

For secondary data, a desk review was conducted to capture past work and studies on thematic areas under GGEP, this was done in the broader context of the two partnering countries (Kenya and Denmark). This detailed desk review provided the basis for analysis and discussion within the evaluation context. Some of the key documents reviewed included a) CIDPs' for the 8 counties b) programme documents including Development Engagement documents, Mid-term review, and completion report c) other key partners' strategic documents and reports including WaterFund's strategic plan, Annual Rural Harmonized Report, DANIDAs' The Right to a Better Life' Strategy for Denmark's Development Cooperation, 2012 and, d) Kenya water sector management framework documents e.g., Kenya Water Act, National Environmental Sanitation and Hygiene Policy, WRUA Development Cycle, 2019 Population and Housing Census Reports among other key documents (Annex 6_Documens Reviewed)

2.3 Sampling

2.3.1 Project Selection

The consultant utilized a two-stage sampling process. First, projects were sampled in each county considering specific parameters for evaluation. Secondly, study participants were sampled from the selected projects within each county.

The selection of projects observed the following requirements.

i. The selection included at least two-thirds of the water and sanitation projects and half of Water resources management projects implemented by WRUAs and Conservancies
ii. Drought Emergency Response (DERP) projects funded under GGEP were well covered.
iii. Projects selected for the field study were randomly sampled from each category (i) with points (i) and (ii) above considered.

Table 4: Sampled projects

	GGEP-DERP Projects		
	Water and Sanitation Projects	WRM Projects	
County	**Project Selected**	**Project Selected**	**Total projects/ county**
Tana River	1. Rehabilitation of Geresa water pan 2. Nanighi water and sanitation project 3. Kipao water and sanitation project	1. Kigaruni WRUA 2. Lagha Tula WRUA 3. Lower Tana Conservancy	6

	GGEP-DERP Projects		
	Water and Sanitation Projects	WRM Projects	
Lamu	1. Poromoko Water and Sanitation project 2. Pangani Water Project Phase 2 3. Mkunumbi water project phase 2	1. Pate Marine Community Conservancy Project 2. Hanshak Nyongoro Community Conservancy Project	5
Garissa	1. Harajab Water and Sanitation Project 2. Libahlow Water and Sanitation Project 3. Shebta-aad Water and Sanitation Project	1. Habarow WRUA 2. Tawakal WRUA 3. Kasha WRUA	6
Wajir	1. Korija Water and Sanitation Project 2. Riba Water and Sanitation Project 3. Sabuli Water and Sanitation Project	1. Buriya WRUA	4
Mandera	1. Lanqura Community Rural Water Supply Project	1. Mujtama WRUA	2
Marsabit	0	1. Shurr WRUA 2. Wama WRUA	2
Isiolo	1. Godarupa Water & Sanitation Extension Project 2. Awarsitu Pipeline Extension Water Project	1. Kuro Bisan Owo WRUA	3
Turkana	1. Namoru Akwar Lokorkor Water Project 2. Lokichar Water & Sanitation Extension Project	1. Lorugum WRUA	3
Total	17	14	31

Summary: Total sample was 31 projects. This represented 53% of all GGEP-funded projects. Among the 31, 17 are Water and Sanitation (DERP 3) and 14 are Water Resources Management projects (Conservancies 3).

2.3.2 Sampling for Household Survey

We sampled a total of 422 households for quantitative data collection. The quantitative sample size was calculated using the Cochran Israel formula with an adjustment of 10% to take care of any possible design effect.

$n \geq (Z^2.p.q)/d^2$ $n \geq (\ 〚1.96〛^2 \ x0.5x0.5)/[〚0.05〛]^2$ =384.16 Adding 10% for design effect: n = 384+ (384x10/100) = 384+34 = 422	*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%)*

The sample was allocated proportionately across counties using number of funded projects. Consequently, every project had approximately 15 household surveys.

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 Microsoft Excel and SPSS. Qualitative data was analyzed through coding to capture cross-cutting themes. To establish change, a comparison was done with baseline data and targets set for the programme, also against standards established by stakeholders or other institutions including the Ministry of Health's ratio of students per toilet and Sphere CHS e.g., minimum distance to a water source. Other analyses conducted include 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 the following key evaluation questions and sub-questions based on the OECD-DAC criteria of Relevance, Coherence, Efficiency, Effectiveness, Impact, and Sustainability. The evaluation was further guided by the OECD-DAC evaluation principles of credibility and usefulness of evaluations[6,7]. A set of indicators, data sources, tools, and specific techniques that guided in the gathering of evidence are shown in the evaluation design matrix (Annex 1).

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

Table 5: Key Evaluation Questions

Evaluation Criteria and Key Evaluation Question	Sub-questions
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 Water, Sanitation, and WRM needs/priorities of intended beneficiaries? 1.2 To what extent are the intervention objectives relevant to WSTF, DANIDA, County, and National Government policies and strategic objectives?
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/WSTF/IP 2.2 How consistent is the intervention with other actors' interventions in the same context (ASALs')

[6] OECD-DAC, Principles for Evaluation of Development Effectiveness, 1991
[7] OECD-DAC, Better Criteria for Better Evaluation, Revised Evaluation Criteria Definitions and Principles for Use, 2019

Evaluation Criteria and Key Evaluation Question	Sub-questions
Effectiveness To what extent have the expected outputs of the intervention been achieved?	Output 1: ASAL counties' capacity and engagement in integrated water, sanitation, and water resources-related planning improved. 3.1 Are counties effectively using water and sanitation data for planning and performing their regulatory functions? 3.2 Do counties have an effective water sector legislative and policy formulation framework to support planning and implementation? 3.3 To what extent are the counties involved in the planning and implementation of integrated water and natural resources management?
	Output 2: Water and sanitation access and deficit in the ASALs addressed? 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?
	Output 3: Sustainable and community-based management of water resources improved 3.7 Has the intervention improved Community-Based Natural Resource Management (CBNRM)
	Output 4: Capacity of Implementing Partners/ agents (WRUA, CBO and WU/WSP, CSO and NGO) improved 3.8 Has the capacity of implementing partners improved?
	Output 5: Experience generated from Public Private Community Partnerships in water provision in the ASALs 3.9 Has the intervention led to new innovative PPCP funding and management approaches?
	Output 6: Strengthened Institutional Performance of WSTF 3.10 How has the intervention impacted WSTF Project management practice? 3.11 Has the intervention improved WSTF efficiency?
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 have regulatory, administrative, time, other resources and procedures contributed to or hindered the achievement of outputs
Impact How effective have the project strategies and approaches in contributing to DE Overall objective	5.1 How has improving water access and water resources management in the ASALs contributed to improved resilience and green growth? 5.2 To what extent has improved access to water for human and livestock use as well as provision of sanitation improved socio-economic development of ASAL communities?

Evaluation Criteria and Key Evaluation Question	Sub-questions
Sustainability What is the likelihood that results will continue once Programme funding and assistance have ended? What is the likelihood that the programme can be replicated	6.1 How sustainable are the intervention results from a socio-political and climatic point of view? 6.2 How sustainable are the intervention results from an economic and/or financial perspective? 6.3 How sustainable are the intervention results from an institutional point of view? 6.4 Can the programme be up scaled or replicated?
Cross-cutting issues What are the key crosscutting issues that were considered in the programme?	7.1 To what extent has the programme adapted to its context? 7.2 How has the GESI issue been considered throughout the programme? 7.3 To what extent did partnerships and stakeholder cooperation, affect the achievement of results? 7.4 What are some of the potential ESG risks and opportunities in GGEP investments? 7.5 To what extent were the results of the intervention influenced by Monitoring, Evaluation, Reporting and Learning (MERL) mechanisms? 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?

2.6 Limitations of Evaluation Methodology

This evaluation was limited by the inherent challenges facing theory-based evaluations. Theory-based approaches to evaluation are not a panacea for attributing results to programmes[8]. They do not necessarily provide a quantitative measure of the size of the contribution an intervention is making. If this is required, there may still be a need for analysis that supports the measurement of the size of observed results[9,10]. Further, contribution analysis which is the core methodology for this evaluation is meant to be done iteratively. This means that evidence should be repeatedly collected and synthesized to refine narratives. Considering the limited resources and scope of this evaluation, it was difficult to have iterations. However, the evaluators implemented contribution analysis in a participatory way with many projects and study participants sampled to validate performance narratives.

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

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

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

Chapter 3: Evaluation Findings

3.1 Household characteristics

A total of 386 participants were surveyed across all the eight Counties with Tana River and Garissa having most of respondents 80 each. There were more female respondents 54.7% (N=211) than males 45.3% (N=175), this can be attributed to the fact that males in ASALs are not always at home due to breadwinning roles and pastoralism. Even though this was the case, women play a major role in water and sanitation aspects of the community as caregivers thus more views from them are a plus for the evaluation. The literacy levels are still very low in the GGEP Counties with 58.3% of respondents having not-attended school at all, and only 1.3% had post-secondary education. The findings also show that fewer women 0.5% proceed to post-secondary education as compared to their male counterparts 2.9%. Majority of the respondents 51.1% were between the age of 35-50 years, a middle age who have experienced the growth, changes, and challenges of the ASALs situation for the last 3-4 decades.

Table 6: Study participants' demographics, Counts (%)

Category		Tana River	Lamu	Garissa	Wajir	Mandera	Marsabit	Isiolo	Turkana
Gender	Male	34 (43)	21 (36)	37 (45)	17 (36)	15 (50)	22 (73)	14 (47)	15 (54)
	Female	46 (58)	37 (69)	46 (55)	30 (64)	15 (50)	8 (27)	16 (53)	13 (46)
Age	18 – 35	13 (16)	33 (57)	10 (13)	5 (11)	14 (47)	10 (35)	12 (41)	8 (29)
	36 – 50	37 (46)	17 (29)	59 (75)	31 (66)	11 (37)	14 (48)	12 (45)	12 (43)
	>50	30 (38)	8 (13)	10 (13)	11 (23)	5 (17)	5 (17)	4 (14)	8 (29)
Education	None	44 (55)	20 (35)	69 (83)	25 (52)	16 (53)	22 (73)	17 (57)	12 (43)
	Primary	29 (36)	27 (47)	10 (12)	10 (21)	11 (37)	8 (27)	10 (33)	13 (46)
	Secondary	5 (9)	10 (17)	4 (5)	9 (19)	1 (3)	0	3 (10)	3 (11)
	Post-secondary	0	1 (2)	0	3 (6)	2 (7)	0	0	0

