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and Cooperation SDC

KENYA

Resilient Arid Lands Partnership
for Integrated Development

Building Resilience Together

Kenya Resilient Arid Lands Partnerships for Integrated Development Program

Final Report

For the Period between 1 October 2015 – 31 May 2021

**Submitted to the Swiss Agency for Development and
Cooperation**

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Acknowledgement of

Kenya RAPID Program Partners

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Acronyms and Abbreviations

AHADI	Agile and Harmonized Assistance for Devolved Institutions
ADIS	African Dryland Institute for Sustainability
ASAL	Arid and Semi-Arid Lands
ATM	Automated Teller Machine
CAPEX	Capital Expenditures
CCBF	County Capacity Building Fund
CFM	Community Feedback and Complaints Mechanism
CHRAC	County Human Resources Advisory Committee
CHVs	Community Health Volunteers
CIDP	County Integrated Development Plan
CLTS	Community Led Total Sanitation
CRS	Catholic Relief Services
CPSC	County Program Steering Committee
DCT	Direct County Transfer
DHIS	District Health Information System
EDE	Ending Drought Emergency
IBM	International Business Machines
IR	Intermediate Results
JKUAT	Jomo Kenyatta University of Agriculture and Technology
KCB	Kenya Commercial Bank
LoP	Life of Project
LOWASCO	Lodwar Water and Sewerage Company
MoU	Memorandum of Understanding
MSME	Micro Small and Medium Enterprise
MWA	Millennium Water Alliance
NGO	Non-Governmental Organizations
ODF	Open Defecation Free
PCU	Program Coordination Unit
PIFA	Project Implementation Through Facilitation Approach
POU	Point of Use
PPP	Public Private Partnership

PREG	Partnership for Resilience and Economic Growth
PSC	Program Steering Committee
PUR	Purifier of Water
3R	Retention, Recharge and Reuse
RMC	Rangeland Management Committee
SDC	Swiss Development Cooperation
SME	Small and Medium Enterprise
SO	Strategic Objective
SRC	Smart Regional Consultants
USAID	United States Agency for International Development
WAJWASCO	Wajir Water and Sewerage Company
WASH	Water Sanitation and Hygiene
MWA	Millennium Water Alliance
WMaaSP	Water Management as a Service Platform
WMC	Water Management Committee
WUA	Water Users Association

Basic Information

Program Name	Kenya Resilient Arid Lands Partnership for Integrated Development (Kenya RAPID)
Program Coordinated by	Millennium Water Alliance (MWA)
Program Base budget	\$30 Million
Number of Target beneficiaries	450,000
Program start date	21 August 2015
Program end date	31 May 2021
Reporting period	1 October 2015 – 31 May 2021
Report submission date	July 2021
Report submission done by	Laura Brunson

Strategic Review and Outlook

Main results achieved and implementation performance of the program

The Kenya RAPID program recorded significant progress towards increasing access to water and sanitation services for people as well as water for livestock and contributed towards rebuilding a healthy rangeland management ecosystem across the five program counties of Garissa, Isiolo, Marsabit, Turkana and Wajir. Key results obtained are summarized below.

Qualitative Impact

The program achieved the following qualitative milestones:

- **Strengthened county governance and policy environment in the water, sanitation and hygiene (WASH) and livestock sectors:** Kenya RAPID strengthened county governance and legal frameworks by contributing to enhancement of the enabling environment for water access, agriculture and livestock production for increased resilience in the five counties through policy and regulatory reforms. Water and sanitation laws have been enacted in Garissa, Marsabit, Isiolo and Turkana counties. The implementation of the Water Acts is ongoing and has resulted in establishment of new institutions including rural water corporations and Water Sector Funds as well as restructuring of urban water service providers. The revitalization of the urban and rural water utilities is expected to improve efficiency in water and sanitation delivery services for communities through structured management systems (financial, technical and commercial services) and improved governance. The program also supported the final validation of livestock/rangelands and agriculture sector policies and bills in Marsabit, Isiolo and Turkana counties and the enactment of the Isiolo County Climate Change Act. These policies and legislations aim to enhance livestock production, expand availability of water for domestic and productive uses and promote sustainable rangeland management.

- **Improved county operational capacity in WASH and livestock sectors:** Through the County Capacity Building Fund (CCBF), Kenya RAPID has strengthened the operational capacities of the county departments of water, public health, agriculture and livestock through tailored technical trainings. Training topics included: human resources management (targeting County Human Resources Advisory Committees), third party open defecation free (ODF) certification and data management, livestock production and rangeland management, water sector governance and leadership, value addition for livestock and livestock products, holistic rangeland management, solar power (T1 & T2 levels) and senior management courses. As a result of the capacity building interventions, 412 (323 M, 89 W) county staff from the three departments were equipped with new skills and the counties have registered improved efficiency and effectiveness in service delivery and deepening of impact by increasing water and sanitation access in the program counties. For example, county ODF certifiers helped to accelerate sanitation uptake in all five counties. Other successes of CCBF include: increased motivation by the counties to identify and invest in human resources development and improved human capacity to help actualize the devolution agenda.
- **Promoting feedback, learning and experience sharing towards enhancing program performance:** Nine Program Management Group (PMG) and learning meetings were held during the life of the program. These PMG meetings brought together the program partner representatives and stakeholders including County Coordinating Units (CCUs), the Program Steering Committee (PSC), donors (USAID and SDC), Millennium Water Alliance (MWA), private sector partners (Sweetsense, IBM Research, Acacia Water and Maji Milele) and county officials. Under the various themes, the meetings provided a platform for reflection on progress, receiving feedback, sharing of experiences and lessons learned as well as refining program interventions for greater impact.
- **Data and information and communications technology (ICT) services for improved decision-making:** RAPID installed 128 borehole sensors across the five counties. These sensors are providing timely functionality data to county Departments of Water and water utilities. This data then informed timely decision-making for timely responses to malfunctioning water points and helped to determine optimal pumping hours. These changes then helped to ensure sustainable water resources management and budget allocation for repair and maintenance of boreholes. Improved access to functionality data has remarkably reduced borehole downtime as most repairs are promptly undertaken by the County Rapid Response Teams.
- **Private sector activities for enhanced service delivery:** Adoption of prepaid water metering technology gained traction within the five counties with 17 water kiosks having been installed with prepaid meters due to the reported positive results of increasing accountability, reducing non-revenue water, and improving revenue collection within the range of 100%-350%. The Wajir desalination unit, installed through a Public-private partnership (PPP) model between the County Government of Wajir, Kenya RAPID and Boreal Light (a private sector

partner), has served to leverage private sector resources and expertise and has cumulatively provided 406,883 liters of purified water to 20,405 households since inception. The repair and maintenance service model being implemented in partnership with the Diocese of Lodwar (within Turkana county) benefited over 96 water schemes through increased uptime for water supply due to timely repairs and maintenance. Over \$152,965 in new revenue has been generated for the WASH and livestock sectors as a result of the PPPs; this revenue has been re-invested in repair and maintenance of the water projects to improve efficiency and effectiveness in water services.