3.2 Relevance of the programme

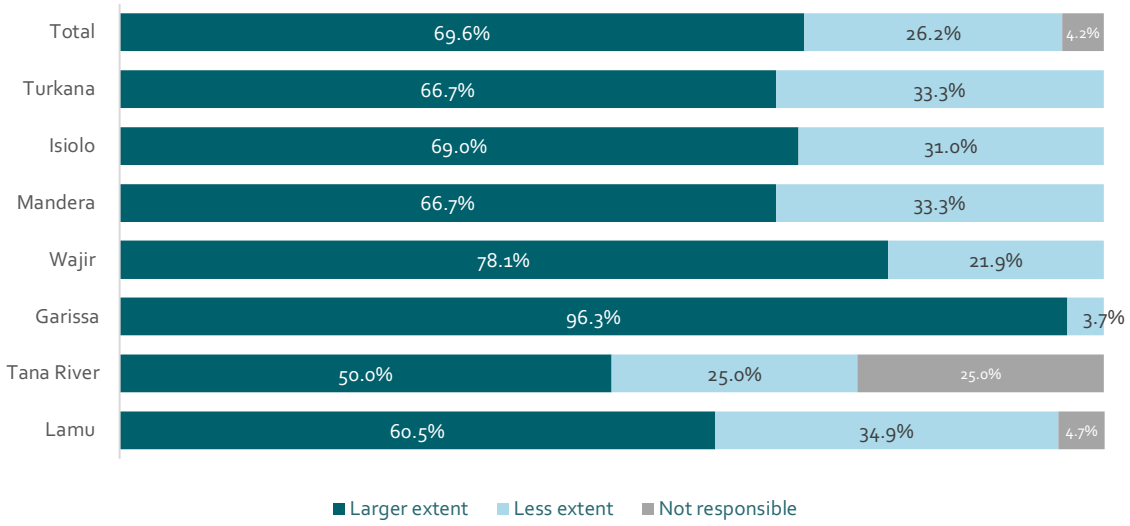
Relevance assessed the extent to which the GGEP Programmes' objectives and design responded to beneficiaries' water, sanitation, and hygiene needs and priorities, and the objectives and priorities of key stakeholders including County Governments, DANIDA, WSTF, and the Government of Kenya.

3.2.1 GGEP Relevance to Primary Beneficiaries Needs and Priorities

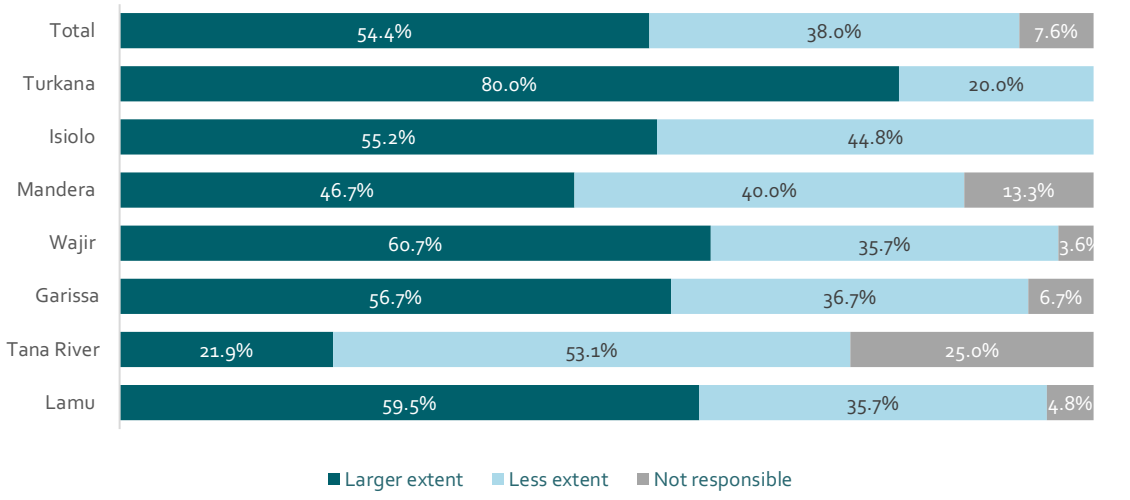
Finding 1: GGEP is relevant to water, sanitation, and WRM needs of primary beneficiaries. The projects implementation structures ensured appropriate response to community needs

The majority of respondents 69.6% reported that the GGEP to a larger extent addressed their water needs. This was particularly evident in Garissa County at 96.3%. Even though sanitation was majorly implemented in schools, more than half of households 54.4% felt that it addressed to a larger extent their sanitation and hygiene needs. From the qualitative data, it was evident that WSTF collaborated with all the eight ASAL counties to identify priority needs as embedded in the Counties' 2018-2022 CIDPs focusing on prioritizing water and sanitation infrastructure and interventions. The collaboration embraced community participation mechanisms that the counties went through in developing the CIDPs. Most Implementing Agents participated in the project design from proposal writing, physical appraisals of their projects and initial project inception meetings, implementation, monitoring, and evaluation

More than half of respondents across the GGEP Counties indicated that the intervention addressed their Water needs



Tana River County had the least proportion of respondents who believed GGEP addressed their sanitation and hygiene needs. Turkana county reported the highest proportion



3.2.2 GGEP Relevance to Key Stakeholders' Policies and Strategic Objectives

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

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

DANIDA	*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*
WSTF	*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 WSTF to enhance its capacity to deliver on its mandate. Water Sector Trust Fund Strategic Plan (2018–2022)*
County Governments	*All the Counties' CIDPs 2018-2022 have water development and resources management as priority areas for their constituents and GGEP projects fit into the Counties' plans and aspirations. The Counties' identified needs and priorities through a consultative process that involved the people and their leaders in decision-making, right from the Ward to the County level. Sub-County Development Boards, and Ward Development Boards to ensure that the projects captured in the CIDP are based on community needs as identified during the ward-level public participation fora. Most Counties also had water catchment protection, and conservation of natural resources as key strategic areas with the promise to support projects that aim at protection of water catchments, disaster management, and early warning systems. On renewable energy, most counties promised to explore the use of solar water pumps as a way of utilizing green energy*
Kenya Government	*The Constitution of Kenya 2010 in Article 27 recognizes that measures should be put in place to encourage affirmative action programmes and policies to address past inequalities. Economic and social rights for all are also recognized in Article 43. These include the right to health care services, adequate housing and sanitation, adequate food of acceptable quality, clean and safe water, and appropriate social security for vulnerable groups in society. Supporting water infrastructure and increasing access to water is relevant to the Country's constitution. The Kenyan government blueprints Medium Term Plans being implemented and Vision 2030 in which water provision falls under the social pillar, Big 4 agenda, Kenya Water Master Plans, and Ministry of Water, Sanitation and Irrigation's policies all work towards access to safe water for all Kenyans by 2030.*

3.2.3 Robustness of GGEP Theory of Change (TOC)

Finding 3: GGEP 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 GGEP Theory of change was found to be generally well structured by clearly outlining the underlying multidimensional challenges facing ASAL Communities in Kenya. The ToC presents a clear logic from outputs to lower-level and higher-level outcomes. It further identifies strategies to be applied to reach the outputs and the interventions. The DED has specified a proper situation analysis, stakeholder analysis, risk analysis and management, M&E plan, and implementation arrangements with meticulously identified implementing agents and partners. The design is realistic, efficient and provides enough opportunity for stakeholder involvement and participation. However, the ToC has not presented succinctly the assumptions underpinning the theory of change nor a clear causal pathway.

For clarity and efficient implementation, the ToC was further illustrated using a results framework. The results framework was well detailed providing additional information including SMART (Specific, Measurable, Attainable, Relevant, and Time-bound) indicators at the output level- the outcome indicators can be improved on to include qualitative indicators that measure change, baseline, and targets. Some baseline data are not available from the results framework whereas other cases indicate absolute values.

This nonetheless did not present a challenge to the evaluation considering the theory-based evaluation adopted in this evaluation, with contribution analysis as the core methodology of assessing the intervention. The evaluators however did not conduct an extensive Quality of Design Assessment.

3.3 Coherence

3.3.1. GGEP Coherence in Design and Implementation

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

GGEP 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 DED was modeled around existing WSTF financial and operational mechanisms a) Rural Investment: This mechanism develops rural communities' capacities to access funding and implement and maintain water and sanitation facilities. Under this mechanism, ASALs have been targeted for purposes of focusing on financing water and sanitation projects. The focus recognizes and appreciates the need for water and sanitation in the ASALs, as well as their unique characteristics concerning water and sanitation and b) Water Resources Investment: This mechanism supports communities to manage their water resources including their rangelands within their sub-catchments. The two financing mechanisms have traditionally been implemented mainly through community-based organizations (CBOs) and Community Based Natural Resources Management organizations such as Water Resources Users Associations (WRUAs).

The programme also builds on the lesson learnt during the implementation of the engagement and relevant for the revised DED is the need for an opening for projects with larger financial requirements, so that the WSTF portfolio will include larger projects with increased impact. The program was consistent with GoK policy targets on developing the ASAL region including improved livelihoods, drought management, and relief as well as the development of water and the economic sectors to enhance the resilience of communities in the ASALs. This engagement also made it possible for WSTF to expand its operations to include eight of the poorest ASAL counties in Kenya, thereby contributing to achieving more equal national development. The two new ASAL counties (Turkana and Mandera) included in the engagement, in addition to those six targeted under the current DANIDA support under MTAP to WSTF, are very arid, poor, and underserved. Further, 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. Lessons learnt showed that coverage can be improved even under difficult conditions, but also highlight challenges and the need to adapt approaches to ensure effectiveness. This engagement addressed these challenges of delivery and sustaining of investments while utilizing the updated approaches to address the problems in the ASALs.

GGEP strategy was also informed by WaterFund Green Growth Strategy, especially on the size of water pans. The programme adopted increased capacity of water capture and storage under rural and water resource management where at least 30,000m^3 capacity for water pans was adopted to hold water for longer periods and avert the effects of drought. Finally, GGEP utilized WSTF's established delivery mechanisms and partnerships with counties, that have proven to be effective in addressing the challenges of limited access to water and sanitation and poor water resources governance in ASALs. Therefore, this engagement ensured aligned and harmonized support between WSTF and County efforts.

3.4 Effectiveness

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

3.4.1 Achievement of Expected Results

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

Outcome Indicators		Target	End Term
Indicator 1.1	Increase in number of households with sustained coverage from improved water services in eight ASAL counties because of the DED	30,000 households reached with sustained water services	83% of the target was reached, approximately 24,800 households have access to improved water services.
Indicator 1.2	Increase in number of households with sustained coverage from improved sanitation services in eight ASAL counties because of the DED	4,000 new households reached with sustained sanitation services	3,350 people have access to improved sanitation services including 2500 school children and more than 450 community members
Indicator 1.3	Increase in area implemented under improved water resources management planning (as SCMP or other water and range management arrangements) in the eight targeted ASAL counties because of the DED	7000km^2 implemented under improved water resources management planning	28.7% of the target achieved 2,010.83 km^2 of new catchment was put under improved water resources planning and management, approximately 561 km^2 has been implemented through conservation.