- **Water for multiple uses:** Due to improved access to water for productive uses coupled with social behavior change interventions, nutrition education and extension support, communities living in the five counties have engaged in small-scale irrigated crop production and the rearing of small stocks such as poultry. These activities are serving both as a source of food and a means of diversifying their sources of income and livelihoods. As result, beneficiary households are reporting increased access and consumption of rich and diverse diets from 2.3 and 2.6 meals per day for adults and children, respectively, at baseline to 3 and 3.5 meals per day for adults and children (Case Study Reports 2019). These households also indicated that at least one meal per day must have vegetables, beans or meat and children must drink milk at least once a day. At the national level, Kenya RAPID championed the successful integration of WASH into various national guidelines by being part of several technical task forces within the National Food and Nutrition Linkages forums leading to development of key documents including the National Agrinutrition Manual, the Kenya Agrinutrition Strategy, the National Agrinutrition Community Dialogue Cards, and the Agrinutrition In-service Training Curriculum among others.
- **Project Implementation through Facilitation Approach (PIFA):** This strategy entailed collective effort by both the counties and Kenya RAPID to serve target communities in a coordinated manner. The purpose was to leverage program resources in support of the county priorities as set in each five-year County Integrated Development Plan (CIDP). The County Program Steering Committee (CPSC), constituting key departments, was mandated to drive the PIFA activities. The key functions of the CPSC included; joint annual work planning, co-financing of prioritized projects, targeting of sites, implementation of technical support and monitoring. Key outcomes of this strategy included: enhanced accountability for resources, greater outreach for more beneficiaries, and assurance that Kenya RAPID goals were part of county agendas such that program ownership and sustainability were embraced at the onset.

Quantitative Impact

The program achieved the following quantitative impacts:

- **Increased access to safe water for domestic use:** In partnership with County Departments of Water, RAPID cumulatively supported rehabilitation/expansion or new

development of 110 water systems thereby improving access to basic drinking water services for 462,133 (234,764 W, 227,369 M) individuals against the target of 350,000. A further, 188,093 (99,568 W, 88,525 M) individuals have increased access to safe water due to private sector investments against the target of 100,000. As a result, households accessing safe water within a shorter time interval, not exceeding 30 minutes, have significantly increased from 57% (at baseline) to 69.2%. Reduced time to and from water points is enabling women who are normally primary caregivers to engage in more income generating activities and care for children. Water supplies in learning institutions and health facilities has enhanced personal and menstrual hygiene, as well as improved retention of female pupils. RAPID further supported delivery, distribution and training on use of point of use (POU) water treatment products including Aqua Tabs, PUR sachets and Life Straws, resulting in treatment of 263,172,224 liters of water in the five counties, thereby increasing access to safe drinking water and reducing risk of consumption of unsafe water by targeted communities.

- **Improved nutritional status of households:** Through consumption of diversified diets and adoption of other appropriate nutrition practices, the program assisted smallholder farmers to produce vegetables and other high value food crops using water efficient farming technologies and techniques. Together with the department of agriculture, RAPID cumulatively trained 57,643 (33,433 W, 24,210 M) farmers on agronomic practices. Additionally, 3,465 women and 3,198 men were reported to have applied improved management practices or technologies including drip irrigation, kitchen gardening, value addition, and soil and water conservation. The program also trained 2,556 women and 2,361 men) in various counties on agrinutrition. These people then in turn facilitated community level nutrition education activities aimed at promoting appropriate maternal, infant and young child nutrition practices. As a result 17,538 (9,119 females, 8,419 males) children under two (0-23 months) were reached with community-level nutrition interventions through their care givers who benefitted from the training.
- **Improved sanitation and hygiene practices:** Through the program facilitation approach, the adoption of Community Led Total Sanitation (CLTS) in the five arid and semi-arid land (ASAL) counties, where local governments have been slow in prioritizing sanitation, has gained traction. Through the social behavior change and communication strategy, which has integrated sanitation, hygiene and nutrition messaging during CLTS follow-ups and community monitoring campaigns, 166 villages/communities have been declared Open Defecation Free (ODF) against a program target of 130. Through this 13,187 household and 585 institutional latrines were completed and are in use thereby benefitting 81,097 (43,333 W, 37,764 M) individuals. Further, 24,008 households were supported to establish handwashing stations with soap and water for use by the family members which resulted in 10,097 women and 11,300 men trained to implement improved sanitation methods in Turkana, Wajir, Marsabit, Isiolo and Garissa counties. A review of monthly data on diarrheal cases from the Kenya Health Information system (KHIS) 2020 was conducted. The data showed that in five ODF

villages from two counties, since commencement of these interventions in 2018, the diarrhea prevalence decreased by an average of 10% between 2018 and 2020 for children under age five. The results showed that communities with ODF status had a lower prevalence of diarrheal cases which suggests that elimination of open defecation may reduce the number of diarrheal cases among young children.

- **Improved rangeland management:** RAPID supported registration and training of 81 Rangeland Management Committees (RMCs) on holistic rangeland management, governance and leadership, fodder production and management of wet and dry season grazing areas. The program also assisted the RMCs in the development of grazing bylaws and plans to operationalize proper management of their grazing areas. To ensure proper utilization of the rangeland resources and ensure that conflict prevention and mitigation measures are in place, 101 conflict and pasture management forums were held with traditional elders and RMCs in the five counties. In collaboration with the Regional Centre for Mapping of Resources and Development (RCMRD) SERVIR program, digitization of 12 grazing plans was completed and disseminated to the county and community level through the RMCs. In addition, training on a rangeland decision support tool was completed to facilitate near real time assessment and monitoring of rangeland resources by use of a web-based tool. This tool aggregates key indicators of rangeland productivity with ancillary data and allows for integration of user selected indicators to produce maps at different administrative boundaries.
- RAPID supported 36 pastoral communities to develop and implement dry and wet season grazing plans, which have proved vital in maintaining the longevity of pastures and ensuring livestock are well fed throughout the year. These are critical aspects towards increasing and sustaining livestock productivity. Grazing plans have also been helpful as forward planning tools that reduce and mitigate conflicts related to scarce rangeland resources. Kenya RAPID's rangeland and water supply interventions are contributing to availability of pasture and water for livestock which has ensured that livestock grazing is possible for women and children to conduct near manyattas (homesteads). This has improved availability of a continuous supply of milk to families. Apart from improved access to quality livestock products such as milk and meat for household consumption, pastoralists are also earning income from the sale of livestock and livestock products which has boosted local economy.

Main Implications for the Next Period of Interventions

Based on learnings and progress in RAPID, the following recommendations are provided for future programming in the ASALs:

- With the support from the program, four counties (Garissa, Isiolo, Marsabit and Turkana) passed their Water and Sewerage Acts and are now in the process of implementing their new Acts. The objective of these County Water Acts is to provide for conservation, use of county water resources and management of water supply and sewerage services for the benefit of communities in those counties. These Acts provide a legal framework for realization of the

right to Water and Sanitation as envisioned in the Kenyan Constitution and present an opportunity for, among other things, increased stakeholder participation which ensures a more coherent and strategic approach to planning and execution of water service improvement initiatives. This is an effort to move beyond piecemeal efforts, maximize long term impacts and ensure efficient use of resources. Further investments in the sector by development actors to continue to operationalize these Acts will greatly benefit from the foundation laid by this program for sustainability.

- Capacity for front-line service delivery is central to each county's performance management. Yet, across the program counties, capacity building is still treated as an afterthought that is only considered after resources have been allocated to priority areas. Few sector strategies or plans systematically address capacity development as a strategic objective. Therefore, there is a need to increase efforts through learning, policy guidance, and training to bring capacity development upfront, even where challenges remain. As an example of a way to proceed forward, in Turkana county, departments have developed a systematic approach to capacity building with regular needs assessments, monitoring of training data, developing capacity building plans at departmental levels, and dedicating resources to implement capacity building plans. This Turkana County example could be embraced by other counties to transform service delivery capacity.
- End of program learning events were held near the end of the program (September-December 2020) for each of the five program counties with a final culminating event at the national level. This initiative brought together the program key stakeholder representatives from beneficiary communities, implementing partners, county government staff, and national government alongside other actors in the ASALs to share experiences from program implementation. These events brought forth lessons on resilience programming in the ASALs that should influence the design of future programs and methods by governments, NGOs and donors to improve sustainability.
- In the face of the COVID-19 pandemic, MWA and partners committed to continue protecting the health and safety of their staff, while providing appropriate oversight of the program and ensuring the accountable and effective use of donor resources in meeting the program objectives. The government measures to curb the spread of COVID-19 (e.g. movement restrictions and prohibitions of assembly beyond a certain number of people) adversely affected program implementation especially conducting of trainings and meetings. In response to these challenges, the program devised innovative ways of ensuring work continued through remote monitoring, conducting virtual meetings with partners and government staff, and utilizing county staff for implementation of activities. Thus going forward, while difficult, there is new knowledge about how to find creative ways to collaborate while keeping safety during a pandemic as the first priority.
- The program supported implementation of Direct County Transfer of Funds whose purpose was to improve the county operational capacity in the WASH, livestock and natural resource

management sectors through multiple processes of system strengthening, improving service delivery and increasing adoption and acceleration of proven innovations and technologies. Through this initiative, Kenya RAPID continued to support institutionalization and strengthening of GARUWASCO in Garissa and County Water Sector Funds in Marsabit, Isiolo and Turkana. The County Water Sector Funds continue to provide the institutional framework for mobilization of county financial resources for the water sector. These joint initiatives should be continued where possible and are expected to help ensure sustainability of service delivery beyond the life of a program.

- As communities continue grappling with the effects of COVID 19 pandemic, it is evident that one of the most appropriate solution to containing its spread and prevalence is by embracing effective WASH practices. It is therefore paramount that every effort, emphasis and resource needs to be directed towards installing WASH systems for households and public institutions such as schools, hospitals, bus stations and markets. This is because these are epicenters for disease transmission if the WASH systems and practices are not put in place. Future WASH programs must therefore embrace effective WASH practices at all community locations.

Chapter I: Introduction

This final performance report for the Kenya Resilient Arid Lands Partnerships for Integrated Development (Kenya RAPID) program highlights accomplishments and impact in relation to expected results in accordance with the contract signed with the Swiss Agency for Development and Cooperation (SDC) in 2015. Kenya RAPID was a five-year development program that brought together public and private sector institutions to work towards increasing access to water and sanitation for people, water for livestock and rebuilding a healthy rangeland-management ecosystem. A key operating strategy of Kenya RAPID was a focus on putting county government at the center of this work through use of a facilitation approach to foster leadership and long-term sustainability for greater impact beyond direct program beneficiaries. From October 2015 through May 2021, the RAPID program was implemented in five northern counties of Kenya including: Garissa, Isiolo, Marsabit, Turkana and Wajir. The program sought to achieve three Strategic Objectives (SO) outlined below:

- SO 1: A responsive and accountable governance framework in place and operational at county level that ensures sustainable provision of WASH and pasture.
- SO2: Replicable and scalable business models for sustainable WASH and livestock services.
- SO3: Communities have increased access to sustainable WASH services and improved rangeland management.

Kenya RAPID was aligned with the Ending Drought Emergencies (EDE) Common Program Framework of the Government of Kenya which focuses on enhancing sustainable management of rangelands, water, and crops and increasing the contributions of livestock to the pastoral economy to promote resilient livelihoods in arid and semi-arid lands (ASALs).