Finding 5: GGEP's overall Development Engagement Objective was partially achieved

An estimated 24,800 new households received water services because of GGEP after successful implementation of water projects in 24 communities spread across the eight Counties, through drilling and equipping of boreholes, construction of distribution mains, raised storage tanks, underground sump tanks, community water points (water kiosks and yard taps), and households' connections. Similarly, approximately 3,350 people have access to improved sanitation services including 2500 school children and more than 450 community members. This was achieved through a combination of sanitation approaches targeting institutions. GGEP supported several interventions including constructing 116 doors of VIP latrines in schools, achieving the Ministry of Health & WHO standards of pupils to toilet door ratio (1:25) and 18 doors of VIP latrines in public institutions (Mosque & Dispensary). Hygiene was further enhanced through hygiene promotion, establishing hand washing, and community sensitization.

Under improved water resources management planning, GGEP worked with 27 WRUAs and 5 conservancies. A total of 14 Community based resource management consisting of 12 WRUA's (Ali Kune, Lagha Madha, Tawakal, Anaam, Kotile Korisa, Sharaha, Khansa Hosle, Gedilum, Lagha Togwene, Bubisa,Turbi, and Shurr) and 2 Conservancies (Kiunga and Pate Marine) catchment areas covering 2,010.83 km^2 were planned through the development of sub-catchment management plans (SCMPs) and Conservancy Development Management Plan (CDMP) for coordinated management of the resources, of this total area, 561 km^2 has been implemented through conservation activities including mangrove

restoration, planting of indigenous trees and construction of water pans for aquifer recharging. Further, a significant number of community members benefited from water resource management, livelihood, and resilience activities including beekeeping, planting of indigenous fruits, rangeland management, etc. Water storage was significantly increased through the development of water pans and putting up of water storage tanks in the project area for both livestock and domestic use. An estimated 184,072m^3 water storage was successfully developed through construction of 2No. berkads, 5No. djabias, 27No. rainwater harvesting tanks, 7No. sand dams and 5No. water pans of various sizes ranging from 30,000 to 50,000m^3.

Figure 4: Achievement of overall DE Objective

Achievement of planned results 1: *ASAL counties' capacity and engagement in integrated water, sanitation, and water resources-related planning improved.*

Output Indicators		Baseline	Target	End Term
Indicator 2.1	Number of Counties 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	8 counties using and updating water and sanitation data for improved planning and follow-up and perform their regulatory functions	100% of the Counties have water and sanitation data used for planning and implementation.
Indicator 2.2	Number of Counties (8) with an effective water sector legislative and policy formulation framework to support effective planning and implementation.	Limited legislative and policy frameworks in the target counties to support effective programme planning and implementation	8 counties implementing an effective water sector policy and implementation frameworks in policy formulation and decision making	62.5% of the Counties i.e., 5 have water legislations although not supported under GGEP

Finding 6: All Counties have water and sanitation data but are not regularly updated. Five of the Counties have water legislation in place.

All the Counties have data on the number and types of water sources in their Counties such as boreholes, springs, rivers, streams, shallow wells, water pans, and sand dams used for planning. There is also information on boreholes functionality that assists the County water departments in follow-up for repair and maintenance. What is lacking in most counties is the digitalized real-time updated data on water points with GPS locations, management information, and efficiency. Most data are manually kept and only used during the CIDP development.

On sanitation, the Counties' data on rural sanitation i.e. Community Led Total Sanitation can be found on CLTS - Kenya | Home (health.go.ke) updated in terms of villages triggered, claims, verified and Open Defecation Free certified. Data on Wajir County however has not been updated for almost 2 years.

On water policies and legislation, five of the counties i.e., 62.5% have water legislation supported by USAID to develop, the three others (Wajir, Tana River and Mandera) still lack this legislation, and the process of enactment has been delayed due to lack of political goodwill or priority by the County governments. These legislations have been utilized to guide the implementation of Water, Sanitation and WRM investments within the counties.

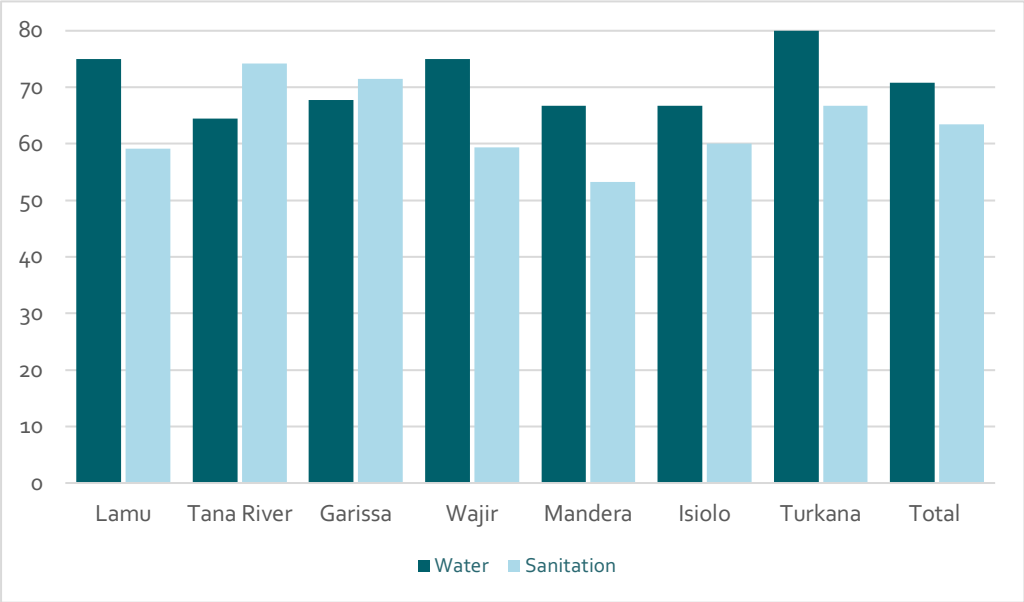
Achievement of planned results 2: *Water and sanitation access and deficit in the ASAL addressed*

Output Indicators		Target	End Term
Indicator 3.1	Increase in number of households with water services from WaterFund in this engagement in the eight ASAL countries.	At least 30,000 new households reached through at least 24 new projects	24,800 households have access to improved water services from 24 GGEP-supported water projects.
Indicator 3.2	Increase in number of households with sanitation services from WSTF in this engagement in the eight ASAL countries.	At least 4,000 new households reached through at least 24 new projects	3,350 people have access to improved sanitation services including 2500 school children and more than 450 community members
Indicator 3.3	Average Sustainability Index of the WaterFund supported investments in the 8 target counties:	70% of the funded investments are sustainable by 2020	The GGEP projects had an average sustainability index of 80%
Indicator 3.4	% Of facilities funded through the engagement that are climate proofed and mainstreaming green approaches.	80% of the total number of facilities funded through the engagement	All the projects implemented under GGEP are Climate Proofed and mainstream green approaches
Indicator 3.5	% Of targeted households in programme counties are expressing satisfaction with the water and/or sanitation services	80 % of those targeted with the services are expressing satisfaction with the services	78.5% expressed satisfaction with water services while slightly more than half, 56.6% are satisfied with sanitation services

Finding 7: GGEP has greatly impacted access to water and sanitation by increasing the number of households accessing water and sanitation services across all the eight counties

The GGEP implementation reached approximately 24,800 households of the targeted 30,000 with access to improved water services from 23 GGEP-supported water projects. Similarly, approximately 3,350 people have access to improved sanitation services including 2500 school children and more than 450 community members. This was achieved through a combination of sanitation approaches targeting public institutions (Schools, Mosques, and Dispensaries). The evaluation reveals that 70.8% of the households in the target areas now have access to a safe water supply while 63.5% have access to sanitation.

All the counties had more than half of the respondents accessing clean water and sanitation. Access to sanitation however remained lower across all the counties



Piped water access has increased to 48% of which 11.9% are within the premises while 36.1% are from water kiosks or public taps. A good percentage 73.4% 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 48%, the distance being far 23%, too dangerous to get water from where it is located 7.9%, not able to afford enough water 15.9%, limitation of the volume of water that one can collect at a water point in a day 28% and lack of enough storage containers 25.6%. In the project areas, the respondents reported that currently their sources of water for livestock and other farm use include water pan 54.5% boreholes 37.7%, rainwater 17.5%, rivers 19%, dug wells 12%, and sand dams at 7.7%. Among the respondents, 78.5% expressed satisfaction with water access. Sanitation was done majorly in the schools within the communities in which water supply projects were implemented. This, coupled with overall low sanitation coverage, can explain lower satisfaction levels with sanitation services 56.6%.

Table 7: Main Source of water for drinking and other household uses

Sources of water	Tana River	Lamu	Garissa	Wajir	Mandera	Isiolo	Turkana	Total
Public tap/ Standpipe	0	1 (2)	2 (7)	4 (13)	2 (13)	1 (3)	3 (20)	13 (7)
Handpumps/ Boreholes	8 (27)	21 (50)	28 (90)	15 (48)	3 (20)	2 (7)	2 (13)	79 (41)
Unprotected hand dug well	0	2 (5)	0	0	4 (27)	1 (3)	0	7 (4)
Water seller/ Kiosks	22 (73)	9 (21)	1 (3)	4 (13)	6 (40)	5 (17)	10 (67)	57 (29)
Piped connections to house/ Neighbor's house	0	6 (14)	0	7 (23)	0	10 (3)	0	23 (12)
Surface water (Lake, dam, river, pond)	0	1 (2)	0	1 (3)	0	11 (37)	0	13 (7)
Rainwater collection	0	2 (5)	0	0	0	0	0	2 (1)
N = 205	30	42	31	31	15	30	15	

The evaluation also revealed that 34% of respondents access water within a distance that meets Sphere standards (Less than 500m), 29% fetch water within 1km radius, while 11% are still getting their water from a distance of more than 5km. Majority of those travelling more than 5km to fetch water are from Isiolo and Mandera, 48% and 20% respectively. The GGEP Programme has significantly reduced the distance to water points which can be as high as 15km[11] in some ASAL areas. The reduced distance reflects shorter times spent on a round trip on water collection which is further channeled to more productive activities. It is noted that spending too much time fetching water may exacerbate water insecurity and be a barrier to sustainable development[12].

Table 8: Average distance to the nearest water source (N=200)

Distance to the nearest water point	Tana River	Lamu	Garissa	Wajir	Mandera	Isiolo	Turkana	Total
Water available on premises	0	11 (28)	9 (29)	12 (38)	0	11 (38)	0	43 (23)
<500m	2 (7)	4 (11)	1 (3)	1 (3)	4 (27)	0	9 (60)	21 (11)
500m – 1km	12 (39)	14 (37)	5 (16)	11 (34)	5 (33)	4 (14)	6 (40)	57 (29)
1km – 5km	14 (47)	9 (24)	16 (52)	8 (25)	3 (20)	0	0	50 (26)
>5 km	2 (7)	0	0	0	3 (20)	14 (48)	0	19 (11)

[11] Mati, B. M.; Muchiri, J. M.; Njenga, K.; Penning de Vries, F.; Merrey, D. J. 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)

[12] 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

A woman and girls collecting water from a Water Kiosk at Kipao Kheri, Tana River

A filled animal watering trough at Lokichar Water Project, Turkana County

Sustainability Index

Finding 8: GGEP projects had a high sustainability index. Projects implemented through the conservancies had a higher SI 85.3% as compared to WRUAs' 82.7% and water service providers 76.7%.