Within the program period, Kenya RAPID made significant progress towards increasing access to water and sanitation services for people as well as water for livestock and contributed towards rebuilding a healthy rangeland management ecosystem. The program closely collaborated with other donor funded programs, national and county governments, private sector actors and communities to build synergies for lasting and sustainable outcomes.

Since the declaration of COVID-19 as a global pandemic and confirmation of the first case in Kenya on March 13th, 2020, the Kenyan government has continued to issue directives to curb its spread; directives have included but not been limited to social distancing and suspension of all mass/public gatherings. These restrictions adversely affected implementation of program activities but creative solutions were put in place to ensure all planned activities were undertaken within the timeline.

Chapter 2: Outcomes achieved October 2015 – May 2021

SO1: A responsive and accountable governance framework is in place and operational at county level that ensures sustainable provision of water and pasture.

Indicators	Program Target	Actual
SO 1.1: Percent of households expressing satisfaction with services offered by water and livestock departments	75%	68%
SO 1.2: Percent of community complaints resolved in a timely manner	75%	59%

- Findings from the final evaluation indicate that households across all program counties experienced improved service delivery from livestock and water departments as a result of the Kenya RAPID Program interventions. This improvement was attributed to improved capacity of county staff to deliver the required services. The main drivers of satisfaction were increased proximity to services (water) and frequency of visits by veterinary extension officers within the project areas. It is worth noting that the new County Water Acts created an enabling environment for improved water service delivery which includes but is not limited to creation and operationalization of utilities (urban and rural) that provide improved services to the citizens.
- Across the five counties, the program worked closely with County Departments of Water and local water utilities to operationalize community complaint and feedback mechanisms with varied degrees of success. Complaints received ranged from borehole breakdowns and insufficient storage facilities to things like bill discrepancies or disconnections to pipeline bursts. Cumulatively, complaints were received from 287,090 (148,053 W, 139,037 M) individuals who utilized the framework to share complaints about their water facilities. Water utilities and County Departments of Water were empowered to manage applicable complaints through County Rapid Response Teams, which are prompt in providing repair and maintenance services thereby increasing borehole uptime and uninterrupted access to safe water. The use of sensor data is also aiding decision-making.

IR 1.1: Strengthened county governance and policy environment in the WASH and livestock sectors

Indicators	Program Target	Actual
I.1.1: Number of new policies, laws, agreements, regulations, or investment agreements (public or private) implemented that promote access to improved water supply and sanitation	20	19
I.1.2: Number of agricultural and Nutritional enabling environment policies analyzed, consulted on, drafted or revised, approved and implemented with Kenya RAPID support	20	10

- The program supported the development, passage and implementation of county policies and laws which contributed towards improvement of the institutional and legal frameworks in the operationalization of devolution agenda. All counties except Wajir, have their Water and Sewerage Acts in place. These Acts provide the much needed enabling legislative environment that has propagated positive initiatives. The delay in passing of the Water Act in Wajir into law arose from numerous changes in political leadership and frequent staff changes in the County Water Department over the course of the program. The implementation of the Water Acts resulted in the establishment of new institutions such as Rural Water Corporations and Water Sector Funds as well as restructuring of urban water service providers. Garissa County, using the mandates of the new law constituted a board of directors to oversee a newly created Garissa Rural Water Corporation. In Turkana and Marsabit counties Water Sector Fund were established to pool resources from development partners and county government to strengthen water system structures.
- In Wajir, the program supported the review and revision of the rangeland bill and policy. The program also supported final validation of livestock production and agriculture sector policies and bills in Marsabit and Turkana and enactment of the Isiolo County Climate Change Act. In Isiolo, the program supported the technical drafting, stakeholder participation and presentation of the Rangeland Management Bill and Policy to the county assembly for discussion and operationalization of the Isiolo County Nutrition Action Plan by convening the Nutrition Multi-sectoral Platform where development partners and county departments with nutrition-sensitive interventions committed to its implementation. These policies and legislations aim to enhance livestock production, improve nutrition, expand availability of water for domestic and productive uses and promote sustainable rangeland management. It's important to note that progress on completion of agricultural and nutritional enabling environment policies has been slow primarily due to the withdrawal of a key partner, AHADI, which was driving the process.

IR 1.2: Improved county operational capacity in the WASH and livestock sectors

Indicators	Program Target	Actual
IR 1.2.1: Percentage of county budget spent on multiple water use (drinking and livestock) and sanitation.	12%	8%
IR 1.2.2: Percentage of County officials who demonstrated knowledge of WASH and livestock policies and laws.	75%	94%

- RAPID promoted joint annual work planning and co-financing of prioritized projects, thereby enabling counties to increasingly allocate more resources to fund selected activities especially in water infrastructure development. Through establishment of Water Service Trust Funds in various counties, pursuant to new County Water Laws, there was a renewed call and commitment to appropriate at least 10% of the annual county development budgets to the departments of water. The program continued to influence county public resource allocation through lobbying and advocacy during Annual work planning and CIDP processes.
- The program provided support to the five county governments in fast tracking completion of water and sanitation, rangeland management and other agriculture related policies and bills to enhance service delivery.
- Through the CCBF, the program strengthened the operational capacities of County Departments of Water, Public Health, Agriculture and Livestock, Human Resources as well as county initiatives such as data management, livestock production and rangeland management, water sector governance, third Party ODF certification and leadership. Capacities were expanded through tailor made trainings, supporting management decisions on human resources management such as staff capacity development and deployment, support to re-structuring of departments to enhance service delivery, and recommendation of staff for further trainings.

IR 1.3: Empowered communities effectively exercise rights and responsibilities for their WASH and rangeland resources

Indicators	Program Target	Actual
IR 1.3.1: Percent of wards that held public hearings/meetings during the policy/law/strategy development process.	100%	80%

- Public consultation forums on draft rangeland management bills and policies involving local communities and county assemblies were held across the five program counties. In Isiolo

County, consultations were held at ward and sub-county levels. In Wajir, a Water Bill consultative forum was held with Wajir members of the County Assembly. These public consultation forums, which are a constitutional requirement, provided opportunity for key stakeholders (staff, partners and communities and their representative) to deepen their understanding on draft bills and content of policies. Stakeholders were also able to provide feedback on the draft bills and policies which helps to enhance ownership of the process and the final products. Through this public participation, community members and stakeholders are directly involved in influencing decisions about policies, plans or programs in which they have interest in.

SO 2: Replicable and scalable business models for sustainable WASH and livestock service delivery have been developed and operationalized

Indicators	Program Target	Actual
2.1.1: Number of people benefitting from new business models/ PPPs initiatives.	100,000	188,093
2.1.2: Amount of new revenue generated for the WASH and livestock sectors because of PPPs	\$300,000	\$152,965
2.1.3: Value of agriculture-related financing accessed as a result of Kenya RAPID assistance	\$200,000	\$96,040

- Kenya RAPID focused on pursuing innovative approaches to increasing the provision and financing of water services infrastructure and rangeland services through private sector engagements. Under this strategic objective, the program sought to achieve increased data management and data utilization for decision-making alongside adoption and scale-up of viable business models for increased investments in water and livestock sectors. The program, in collaboration with the five county governments, worked with private sector partners to operationalize various business models which included repair and maintenance, prepaid water meter technology, private operator models, sanitation options and water desalination solutions. Cumulatively, 188,093 (95,928 W, 92,165 M) individuals benefitted from the services provided by these business models since program inception. The benefits ranged from prompt repair of broken-down water infrastructure (repair and maintenance), clean drinking water from the desalination technology, uninterrupted access to safe water and increased financial accountability (prepaid meters, private operator model and desalination system).
- The program tracked new revenues generated from prepaid water meters installed at water kiosks which are owned and managed by water utilities and Water Management Committees in three counties (Turkana, Isiolo and Marsabit) as well as repair and maintenance business

model in Turkana and water desalination facilities in Wajir. About \$152,965 in revenue was collected in the four counties and this has been reinvested to support operation and maintenance of water facilities. Effective revenue management has helped in sustaining functionality and operations of the water points thereby supporting households with uninterrupted access to safe water.

- In Turkana county for example, Kenya RAPID, in collaboration with the county government, supported private sector partnerships for enhancing water access. As a result of the county direct transfer of funds, the Davis and Shirtliff Ltd repair model with the department of water was revamped, leading to repair of ten solarized boreholes benefiting 23,450 people (12194 M ,11256 W) and over 8,653 livestock (6760 shoats, 905 cows, 820 camels, 168 donkeys). Total revenue generated as a result of installation of six prepaid water meters managed by LOWASCO was \$4,800. This was a 95% return on the utility’s investment of funds utilized in purchasing the tokens. LOWASCO engaged Maji Milele to upgrade their payment system by automating it to incorporate use of till numbers in which Safaricom provided two till numbers to be used by consumers in purchasing tokens any time of the day.

IR 2.2: Financially viable public, private and/or PPP models for WASH service delivery and livestock operationalized

Indicators	Program Target	Actual
2.2.1: Number of viable livestock and WASH service delivery models developed	5	5
2.2.2: Number of public-private partnerships formed as a result of Kenya RAPID support	5	5
2.2.3: Number of organizations with increased performance improvement with Kenya RAPID assistance	100	60

- The Wajir water desalination unit installed through a Private Public Partnership (PPP) model between the County Government of Wajir, Kenya RAPID and Boreal light (a private partner), with 50% share on capital and revenue, started operations in February 2020. Cumulatively, over 30,000 community members have accessed safe water within Wajir Town since with a total of \$54,320 revenue collected so far. Apart from being one of the main sources of portable water in Wajir Town, the facility has created employment for water attendants and vendors in the community; wastewater from the system is used for greening and planting of trees. Arising from the success of this pilot, Boreal Light has subsequently launched a national program of replicating the model across Kenya with an indication that they have allocated Euros 4.4 million for that purpose. This facility and pilot have also provided useful lessons to the Wajir County Government on scaling up the technology to other areas within the county.

- The program, in collaboration with LIXIL Africa (private sector partner), rolled out a multi-stakeholder sanitation marketing supply chain model in Garissa to stimulate SaTo Pan demand and use by communities. This helps communities and households to climb the sanitation ladder by improving their latrines to climate proof resilient sanitation facilities (an initiative dubbed *Bora Choo to Choo Bora*) and creating a reliable sanitation product supply chain. The program supported promotion of SaTo products in villages in Garissa through sanitation marketing to improve and sustain better sanitation standards across households. Through use of SaTo devices, households in ODF villages improved their pit latrines; the SaTo device helps to eliminate smell and flies but also assures zero contact of humans with excreta which greatly prevents transmission of oral fecal route diseases.
- A total of 21 Water Users Association (WUAs) were supported through installation of ordinary and bulk prepaid water meters and training which have significantly improved their revenue collection from water sales and reduced non-revenue water losses.

SO3: Communities have increased access to sustainable WASH services and improved rangeland management.

Indicators	Program Target	Actual
SO 3.1: Percent of a drinking water utility’s supply that is non-revenue	38%	39%
SO 3.2: Percentage of households with basic service level for livestock (disaggregated by quantity, quality, accessibility, reliability- as defined in inception phase)	31%	36%
SO 3.3: Percent of population in target areas practicing open defecation	35%	31%

- Non-Revenue Water (NRW) adversely affects the operational efficiency of water points and most importantly negates anticipated paybacks from water supply infrastructure developments. During RAPID, County Water Departments and local utilities were supported to employ mechanisms for timely detection of water pipeline bursts and leaks, improve maintenance of water distribution systems and utilize effective metering, especially encouraging use of prepaid water meters which contribute to reduction of non-revenue water.
- Close collaboration and partnerships with the County Departments of Health in the five counties significantly contributed towards achievement of ODF communities in line with the Ministry of Health’s national objective of an ODF Kenya by the year 2022. Through increased budgetary allocation and technical support, county teams played a leading role in achievement of sustainable sanitation outcomes.