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 are still operational and in good technical and operational condition[13]. 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[14]. In this evaluation, 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 evaluation aggregated the average value based on the Functionality and Reliability of an investment, Revenue collection (ability to cover O&M), Age and Survival rate of an investment, and the Functionality of an investment (Annex 4_Sustainability Index). The GGEP projects had an average sustainability index of 80% with projects implemented through the conservancies showing higher sustainability percentage 85.3% as compared to WRUAs' 82.7% and water service providers' 76.7%.

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

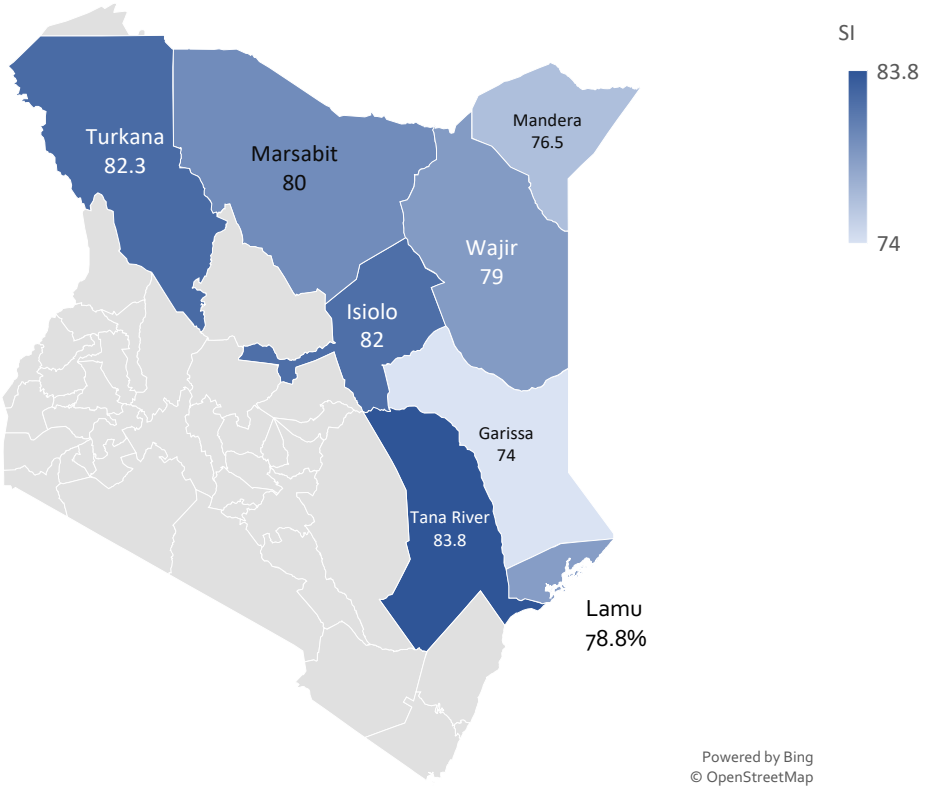


Figure 5: Percentage Sustainability Index by County

Climate Proofing and Green Approaches

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

A sand dam at Buriya WRUA, Wajir County

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 ending hunger, poverty and improving access to water and sanitation[15]. All the projects implemented under GGEP are Climate-Proofed and mainstream green approaches. This has been done by increasing their capacity to withstand drought, proper siting to mitigate flood destruction, and use of appropriate technology on piping and solar power for pumping.

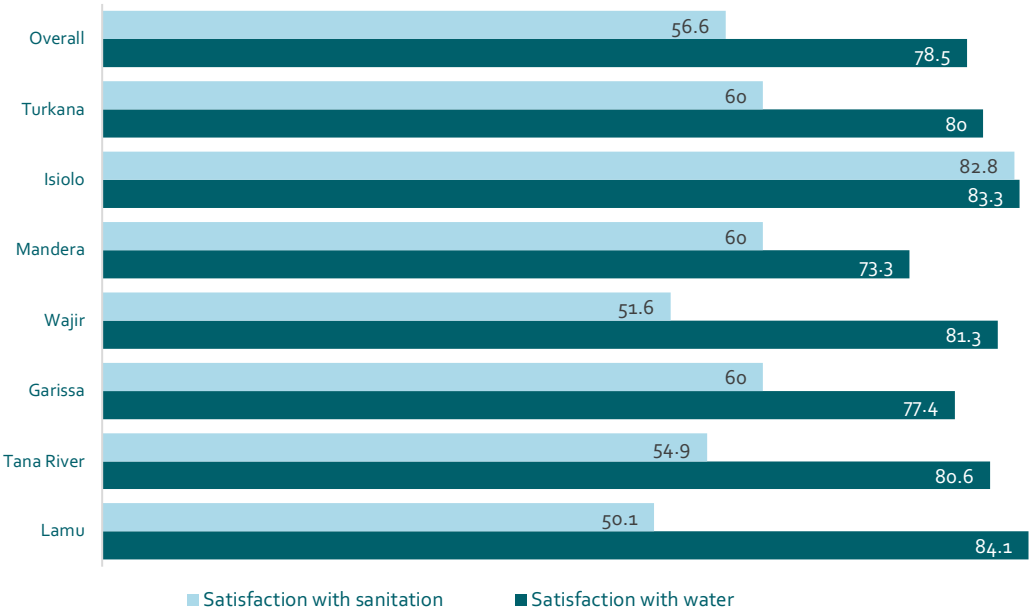
[15] Climate Adaptation & Resilience for Food & Water Security, USAID

Satisfaction with Water and Sanitation Services

Finding 10: Satisfaction with water services was significantly higher than with sanitation.

In general, 79% of the respondents were satisfied with the water services offered across the eight counties. Lamu and Isiolo had the highest proportion of respondents satisfied with sanitation services, 84.1% and 83.3% respectively. The majority of those not satisfied were from Mandera 26.7% and Garissa 22.6%. Overall, satisfaction with sanitation services was comparatively low, slightly more than half (56.6%) of respondents were satisfied

Across all the counties satisfaction with water is significantly higher than sanitation except in Isiolo



Achievement of 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 (No targets) from the WaterFund investments.	30% increase in water storage from improved CBNRM (as compared to situation before projects)	184,072m^3 Of new water storage developed
Indicator 4.2	Increase in area with improved water resources management planning including SCMPs in WRUAs, range management in 8 ASAL counties, and catchment planning	7,000km^2 Increase in area with improved water resources management planning including SCMPs in WRUAs, range management in 8 ASAL counties, and catchment planning	2,010.83 km^2 of catchment put under improved water resources planning and management

Finding 11: GGEP has improved Sustainable and community-based management of water resources in the 8 ASAL Counties by significantly increasing water storage capacity and expanding the area under improved water resources planning

Water storage was significantly increased through development of water pans and putting up of water storage tanks in the project area both for livestock and domestic water use. An estimated 184,072m^3 water storage was successfully developed through construction of 2No. berkads, 5No. djabias, 27No. rainwater harvesting tanks, 7No. sand dams and 5No. water pans of various sizes ranging from 30,000 to 50,000m^3. A total of 14 Community based resources management consisting of 12 WRUA's (Ali Kune, Lagha Madha, Tawakal, Anaam, Kotile Korisa, Sharaha, Khansa Hosle, Gedilum, Lagha Togwene, Bubisa,Turbi, and Shurr) and 2 Conservancies (Kiunga and Pate Marine) catchment areas, covering 2,010.83 km^2 were planned through development of sub-catchment management plans (SCMPs) and Conservancy Development Management Plan (CDMP), for coordinated management of the resources. Of this total area, 561 km^2 has been implemented through conservation activities including mangrove restoration, planting of indigenous trees and construction of water pans for aquifer recharging. Further, a significant number of community members benefited from water resource management, livelihood, and resilience activities including beekeeping, planting of indigenous fruits, rangeland management, etc.

Handing over of Djabia to community members at ShangaRubu. Lamu County

Table 9:New catchment under improved Water Resources Planning

County	WRUA/ Catchment Area	Key Activities	Area in Km^2
Lamu	Kiunga Community Conservancy Project, Pate Marine Community Conservancy Project,	Development of Conservancy Development Management Plan (CDMP), Construction of djabias, Mangrove restoration training, planting & establishment of mangrove tree nurseries, Training community beneficiaries on beekeeping	810.83 km^2
Garissa	Ali Kune WRUA, Lagha Madha WRUA, Tawakal WRUA, Anaam WRUA, Kotile Korisa WRUA, Sharaha WRUA, Khansa Hosle WRUA, Gedilum WRUA, Lagha Togwene WRUA,	Capacity building and SCMP development	900 km^2
Marsabit	Bubisa WRUA, Turbi WRUA, Shurr WRUA	Capacity building and SCMP development	300 km^2
Total			2,010.83 km^2

Planting of trees for Habarow WRUA (Baraza Park), Garissa County

It is generally noted that WRUAs and Conservancies participated in activities aimed at soil, rangeland, and water resource management within the community. The WRUA and Conservancies engaged in community sensitization and riverbank protection including fencing, riparian pegging, and tree planting, 89% and 71% respectively. Activities along sub-catchments to protect against illegal abstractions of water and other destructive practices were least practiced.

Dalga galge mangrove restoration of 3HA with over 2,700 trees planted by the Lower Tana Delta Conservancy, the alternative clean energy component provided (38 biogas kits and 320 energy-saving jikos) to the households thus reducing the use of firewood and charcoal thus saving the forest cover. Distribution of about 12,000 fruit trees seedlings and 20,000 trees planted in Kigaruni WRUA basin, Tana River County

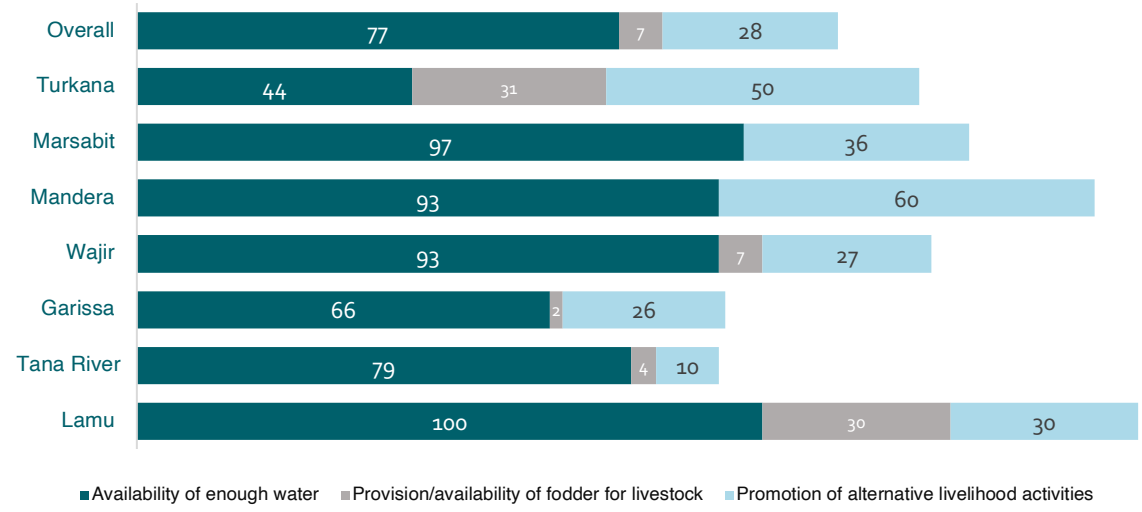
Table 10: Activities aimed at soil, rangeland and WRM within the community, N = 185