- Provision of livestock watering troughs as part of the design for water systems ensured increased access to water for livestock (with is the major livelihood of ASAL communities) across all seasons. This, coupled with fodder/pasture production and restoration initiatives, had a positive impact on livestock productivity translating to increased availability of livestock products such as milk.
- RAPID’s rangeland activities contributed to availability of pasture for livestock which supported milking, lactating and young livestock grazing near Manyattas (homesteads). This ensured a continuous supply of milk to families. Establishment and empowerment of Rangeland Management Committees (RMCs) to effectively manage rangeland resources and enforcement of grazing plans contributed to improved basic services for livestock.
- The program supported triggering for over 169 villages using the community led total sanitation (CLTS) methodology out of which 166 villages were declared ODF. The CLTS methodology was promoted by the County Health Departments and other stakeholders in counties and is gradually transforming communities to safe defecation practices.

IR3.1: Increased access to sustainable water for drinking and other domestic uses

Indicators	Program Target	Actual
3.1.1: Number of people gaining access to basic drinking water services as a result of Kenya RAPID assistance	350,000	462,133
3.1.2: Number of liters of drinking water disinfected with point-of-use treatment products	630,000,000	263,172,224

- In partnership with County Departments of Water, RAPID supported development and rehabilitation/expansion of 110 water points, thereby improving access to basic drinking water services for 462,133 (234,764 W, 227,369 M) people. Broken out per county beneficiaries were Marsabit (105,951), Turkana (91,107), Isiolo (66,842), Garissa (101,837) and Wajir (96,396). Furthermore, livestock were supported as improved water access was available for 907,809 livestock (477,030 shoats, 263,900 cattle, 112,877 camels and 54,002 donkeys). The program further supported delivery, distribution and training on use of point of use (POU) water treatment products including Aqua Tabs, PUR sachets and Life Straws. POU efforts resulted in treatment of 263,172,224 liters of water in the five counties thereby increasing access to safe drinking water and reducing risk of consumption of unsafe water by targeted communities. As a result, households accessing safe water within a shorter time frame, not exceeding 30 minutes for collection, increased from 57% (at baseline) to 69.2%. Reduced time to and from water points is enabling women who are normally primary caregivers to engage

in income generating activities and care for children. Water supply to learning institutions and health facilities has enhanced personal and menstrual hygiene options, as well as improved retention of girl child in schools.

- Knowledge gained by water officers during Integrated Water Resources Management (IWRM) training sessions by the program jointly with Acacia Water and the department of water enabled them to prioritize implementation of 3R activities in Loima-Turkana county. Officers applied techniques and skills learned in identifying gaps (water demand and cost analysis) and ground profiling for implementation of appropriate subsurface water catchment systems. As a result, Nayada subsurface sand dam was constructed and integrated with hand pumps to provide safe water for domestic use benefiting 1,500 people (720 F, 780 M) and 3,000 livestock.

IR 3.2: Improved access to sustainable water for livestock and other productive uses

Indicators	Program Target	Actual
3.2.1: Percentage of households with access to between 21 and 50 liters per person per day for all uses (domestic, livestock, and productive)	37%	53%
3.2.2: Number of individuals in the agriculture system who have applied improved management practices or technologies with Kenya RAPID assistance	2,000	6,663
3.2.3: Number of children under two (0-23 months) reached with community-level nutrition interventions through Kenya RAPID program	4,085	17,498

- Over 85% of boreholes developed in the program counties are high-yielding and thus provide more than 21 liters per person per day. This high yield also allows households to engage in other productive uses including irrigation, home gardens/kitchen gardens and providing water for livestock. A final evaluation of RAPID revealed that 53% of households in target counties had access to at least 21 liters of water per person per day for all uses (domestic, livestock, and productive) within a 30 minute walk. This is a notable increase from the 34% reported at project baseline.
- To achieve improved nutritional outcomes among the targeted population in the five counties, the program facilitated trainings on best agronomic practices and targeted extension services to smallholder farmers, thus promoting local production of vegetables and other horticultural

crops using water efficient irrigation technologies. Together with the Department of Agriculture, the program supported training of 57,643 (33,433 W, 24,210 M) farmers on various agronomic practices. Additionally, 3,465 women and 3,198 men were reported to have applied improved management practices/technologies including drip irrigation, kitchen gardening, value addition, and soil and water conservation. The program also supported training of 2,556 female and 2,361 male professionals in on agrinutrition. These professionals then facilitated community level nutrition education activities aimed at promoting appropriate maternal infant and young child nutrition practices. As a result, 17,538 (9119 girls, 8419 boys) children under two (0-23 months) were reached with various community-level nutrition interventions through their care givers who benefitted from the training. The small-scale farming, coupled with agrinutrition training, social behavior change and communication interventions, has led to positive adoption of healthy practices by various womens' groups and female individuals. These women now have access to income from the sale of dried vegetable, such as Moringa powder, as well as increased access to diverse foods from the kitchen gardens they established after the trainings and dialogue sessions.

IR 3.3: Improved sanitation and hygiene practices

Indicators	Program Target	Actual
3.3.1: Number of people gaining access to a basic sanitation service as a result of Kenya RAPID assistance	45,000	81,097
3.3.2: Number of communities verified as open defecation free (ODF) as a result of Kenya RAPID assistance	130	166
3.3.3: Number of households with soap and water at a handwashing station commonly used by family members	25,000	24,008
3.3.4: Percent of households in target areas practicing correct use of recommended household water treatment technologies	35.6%	24%

- To improve adoption of appropriate sanitation and hygiene practices among the targeted households, Kenya RAPID, in collaboration with County Departments of Public Health supported CLTS follow-up and monitoring in 169 villages within Marsabit, Isiolo, Wajir, Turkana and Garissa. As a result, 166 villages were verified and declared ODF including: 41 in Turkana, 25 in Garissa, 44 in Marsabit, 30 in Isiolo and 26 in Wair. Collectively, 13,187 household latrines as well as 585 institutional latrines were completed and are in use

benefitting 81,097 (43,333 W, 37,764 M) individuals. Furthermore, 24,008 households were supported to establish handwashing stations with soap and water for use by the family members and 10,097 women and 11,300 men were trained to implement improved sanitation methods in the five target counties.