Activities	Tana River	Lamu	Garissa	Wajir	Mandera	Marsabit	Turkana	Total
Riverbank protection (fencing, riparian pegging, tree planting)	35 (73)	3 (21)	32 (68)	13 (87)	14 (93)	24 (80)	10 (63)	131 (71)
Construction of water storage and conservation infrastructure e.g., Sand dams and water pans	17 (35)	13 (93)	0	2 (13)	1 (7)	13 (43)	9 (56)	55 (30)
Regulation of water use and equitable distribution through bulk metering	0	0	0	0	0	0	0	0

Activities	Tana River	Lamu	Garissa	Wajir	Mandera	Marsabit	Turkana	Total
Activities along sub-catchments to protect against illegal abstractions of water and other destructive practices	4 (8)	2 (14)	0	0	0	0	0	6 (3)
Community Sensitization	44 (92)	14 (100)	45 (96)	15 (100)	14 (93)	24 (80)	8 (50)	164 (89)

Majority of respondents believed that WRUAs and Conservancies activities aimed at soil, rangeland, and water resource management within the community have helped to reduce rangeland and water resource conflicts in the sub-basin through the availability of enough water (77%) and promotion of alternative livelihood activities (28%).

Lamu county WRUA/ Conservancies activities had the greatest impact on reducing rangeland and water resource conflicts in the sub-basin. Overall, the availability of enough water had the greatest impact



Achievement of planned results 4: Improved capacity and engagement by implementing agents (WRUAs, CBOs, Water Utilities, and Water Services Providers) for planning and efficient water service delivery.

Output Indicators		Target	End Term
Indicator 5.1	Number of WRUAs / CBNRM organizations that have successfully[16] implemented their WRUA projects under this engagement	27 WRUA/CBNRM organizations projects	32 Organizations (27 WRUAs and 5 Conservancies have successfully implemented their projects
Indicator 5.2	The number of WUs / WSPs that have successfully implemented all their county water and sanitation projects under this engagement (and number of projects).	24 WU/WSP projects	23 WSP have successfully implemented all their county water and sanitation projects

[16] Successfully implemented means completed projects to a satisfactory level as assessed by post project assessment

Output Indicators		Target	End Term
Indicator 5.3	Creditworthiness index of the projects funded by this engagement	An average of 70% credit worthiness of the supported WUs/WSPs	An average of 71% Creditworthiness for 7 of the supported projects sampled was achieved.

Finding 12: There is improved capacity and engagement by implementing agents (WRUAs, CBOs, Water Utilities, and Water Services Providers) for planning and efficient water service delivery.

WaterFund's engagement with the Implementing Agents included activities that build their capacities in key areas of project implementation. Each agent had its key staff trained on proposal development, financial management, procurement, and contract management in the initial stages of the implementation. This training was critical to ensure various projects adhere to good management practices and harmonize their reporting with WSTF's requirements for financial, monitoring, and technical reporting standards.

Table 11: Capacity building of Implementing Agents

Training/support area	Components
Procurement	Public Procurement and Asset Disposal Act, 2015, tendering process including preparation of tenders and evaluation of bids,
Audit	Common audit issues with a view of offering preventive rather than curative approaches in audit
Technical	Review technical components of the tender documents and assist in the technical evaluation of bids Project supervision
Management	Preparation of monthly monitoring and progress reports Operation and Maintenance: Governance, financial management – billing and revenue, tariff setting, Operation and Maintenance, Non-Revenue Water, ring-fencing of funds for O&M, NRW, and sustainability, and lastly sensitization and steering of county selection on the most appropriate rural water delivery option to ensure sustainability.

The programme also adopted benchmarking. Benchmarking has become a strategic tool for measuring performance, learning, and inducing improvements in service delivery. All the counties Participated in a benchmarking tour, visiting three water utilities in Western Kenya. The benchmarking team comprised representatives of the Counties' water departments, WSP technical staff, WaterFund, and Kenya Market Trust. These training and capacity building of implementing agents have contributed to effective and efficient implementation, 95% of all projects were implemented successfully with majority of the counties having all projects completed satisfactorily

County	No. of implemented projects	Projects successfully completed	Projects not completed	94.8% of projects successfully completed
Tana River	*11*	*11*	*0*	
Lamu	*9*	*9*	*0*	
Garissa	*14*	*13*	*1*	
Wajir	*5*	*4*	*1*	
Mandera	*4*	*4*	*0*	
Marsabit	*4*	*4*	*0*	
Isiolo	*6*	*6*	*0*	
Turkana	*5*	*4*	*1*	

Table 12:Number of successful projects implemented

Effectiveness of Training Delivered

Finding 13: Capacity-building approaches were highly effective and contributed to successful implementation and improved service delivery

Kirkpatrick's model was used to evaluate the effectiveness of the training delivered to the Implementing Agents (WRUA, CBO, WU/WSP/Conservancies) and beneficiaries of the programme. 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 13: Kirkpatrick Training Assessment

Levels	Finding
Level 1: Reaction	There was a positive reaction to the training delivered, 76% of the respondents (N= 60) found the training relevant to their needs, 80% found them engaging, 78% were satisfied with what they learnt. While 75% said they would recommend the training to their colleagues.
Level 2: Learning	The methods were effective in knowledge transfer, 78% 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	Project leaders (80%) reported improvement in the job performance and behavior change towards work by the trained team, 77% of the customers (primary beneficiaries) surveyed expressed satisfaction with the services. Also, more than half of implementing agents indicated improved efficiency in revenue collection, reducing non-revenue water, improved project supervision and monitoring
Level 4: Results	Improved capacity of implementing agents has contributed to a high success rate in the implementation of GGEP projects, Improved sustainability of the projects and improved service delivery as demonstrated by improved customer satisfaction

Creditworthiness Index

Finding 14: Seven sampled GGEP projects had an average of 71% CWI. Two of the seven projects had CWI below the GGEP 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[17]. 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 (Table 14) 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. (Annex 5_Creditworthiness Index)

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

Table 14: Creditworthiness Index

	Indicators	Nanighi WSS Project	Kipao WSS Project	Poromoko/ Pangani WSS	Korija WSS Project	Riba WSS Project	Sabuli WSS Project	Lokichar WSS Project
Annual Cost	% Of Maintenance costs of total O&M costs	2.5	2.5	10	10	10	10	10
	% Of energy costs of total O&M costs	10	10	10	0	0	0	0
	% Of staff costs of total O&M costs	0	0	0	5	10	5	0
Annual Revenue	% Difference between collected Revenue and expected Revenue	5	5	10	5	7.5	5	7.5
	O&M Coverage (% Revenue of O&M Cost)	0	0	10	10	10	10	10
Technical	% Of people with water supply/population of the area	4	4	0	0	0	0	1
	% Estimation of NRW	4	4	4	1	3	3	4
	Number of staff/ 1000 people served	0	4	4	0	3	4	4
Governance	Availability of Management Committee	4	4	4	4	4	4	4
	Diversity of Management Committee (Gender, Youth, PWD)	4	4	4	4	4	4	4
Systems	Availability of Management systems e.g., Consumer records, financial management, HR, Stores & Investment plan	10	10	10	10	10	10	10
Liabilities	% Total debt/ Revenue Collected	10	10	10	10	10	10	10
	Grant Dependency, Proportion of O&M cost financed through grants	0	0	10	10	10	10	10
CWI		53.5	57.5		69	81.5	75	74.5

The seven sampled Water and Sanitation projects had average creditworthiness of 71%. According to WASREB, a creditworthiness index of between 70 to 85 Indicates 'Highly Creditworthy' i.e., 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.

Achievement of planned results 5: *Enhanced experience for promoting Public Private Community Partnerships in water provision in the ASALs*

Output Indicators		Target	End Term
Indicator 6.1	Number of Public-Private-Community Partnership management approaches piloted in the target counties.	At least two models in at least two counties	One PPCP model is being implemented between Lamu County and Davis and Shirtliff Company for maintenance of the Reverse Osmosis plants in Lamu County
Indicator 6.2	% Of external finance leveraged by piloted PPCP models	At least 50% of funding leveraged from external sources	No leveraged funds were established

Finding 15: PPCP has not fully been leveraged in Water and Sanitation provision in ASAL despite capacity building

This output sort to pilot models for collaboration between the public sector and private sector actors in provision of water services and water resource management in the ASALs. Including CSR activities and green technology application in water provision in selected ASAL areas in one or two of the selected ASAL counties to produce lessons learnt on models for increased water service coverage and promote sustainable drylands productive opportunities.

The WASREB 2019 guidelines for water provision in rural and underserved urban areas provide various options for County governments in collaboration with WASH sector stakeholders to provide water services with close monitoring by WASREB. Under this, Isiolo and Lamu counties have opted to allow new water service providers to manage rural water schemes. Lamu Water and Sewerage Company signed a service contract with Davis and Shirtliff to provide technical support through routine Operation and Maintenance of the two reverse osmosis plants installed in Kiunga and Kizingitini Islands. Isiolo County also has used the delegated approach to Water Utilities to ensure service delivery in the rural areas since the urban WSP does not have the capacity to cover rural water supply schemes. The evaluation however did not establish any funds leveraged from these two pilots.

Despite existing capacity within WSTF on PPP for example, three WSTF staff (Resource Mobilization Officer, two Programme staff supporting GGEP) were trained in Certified Public Private Partnership (PPP) Professional Foundation Course organized by The NEPAD Foundation (NBF) and USAID – funded Water, Sanitation and Hygiene Finance (WASH – FIN) programme, this target was not achieved partly due to the modalities required during implementation that was above the allocated budget line.

Achievement of planned results 6: *Strengthened institutional performance of WSTF*

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 WSTF implemented projects and some data on county coverage exist but no digital information or spatial data systems are available and used	100% of the WSTF-supported investments in the target ASAL Counties are mapped and managed in a GIS-enabled management information system	All WSTF-supported investments in the targeted ASAL counties have been mapped and georeferenced

Output Indicators		Baseline	Target	End Term
Indicator 6.2	WaterFund capacity to support project identification, implementation support, and monitoring is improved.	WSTF is constrained in aspects of project identification, implementation support, and monitoring	WSTF reports improved capacity to undertake project identification, provide implementation support and do project monitoring	WSTF staff have reported and demonstrated improved capacity to undertake project identification, provide implementation support, and do project monitoring
Indicator 6.3	Proportion of questioned costs funded through the DED against total WSTF investments to assess value for money and the WSTF 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	0.75% of the investment cost was questioned

Finding 16: GGEP investment has improved WSTF institutional performance

WaterFund is using an effective MIS system to map and manage water and sanitation supported investments across the country. Their partnership with DANIDA has improved their 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 WaterFund Programme Management team consisting of Engineers, Sociologists, Project Management, Integrated Water Resource Management, M&E, Finance, and Audits carrying out support. Everyone checks their section for concurrency and reporting by 10th of every month and does periodic ad hoc monitoring as when is needed. There used to be Joint Monitoring with the donors and partners annually while the Board of trustees also carried out monitoring bi-annually. This improved efficiency and transparency in project implementation are responsible for the high accountability and financial prudence observed, less than 1% of investment cost questioned. Some of the areas highlighted in the audit report leading to questioned costs included a) inadequate supported documents, b) spending outside the budget, c) weaknesses in cash management, and d) payment of expenses in the wrong period (outside the contract period)

Table 15: GGEP Questioned Costs[18]

County	Questioned costs
Tana River	144,723.00
Garissa	871,363.00
Wajir	14,300.00
Mandera	2,049,500.00
Isiolo	3,134,750.00
Turkana	330,200.00
Total	6,544,836.00
Spent amount	KSH.875,163,534.07 (DKK 54,258,464.88)
% Of questioned costs	0.75

[18] WSTF Report to Management for the Audit of the Rural Programme. Delloitte, June 2021

3.5 Efficiency

Under efficiency, we assessed the extent to which GGEP 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 b) timely delivery is within the intended timeframe, or a timeframe reasonably adjusted to the demands of the evolving context. This included assessing operational efficiency.

Cost Effectiveness and timeliness

Finding 17: GGEP projects were implemented as cost-effective as budgeted, 94.8% of the GGEP projects were implemented within the scheduled time

The GGEP projects were implemented within the budgets without variations. This is demonstrated by no-cost extensions and achievement of all planned physical facilities, training, and administrative support to the Implementing Agents. Most projects were completed within the timelines 95%, few overlapped the timings, and an initial 6-month no-cost extension was approved to the end of 2021. A further additional 6-month extension was granted to aid in financial accounting. The covid-19 pandemic affected the pace of implementation with government restrictions on movements at some point. (Annex 9_GGEP Financial Utilization)

Value for money and Utilization of existing/local expertise

Finding 18: GGEP projects implementation utilized the financial and local expertise resources more effectively

WaterFund has a robust financial management system with due diligence and approval processes in every step of the payment process. The payment to the contractors was based on deliverables and promptly done upon verification and certification of the works. Implementing Agents too received their disbursement upon accountability of the previous disbursement. Where there were some delays, the CRMs would make follow-ups and support the IPs in accounting and reporting.

> *"There were so many bidders for LAWASCO projects by WaterFund due to money availability as compared to other projects we advertise for bidding. Their projects have never frustrated their stakeholders."* LAWASCO MD

The project utilized local contractors and expertise within the specific counties where expertise was not locally available then from the neighbouring counties. At the County level, the projects relied on Water Utilities technical staff and County departmental staff to carry out project activities including supervision of works, community mobilization, engagement, and reporting.

Projects Governance and Management

Finding 19: WaterFund's internal structures and systems enhanced implementation of the projects hence achievement of the results while few external procedures created bottlenecks in implementation.

Signing of financing contracts with the Implementing Agents, capacity building them, working closely with the implementing agents through the County Resident Monitors and Engineers, and periodic monitoring and reporting helped in the implementation and achievement of results. All the projects delivered were constructed based on the original designs, and specifications and gave the desired outputs except Korija borehole in Wajir which the quality of water could not be used for drinking, the extension of water to Awarsitu from Godarupa (Isiolo) borehole was poorly done due to poor workmanship and

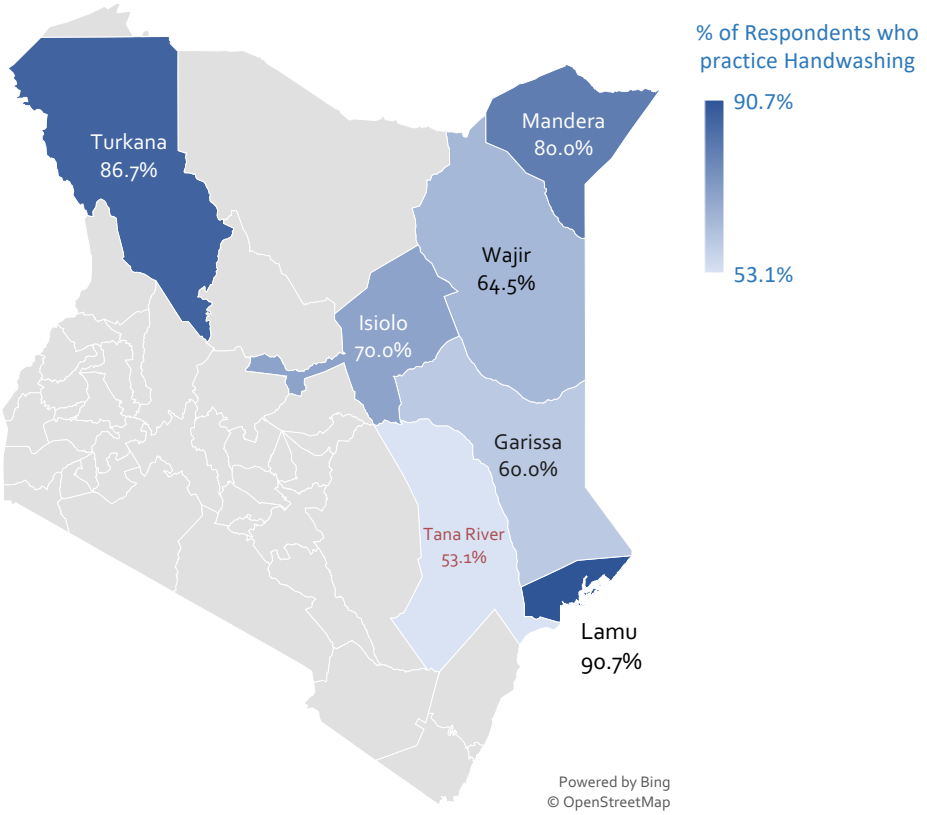
challenges with the contractor hence by the time of evaluation, the project was still under rectification by the County, and pans in Mandera which are still awaiting rainfall. The external arrangement to work with WRUAs through Water Resources Authority (WRA) had some hitches on institutional mandates and reporting processes affecting timelines and working relationships in the field. This was ironed out through partnership meetings and a review of partnership agreement is currently being looked at by the leadership of both institutions.

3.6 Impact

Improved Hygiene Practices

Finding 20: GGEP implementation has contributed to the improved health status of the targeted households.

Access to safe water for domestic use by the beneficiaries in the eight Counties has the potential to positively impact on the health of more than 24,800 households. Access to safe water directly helps the most vulnerable families prepare and protect themselves from illness and diseases. They experience improved health because with safe water they can practice good hygiene like handwashing and drinking safe water thus avoiding contamination and diarrheal diseases and they don't have to travel long distances to collect water thus improving the physical well-being of women and children. On average, GGEP has increased positive hygiene behaviours such as hand washing after defecation of which 72.1% of the respondents reported practicing currently.



Despite the majority of respondents practicing handwashing due to GGEP projects, there is a need for more effort or interventions targeting behavior change. Majority of the respondents who did not practice handwashing did not see the need (41%).

Table 16: If you did not wash your hands after visiting the toilet, why?

	Tana River	Lamu	Garissa	Wajir	Mandera	Isiolo	Turkana	Total
No water available	8 (67)	3 (75)	0	0	0	2 (22)	0	13 (23)
No soap available	6 (20)	0	4 (33)	7 (64)	0	2 (22)	1 (50)	20 (36)
Did not see the need	1 (13)	1 (25)	8 (67)	4 (36)	3 (100)	5 (56)	1 (50)	23 (41)

Improved Resilience and Green Growth

Finding 21: GGEP implementation has contributed to improved resilience and green growth within the targeted water catchments.

GGEP supported establishment of tree nurseries, planting of fruit and indigenous trees, restoration of mangrove forests, and rehabilitation of forests which have a lot of ecological value to the environment and ecosystem from being carbon sinks, soil quality enhancement, home to birds and insects' benefits. The Programme supported the planting of approximately 78,624 tree seedlings and 10,000 indigenous trees across Tana River and Lamu Counties.

The Godarupa water project has enabled the group to re-activate their farms and even greenhouse farming increasing availability of vegetables and financial income to the community. This was not part of the intended outcomes of the water project

Carbon footprint impact: For a very long time, ASAL Counties have relied on diesel generator pumping systems for the boreholes. Due to the demand for water in these areas for domestic and livestock consumption, most of the pumps were working full time and only rested during service or when broken down. This led to a high cost of sustainability and maintenance. The use of solar pumping systems in the GGEP boreholes has significantly reduced the use of fossil fuel and the cost of running the boreholes. Water trucking in these areas equally consumed a lot of fuel with trips of water boozers every day during drought and when the boreholes broke down. For example, Lamu County Government carried out water trucking using boats to Pate Island making many trips across the Island and consuming a lot of fuel. The Kiunga and Kizingitini projects used about 2,000 liters of fuel per hour on plants powered by diesel generators before changing to solar during GGEP.

Improved Socioeconomic Status

Finding 22: GGEP implementation has contributed to improved economic status of the targeted households.

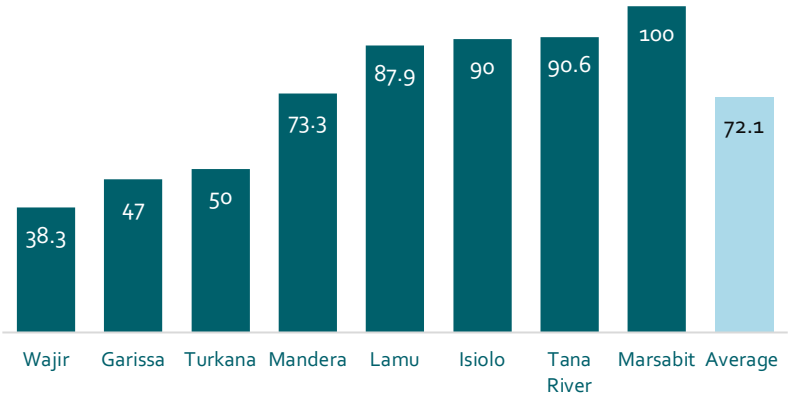
The GGEP project included some intended livelihood projects. The provision of beehives to Kiunga and Pate communities, Jikos and biogas to Lower Tana Delta conservancies, selling of water through community water points, employment to labourers during construction works, and those working for the water projects

all have contributed or are contributing to income sources to the beneficiaries. This has the potential of impacting their lives positively enabling them to meet basic needs such as food, education, and general economic growth. For instance, 58% of all respondents (N=386) observed that their health has improved, 39% suggested they experienced increased household income, 54% experienced increased access to food, and 42% commended the new employment opportunities that arose. Information from Key informants shows that the GGEP 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. The communities using the improved jikos reported using less fuel as compared to before. Improved jikos reduce fuel consumption by half compared to traditional Kenya Ceramic Jiko stoves, reducing charcoal demand and deforestation associated with charcoal production.