- In total, 24% of households reported practicing correct use of recommended household water treatment technologies. From the 24%, chemical water treatment is the most commonly (64%) used but boiling water is often a common approach (57%).

IR 3.4: Improved rangeland management at county level

Indicator	Program Target	Actual
3.4.1: Percentage increase in grassland cover	10%	3%
3.4.2: Number of Pastoral communities - with appropriate grazing plans in place and utilized	16	36

- The program supported registration and training of 81 Rangeland Management Committees (RMCs) on holistic rangeland management, governance and leadership, fodder production and management of wet and dry season grazing areas. RMCs were also assisted in development of grazing bylaws and plans to operationalize proper management of their grazing areas. To ensure proper utilization of rangeland resources and support conflict prevention and mitigation measures, 101 conflict and pasture management forums were held with traditional elders and RMCs in the five counties. In collaboration with Regional Centre for Mapping of Resources and Development (RCMRD) SERVIR program, digitization of 12 grazing plans was completed and these were disseminated to the county and community level through the RMCs. Cumulatively, 36 pastoral communities were supported to develop appropriate grazing plans which aided effective management of rangeland resources. The RMCs were empowered through relevant trainings and became instrumental in enforcing the grazing plans through controlled grazing during wet and dry seasons. Close partnerships between Conservancies and RMCs in the counties contributed to increased availability of pasture and water for livestock.
- Through reseeded and monitoring of grazing plans, communities have reported adequate availability of pasture and water for utilization by livestock. Increased rains towards the end of 2020 and early 2021 improved forage growth and water access. Effective application of grazing plans and continuous vegetation monitoring by RMCs, alongside concerted efforts in rehabilitation of denuded lands has contributed to improvement in grassland cover.

Progress on Implementation of Direct County Transfer of fund Supported activities

The Kenya RAPID Program was designed with the objective of supporting government leadership via the facilitation approach – improving interventions that promote county-led, context-specific efforts to address development priorities in WASH, livestock, rangelands and nutrition sectors. The facilitation approach focuses on creating widespread, systemic change without NGO direct intervention in a system. As part of the facilitation approach, the Kenya RAPID program contributed to putting in place strong, responsive and accountable governance frameworks at the county government level to ensure sustainable provision of water and pasture. To support this idea, the Direct County Transfer of Funds was developed with the aim to improve the county operational capacity in the WASH, livestock and natural resource management sectors through multiple processes of systems strengthening, improving service delivery and increasing adoption and acceleration of proven innovations and technologies.

Over the program period however, transfer of responsibilities between NGO/private sector partners and county governments was uneven with different counties demonstrating mixed results and different time required for transfer of the five key responsibilities of project leadership and decision-making, accountability and reporting, management systems (e.g. procurement), coordination and financial management. County specific progress is provided next.

Garissa County

The Direct County Transfer funds supported the institutionalization of the Garissa Rural Water Services Corporation (GARUWASCO). Milestones are as follows:

Capacity building:

- Completed Board and senior management training on corporate governance as well as online training of four county staff (from the Department of Water) on solar technology, facilitated by Strathmore University, to improve their technical knowledge and support in the management of the green energy- solar powered water system.
- Concluded office set up for staff which included procurement and delivery of office furniture such as chairs, tables, information and communications technology (ICT) equipment (four desktops, four laptops, projectors, and printers), fireproof safes, and kitchen appliances.
- Completed induction of new staff on their roles and responsibilities among other aspects.
- Quarterly meetings of the board continued to ensure effective oversight of the corporation.

Stakeholder engagement and strengthening of GARUWASCO:

These activities were undertaken to support stakeholder buy-in of the existence of GARUWASCO and its mandate and to strengthen GARUWASCO as an organization:

- Consultative forums were held in Ijara, Masalani and Bura sub-counties. Present at the forums were County Assembly Water Committee Members, Ward Administrators and Community Water User's Association representatives.
- Management and the Board of Directors of GARUWASCO went on a bench-marking trip to Laikipia and Marsabit Counties to learn how rural and community water projects are run. They also learned about the use of technologies (e.g. prepaid water meters in management of communal water kiosks) for improved decision-making. The insights from the trip are informing decisions on managing the rural community water projects that GARUWASCO has planned to take over.
- Supported GARUWASCO to develop standard operating procedures for human resources, financial management, technical aspects and procurement processes to guide operations of the corporation.
- Developed the corporate brand (logo developed and launched) and launched a newly developed website.
- Development of a five-year corporate strategic plan is in progress.
- Procured water quality testing equipment which has been delivered and is in use.

Isiolo County

Support to strengthening of the governance and legal framework and capacity building:

- Supported strengthening of county governance and legal frameworks by contributing to enhancement of the enabling environments for water access, agriculture and livestock production for increased resilience in Isiolo County through policy and regulatory reforms.
- Supported the operationalization of the Isiolo Water and Sanitation Services Act of 2020 through the activation of the water fund and development and passage of the Isiolo Water Rules and Regulations to support management of water and sanitation systems.
- Provided water management trainings for Ondonyiro, Sericho, Kinna, Boji, Garbatulla, Chari and Cherab Water Committees in preparation for professional management of rural water supply systems.
- Strengthened rural water governance through supporting development of the Rangeland Management Policy and Bill and the final launch of the County Nutrition Action Plan 2019-2023.
- Procured services for development of water rules and the consultant is working on the document.
- With support from a consultant, established a billing system.
- Procured 14 new water meters.

Water Point Mapping with focus of data collection and ICT for decision-making:

- Activity included preparation, training and pretesting, data collection and analysis, final reporting, dissemination, database updates and handover to the county government.
- Through support from SweetSense, continued displaying water point data from all the instrumented boreholes on the dashboard and installed 31 additional sensors on boreholes, leading to a cumulative 47 boreholes with data displayed on the e-Maji Manager dashboard.
- Sensor data continues to be transmitted via satellite to an IBM-developed cloud-based dashboard (e-Maji Manager) which has allowed borehole functionality and water abstraction to be tracked from the county headquarters or anywhere the Borehole Rapid Response Units (BRRU) are. This has resulted in time and resource savings. Data from the sensors guides the counties in decision-making on water resources development, management and budget allocation for repair and maintenance of boreholes. An improvement in the access to functionality data has remarkably reduced borehole downtime by half as most repairs are promptly undertaken.