Table 17: Improvement in living standards, N=386

	Tana River	Lamu	Garissa	Wajir	Mandera	Marsabit	Isiolo	Turkana	Total
Increased household income	31 (39)	23 (40)	32 (38)	20 (42)	13 (43)	12 (41)	11 (38)	9 (31)	151 (39)
Increased access to education	14 (18)	10 (17)	17 (21)	8 (17)	5 (15)	6 (20)	5 (18)	7 (26)	72 (19)
Increased access to food	44 (55)	30 (52)	42 (50)	23 (49)	20 (67)	15 (50)	17 (57)	15 (54)	206 (54)
Better housing	18 (23)	14 (24)	31 (37)	8 (18)	8 (27)	6 (21)	6 (20)	6 (23)	97 (24)
Improved health	47 (59)	44 (76)	51 (61)	27 (57)	15 (51)	15 (49)	17 (56)	15 (55)	231 (58)
New employment opportunities	31 (39)	21 (37)	39 (47)	19 (40)	11 (38)	13 (42)	12 (41)	15 (52)	161 (42)

All counties had a significant proportion of beneficiaries practicing agriculture because of GGEP



GGEP has also significantly impacted agriculture in the ASAL, 72.1% of the households in the project areas reported engaging in agriculture because of water availability. Many households, 61.6% have adopted new agricultural practices in crop and livestock production because of GGEP especially in improving water conservation and utilization. Other key areas of improvement included the establishment of a garden 30%, an improvement in the quality of animal feeds and water 31% and growing of new/ improved vegetables 38%.

Table 18: New agricultural practices adopted because of GGEP, N= 258

Agricultural practices	Tana River	Lamu	Garissa	Wajir	Mandera	Marsabit	Isiolo	Turkana	Total
Have not made any improvements	13 (22)	7 (14)	16 (34)	3 (17)	3 (14)	4 (13)	2 (7)	0	48 (17)
Improved on water conservation and utilization	39 (67)	34 (67)	21 (45)	12 (67)	13 (59)	24 (80)	13 (48)	3 (60)	159 (62)
Improved on crop selection	17 (29)	12 (24)	12 (26)	4 (22)	3 (14)	5 (17)	4 (15)	0	57 (22)
Improved soil fertility	12 (21)	2 (4)	15 (32)	2 (11)	2 (9)	4 (13)	4 (15)	4 (80)	45 (17)
Established a garden	31 (53)	14 (28)	8 (17)	4 (22)	5 (23)	11 (37)	5 (19)	0	78 (30)
Improved on selection of animals	27 (47)	0	12 (26)	1 (6)	3 (14)	0	2 (7)	0	45 (17)
Improved on housing for livestock	11 (19)	2 (4)	0	0	2 (9)	4 (13)	3 (11)	0	22 (9)
Improved on the quality of animal feeds and water	14 (24)	12 (24)	21 (45)	6 (33)	5 (23)	9 (30)	11 (41)	2 (30)	80 (31)
New/ improved vegetable	19 (33)	31 (61)	20 (43)	7 (39)	4 (18)	6 (20)	11 (41)	2 (40)	100 (39)

Training of beehives beneficiaries at Faza. Lamu County

Handing over the beehive equipment after the training of the beehive's beneficiaries at Faza.

Human-Animal Conflict

The GGEP programme has worked with WRUAs and Conservancies in addition to establishing water projects. The water committees at the community water points have come up with schedules for watering animals with goats and camels having different timings, this has reduced conflicts at water points. The construction of malkas; a corridor to the river for livestock watering has reduced conflicts between farmers and pastoralists while protection within the rivers has made the livestock safe from crocodile attacks. For example, in Tana Delta, the conservancy came up with by-laws that govern grazing lands and the movement of livestock accessing pastureland. This was done consultatively involving all the stakeholders and helped significantly reduce human-human conflict and human-animal conflicts.

Malkas in River Tana to protect animals and human from the infamaous Tana crocodiles

Better Learning Environment

Increased access to sanitation facilities in schools especially gender segregated sanitation contributed to a better learning environment and retention of girls in school. It also reduced cases of sexual harassment and gives privacy and confidence to girls e.g., Kiunga Primary had few pit latrines forcing boys and girls to share some doors which caused possibilities of sexual harassment and discomfort to girls. Increased access to sanitation facilities comes with a hygiene component for the institutions' population including hand washing, awareness creation and hygiene promotion. This contributes to improved health by lowering diarrheal or sanitation related illnesses. Children's use of latrines in school influences behaviour change to also use toilets at home and reduce open defecation practices.

Completed 4-door VIP latrine at Mikinduni primary school with handwashing point and hygiene promotion, Lamu County

3.7 Sustainability

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

Finding 23: GGEP put robust mechanisms to ensure the sustainability of the investment.

Sustainability of rural water projects continues to remain a challenge for both donors and the County governments with the value for the investment involved being hard to realize. Sustainability of water projects in ASALs has been a major concern for implementers and beneficiaries due to the pressure put on the facilities based on water demand for humans and livestock. It is always affected by factors such as community ownership of the projects, cultural practices, management skills, information systems, availability of spare parts and technical skills, willingness, and ability to pay for water services, and socio-political environment influence. The GGEP projects were implemented with sustainability challenges in mind and sustainability factors inbuilt as part of the project design. The key mechanisms put in place include:

- Ensuring community participation in the project design from proposal writing, appraisals, supervision of works, monitoring, and evaluation. This enhances ownership and both observation and practical learning of aspects of water project management.
- Training on Programme implementation, Governance and, Operation and Maintenance for water committees or attendants to equip them with skills to run and carry out minor repairs and daily operations of the water schemes.
- Linkage and partnership with County Governments by involving them in the whole process of project identification, appraisal, implementation, and monitoring and then handing over to them. This creates a deeper understanding of the areas, those involved in the management of the water projects, technical components, challenges, or gaps that the County government can then plan on how to support the water projects to remain functional as part of their projects and their achievement in the office.
- Green Growth approaches mainstreaming contributing to the reduction in O&M costs in addition to increased adaptation and mitigation of Climate Change impacts e.g., change from high-cost operation-based diesel genset run pumping system for boreholes to solar pumping system to reduce the cost of fuel and repairs to the pumps.

3.8 Cross-Cutting Issues

In water and sanitation, cross-cutting issues include Gender, Equality and Social Inclusion, Climate Change and Environment. In this evaluation, equity has been expanded to review a broader social differentiation (gender, ethnicity, socio-economic background, disability, youth, and other vulnerable groups). Gender, caste, ethnicity, age, and disability are some of the key causes for exclusion, which then results in a downward spiral of development and access to basic needs. Under GGEP implementation, WaterFund and the implementing agents put in place the following to mainstream the cross-cutting issues.

Adaptation to Programme Context

Finding 24: GGEP implementation context largely remained the same throughout the implementation period.

The GGEP programme addresses the aspects of climate change mitigation and sustainability after the drought emergency declaration in 2017. The green growth Strategy agenda has been sold to the Counties for them to adopt and influence how they think about water project development including water pumping systems and the size of projects in terms of capacity. The provisions were also used to create a niche in rural and water resource management where at least 30,000m^3 capacity for water pans was adopted to hold water for longer periods and avert the effects of drought. The project funds were even diverted to fund

Drought Emergency Programme in 3 Counties that were greatly affected within the 8 targeted counties in 2018. Within the project implementation period, security risks were minimal to change the contextual approach. Covid-19 regulations that minimized movement and meetings contributed to delays, especially in the early stages of the implementation.

Mainstreaming GESI issues

Finding 25: Gender, Equality, and Social Inclusion have been integral in GGEP implementation.

On gender: during project identification, WaterFund and partners gave priority to projects with higher benefits or engagement of women and youths. The initial programme community meetings ensured that all aspects of age, ethnicity and class were represented in the participation in project activities. Both pastoralists, agro-pastoralists, farmers, elders, youth leaders, and women representatives were engaged in project discussions, assessments, and even implementation. Ensuring that women are included in the water committees' leadership with the 2/3 gender rule. During project activities, involving both men, women, and youths in training, labour, and evaluation. Water points and sanitation facilities have rams for ease of access for persons living with physical disabilities.

For Climate change and the environment, the GGEP ensured that the projects were climate-proof and had positive impacts on the environment.

- Carrying out Environmental Impact Assessment for all projects and development of Environmental Impact Management Plans
- Use of solar pumping system to replace the diesel run gensets.
- Planting of trees and restoration of forests
- Increasing the capacity of water pans to hold more water to last the communities longer during the drought.
- Proper siting of the water projects to avoid destruction by floods

Partnerships and Stakeholder Cooperation

Finding 26: Effective collaboration between partners contributed to the successful implementation of GGEP projects

Collaboration between stakeholders was demonstrated throughout the implementation. During Programme design, WSTF collaborated with the County government's leadership to identify priority areas of target. During implementation, implementing agents worked closely with county-relevant departments e.g., Water, Health, and Natural Resources and Environment, WaterFund and other partners like NRT and WRA through joint project monitoring visits and supervision. This offered an opportunity to provide technical backstopping of the ongoing works as well as ensure the quality of works. Improved coordination between stakeholders and continuous monitoring and support by the WSTF team contributed to the success of the projects. The collaboration between partners and stakeholders ensured that there was no duplication of projects.

Finding 27: There exist opportunities that can be exploited to mitigate ESG risks identified

ESG	Risk	Opportunity
Environmental	Climate shocks like prolonged rains leading to flooding, unprotected excavated shallow wells posing danger to both humans and livestock and loose soil around laghas exposing water pipes. Overgrazing results in a reduction of the economic potential of lands	Collaboration with Meteorological, agricultural and livestock departments

ESG	Risk	Opportunity
	Increase in land fragmentation, range degradation and loss of key livestock habitats (dry season grazing, wetlands, and forests) and blockage of migratory routes.	
Social	Conflicting political interests among local administration, slow behavior change, and inadequate technical knowledge among the local community affect their participation Erosion of indigenous knowledge on biodiversity/ Low capacity of management of some implementing agents/ communities Frequent conflicts among the pastoral communities and cross-border conflicts linked to the competition of resources Cultural norms on gender roles limit the participation of women in activities that would otherwise increase their climate resilience and income	Collaboration with county government departments to promote behaviour change, full community engagement from project design, and building the capacity of the locals to increase sustainability Regional and local planning, dialogue, and coordination.
Governance	Slow/ non-compliance with various government regulations such as NEMA, WRA, WASREB Actors on climate resilience support continue working in isolation, leading to duplication of efforts and waste of valuable resources Unplanned and uncoordinated development of water developments in the ASALs	Inter-governmental collaboration/ coordination

Innovation and Learning

Water supply and sanitation and water resources continue to face increasing pressures in Kenya especially due to the impacts of climate change, 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, treatment, and data and analytics. GGEP implementation had the witnessing to test and adopt promising technologies: promoting the reduction of non-revenue water and improving water quality. Some of the key technological and implementation innovations included:

1. Installation of a Reverse Osmosis system in Kizingitini and Kiunga to desalinize the water and treat it making it fit for human consumption. Even though the technology is advanced, a partnership with *Davis and Shirtliff* a technological company in Kenya ensures support to the County for sustainability.
2. The adoption of solar pumps has been embraced by both the custodians and beneficiaries of the projects due to their low maintenance cost and green energy status.
3. The inclusion of Conservancies as an alternative for water catchment and resources management has paid off greatly, supported by Northern Rangeland Trust, the conservancies have working structures well trained in natural resources management and efficient in their implementation. Similar effects can be echoed in the use of INGOs in Turkana due to their systems and processes making implementation smoother and easier.

Chapter 4: Challenges and Lessons Learnt

4.1 Challenges

a) There was a lack of Political goodwill in some Counties to drive the process of enacting the water legislation which needs to go through the county assembly process making WSTF drop this output and redirect the funds to other components of the GGEP

b) The Covid-19 pandemic slowed down activities with restrictions on movement in and out of some counties. This delayed part of some construction work for the water project, engagement with the communities, and carrying out physical project activities in 2020 and part of 2021.

c) The Counties have vast areas and accessibility of most areas is still a challenge due to poor road network. The vastness of the County and basins makes it difficult to adequately monitor the projects both by the implementing partners and the county government. The nomadic lifestyle of the beneficiary communities may impact on sustainability and O&M of the projects financed

d) Governance challenges at County, partners, and communities. County governments are still teething with some experiencing numerous turnovers in departmental staff or frequent changes of leadership at the water utilities.

e) A big challenge on progress reports. County Resident Monitors and Engineers as part of the recommendation of Midterm Review. Quality of work improved and reporting but still, delays from the implementing agents due to limited capacity in reporting and multiple projects overwhelmed or not well trained. Mitigated by undertaking training

f) Insecurity/ external threats within parts of the Counties i.e., Attacks from Pokots in Turkana, and Al-Shabaab threats in Garissa, Wajir and Mandera, inter-clan conflicts in Isiolo, limited the ability to carry out development or monitoring of water projects, for example, Kiungas' nearness to Somali made road transport impossible

4.2 Lesson learnt

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

a) **Working with WSPs' has capacity gaps** since most of them are focused on major towns within the Counties with inadequate resources to traverse the vast ASAL counties with poor road network, overstretched staff capacity, and lack of means for spreading to rural areas for effective supervision. WSTF should still work with the County department of water and build their systems to work better, and aspects of Rural water management set up and see how the new companies' capacity can be built to manage the rural water schemes.

b) **Working with WRUAs has management and reporting challenges** because of the different setups between WRA, WaterFund, implementing agency and financier respectively. With WaterFund having direct expectations from the donor to meet in terms of technical and financial obligations, the arrangement to work through WRA derailed the efficiency and forced WaterFund most of the time to by-pass reporting structures within WRA and monitor WRUAs activities, get reports and

support them directly through their CRM. Working with Conservancies was easier and more effective thus embracing this integrated approach will be key.

c) Project implementation under the GGEP had a **strong reliance on community engagement** from the design stages. The existing community management committees played a vital role in community engagement. 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, financial management, and proper project implementation across the 8 counties.

d) **Sustained monitoring and follow-up of projects are essential ingredients to an effective and efficient implementation of activities and sustained infrastructure**. WSTF 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 reviews kept the stakeholders in check for the sustained meeting of implementation milestones promptly. This was also key in reporting on implementation status and adaptive management of GGEP projects.

e) ASAL counties face frequent security challenges in form of inter-communal conflicts due to sharing of natural resources and cultural values that negatively impact project implementation and sustainability. **Provision of water for domestic and livestock production, integrated water resources management, and rangeland management significantly reduce intra- and inter-communal conflicts.**

f) **The involvement of ASAL County governments is central to the success and sustainability of the investment**. Coordination of stakeholders at the county level coupled with joint M&E is integral in realizing the benefits of the projects. 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.

g) Implementation of activities at the County level demands a **well-established institutional arrangement**. In most ASAL counties, water service provision was undertaken by various providers with a bias toward urban centers, this can greatly affect enhanced water and sanitation services, especially to the disadvantaged rural communities.

h) **Investing in capacity building of Implementing agents and primary beneficiaries contributes to an efficient implementation** of ASAL projects and improves participation and local ownership.

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 perceptive. The GGEP 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 and synthesis of these data and processes, therefore, give the evaluators confidence in giving the following pertinent recommendations.

5.1.1 Recommendations for WSTF

As the fund's recipient, donor accountable institution and partnership builder, WaterFund had to be at the center of the success and failure of any component of the GGEP implementation. With the rapidly growing fields of climate-smart interventions, environmental peacebuilding, and water diplomacy in an inextricably interlinked concept, good management of natural resources, especially water, is key to strengthening local communities' resilience, and increasing access to safe water and reducing conflict risks. WaterFund, therefore, needs to consider the following areas for improvement or strengthening:

a) Capacity Building of Implementing Agents: Capacity building is a process and needs to be multi-dimensional. WaterFund performed well in key areas of training in finance and procurement and operation and maintenance. It is recommended that while working with Water Utilities, WRUAs and Conservancies, carry out an initial Capacity Assessment to identify all the capacity gaps in key areas of Governance, Policies Development, Human Resources, Project Implementation, Financial Management, Resource Mobilization, and Sustainability mechanisms before carrying out the capacity building to generate indicators that can be measured during evaluation and enable linkage to the overall performance of these partners.

b) Data capture and sharing: The world is going digital and technological monitoring and availability of data is key in development, especially for water and sanitation projects. The GGEP had a component of strengthening the Counties' capacity to use water data for planning and decision making. It is recommended that WSTF build the capacity of Counties' departments to be able to capture data, validate, synthesize, disseminate, and effectively use the data for decision making.

c) Impact survey or research: WaterFund projects are built to offer ecological and economic impacts to the environment and the people. It is prudent that under the research component, WaterFund carries out research on carbon footprints for the Pate Island and Lower Tana Delta jiko/biogas projects to understand the economical savings in terms of fuel consumption, pollution, and health status of the beneficiaries and the County government.

d) Results Framework: WaterFund logframe has both outcome and output indicators but the indicators are not well defined to capture the real intended outcome to be measured. It is advisable to make all project indicators clear and have indicator definitions/reference sheet to facilitate data collection, analysis, and critical reflection.

e) Project designing: WaterFund's experience in rural Kenya is a strength and could inform better designing of projects in terms of timelines, practicability, and cost. Projects that include policy or legislation influence or working with County Governments need to be timed with the political timelines in the country i.e., five-year scope to limit change of government and greater effects on management and sustainability of the projects. Major mobilizations and implementation should start within the first year in office of the existing County Government.

f) Emerging trends: Identifying emerging trends, such as how water scarcity generates new forms of exploitation is important. If people lose their livelihoods because there is no longer enough water to farm or herd cattle, local communities can fall prey to criminal gangs, terrorist groups, or local militias, especially in these ASAL Counties. WaterFund should invest in assessments to determine emerging trends affecting water resources in hard-to-reach areas.

g) Gender and Inclusion: It is essential to continue applying the Rights Based Approach and GESI, Women and girls are often responsible for providing water for the household, which means that they are especially vulnerable. At the same time, they are also important agents of change and often first responders on the ground. In ASAL Counties, women are not offered freedom to express themselves and contribute fully to development matters, WaterFund must devise ways of working within the cultural systems to empower women.

5.1.2 Recommendations for Implementing Agents

The Implementing agencies under GGEP included Water Utilities, Water Resources Users Associations, Community Groups (CBOs), and Conservancies. The following recommendations fit them based on their performance under this programme:

a) Work through partnerships: The Implementing Agents should embrace working with partners as an opportunity to learn and overcome limitations in addition to benchmarking on best practices

b) Leverage funding opportunities to build efficiency: Working systems attract partnerships easily. The IPs should self-develop using opportunities they have to be more attractive to donors and achieve more in their implementation. WRUAs should build their capacity to function as legal and capable institutions in areas of governance, project implementation, human resources, financial management, reporting and information management, and sustainability.

5.1.3 Recommendation for County Governments

a) Water Master Plan: The Counties are semi-autonomous and must project into the future of their constituents in terms of water resources and management. Each county should have detailed County Water Master Plans and budgets for funding. Implementation strategies include negotiation with counties where sources of rivers and streams that are transboundary are located.

b) Water Data: The County Department of Water needs a hub equipped with staff and a system for water sources, quality, access, and functionality rof eal-time information for sustainability. This will ease decision-making and development of water in the Counties and attract funding from donors

c) County budgets for water and sanitation: The counties should continue allocating resources for water and sanitation services provision and prioritize in the CIDP including training, technical assistance, O&M equipment, and monitoring. This will enable county staff to offer greater support to IPs and gain more experience in sharing and working with WaterFund.

d) Water Service Providers: Service provision should be sustainable and commercially sound. The Counties must put measures in place to enable Water Utilities to function like smart commercial private companies with results-driven staff well-motivated, well-funded with targets set as part of performance appraisal. The Counties should also have consistencies in human resources to develop capacities and retain institutional memory and for sustainability.

e) Transboundary water cooperation: The traditional approach to security often fails to assess and address threats linked to natural resources and human development. There is a strong need for Counties to work with experts from different fields to find solutions for climate-smart security.

Transboundary water cooperation and water diplomacy offer two promising avenues for peace and conflict resolution.

5.1.4 Recommendations for DANIDA

a) Encourage growth through competition: Funding projects in Counties offer an opportunity to motivate through creative funds. The donor could set aside funds for replicating or upscaling innovative projects within the areas under the ongoing funding. A robust process will enable all partners to work creatively towards solutions that can attract further assured funding from the same donor.
b) Set aside funds for both impact and sustainability assessment 2 years after programme completion. Six months find when most projects are just starting to operate while others sometimes are yet to stabilize thus impact cannot be fully attributed to the projects unless done after a long time.

5.2 Conclusion

Climate change is increasingly becoming a real threat multiplier with far-reaching impacts on global security causing droughts and floods, which make access to water much more unpredictable. There is also increasing pressure on water resources from rapidly growing populations, rising demand, and unsustainable land use. All these factors have triggered water scarcity, hunger, and conflict. WaterFund's Green Growth Strategy is aligned with contributing to solutions to make water accessible to all in line with the SDGs and the Country's policies. It is therefore a major conclusion of this evaluation that the GGEP programme was successful and met expectations.