Marsabit County

Milestones during this period include:

Support to strengthening of the governance and legal framework:

- Supported the county government Department of Water, Environment and Natural Resources in operationalization of the Water Sector Fund as enshrined in the Marsabit County Water Act of 2018.
- A water sector fund bank account was opened and a committee comprised of the CEC, County Officers from water, environment, natural resources and finance and the Fund Manager has been formed to oversee management of direct county transfer funds.
- Training of the committee on financial management is completed and an accountant from the County was seconded to provide support on the management, accounting and reporting of the use of water sector funds.

Support to review, prioritize and implement activities:

- Supported the department of water in reviewing and prioritization of proposed activities under the Direct County Transfer. Prioritized activities included: procurement and installation of four prepaid water meters for communal water points, four prepaid water meters for water trucks, four prepaid water meters for livestock solutions; construction of four water kiosks and pipeline infrastructure; and construction of four elevated steel tanks.
- Social mobilization and sensitization on adoption of prepaid metering systems for water dispensing took place in targeted sites (Kinisa in Moyale sub-county, Bubisa in North Horr sub-county, Kubiqallo in Saku sub-county; and Furmisan-Kamboe, Laisamis and Merille in Laisamis Sub-County). The process involved holding community barazas of less than 30 people (observing Ministry of Health Covid-19 regulations). The barazas were comprised

of water management committees (WMCs) and local leaders who were then tasked with the role of sensitizing other community members at household level. A total of 180 people were directly sensitized and eventually the communities at the target sites accepted and welcomed the idea of installing prepaid water meters at their water points.

- Construction activities took place including: a 50 m³ steel tank on a 9 m tower at Kubiqallo in Saku sub-county, a 50 m³ steel tank on a tower at Bubisa in North Horr sub-county, a 50 m³ steel tank on 9 m high tower at Furmisan-Kamboe in Laisamis sub-county and a 50 m³ steel tank on a high tower at Merille in Laisamis sub-county. The tanks were installed with bulk prepaid water meters for revenue collection targeting water trucks that mainly come from Marsabit Town headquarters and surrounding areas. It is expected that for every borehole supported through this investment, accountability mechanisms for revenue collected are now fully in place, thus strengthening the sustainability of these boreholes even during drought emergencies.
- Construction of four water kiosks with fully installed with household prepaid water meters. The installation of prepaid water meters at water kiosks has not only improved revenue but has also enhanced equity in the sharing of water resources and removed wastages because every drop of water counts.

Use of ICT for decision-making:

- Conducted training, in collaboration with Maji Milele, on prepaid water meter dashboard data utilization for county and local partners. A total of 24 (9F, 15M) participants were trained on prepaid dashboard site opening, accessing the amount of water dispensed from the water point at a specified period from the site, accessing the total credit sales for a specified period of time for both shop and user credit sales, accessing the revenue collection for a specified period of time and report generation. The aim of the training was to equip participants with online monitoring skills for the sites already installed with prepaid meters. The county team became able to remotely monitor revenue collected from a water points within a specified period, amount of water dispensed in a day (control against over abstraction) and compare the revenue collected versus the amount of water dispensed to help in manage unaccounted for water.
- Installed, in collaboration with Sweetsense, 21 sensors of which 17 were new sites and four were replacements.

Turkana County

Milestones during this period include:

Support to strengthening of the governance and legal framework:

- Completed formation of a Turkana sub-county Water Forum which is fully operational along with Coordination Committees for Loima, Turkana North, Turkana South and Turkana East.

- Completed registration of two water companies to serve urban and rural areas respectively, namely Turkana Urban Water Company and Turkana Rural Water Company.
- Rolled out the Water Fund whereby the Turkana County Government committed KSHs 15 million.
- Supported upscaling of repair and maintenance of water systems within a PPP arrangement.
- Strengthened capacity of Water User Associations.

ICT for decision-making:

- Installed, jointly with the department of water services, 23 borehole sensors, out of which 18 were new installations and five were based on a need for repairs and the sensors were simultaneously upgraded to the new generation. In total, 56 borehole sensors have been installed across the county.

Strengthening of county engagement with private sector for sustainability:

- Utilized a PPP model to enable the county government to strengthen their repair and maintenance model by engaging Davis and Shirtliff LTD in repairing ten solarized boreholes. These boreholes benefited 23,450 (12,194 M, 11,256 F) individuals and over 8,653 livestock (6,760 shoats, 905 cows, 820 camels, 168 donkeys).
- Supported the county government and the Diocese of Lodwar (DoL) in reviewing an existing MoU that would see Turkana County delegating functions of repair and maintenance of hand pumps to DoL.
- Supported, jointly with the Department of Water Services, the formation of a Water Institutionalization Steering Committee that will spearhead implementation of the County Water Act 2019. The committee comprised of 11 members is chaired by the Chief Officer of the Ministry of Water, Environment and Mineral Resources.

Wajir County

Wajir County did not receive direct country transfer funds due to the fact that the funds were intended to support operationalization of the Water Act which is not yet in place in Wajir. Nonetheless, during the period other activities supported by the program took place to continue progress.

Support to strengthening of the governance and legal framework:

- Provided support for the development and enactment of county policies and laws which contribute to improving the institutional and legal frameworks for operationalization of services in WASH, livestock and rangeland management sectors. This facilitation was aimed at supporting the county government to effectively deliver services to improve water access for communities and livestock.
- Wajir County Assembly members were orientated on the Water Bill in addition to facilitation of public participation.

- Facilitated discussions with county leadership to support passing the Water Bill at the County Assembly to help ensure the Water Act will be in place.
- Supported the gazettement of the advert for public participation in leading newspapers so that it reached as many people as possible and followed requirements in the constitution of Kenya.
- Facilitated public participation in all of the sub counties of Wajir County (Wajir East, Wajir West, Wajir South, Wajir North, Eldas and Tarbaj) with a view of enabling the public to have their feedback on the bill addressed. A public participation report was developed and adopted at the county committee level and is awaiting reading and possible passage at the county assembly.

Empowered communities to effectively exercise rights and responsibilities for their WASH and rangeland resources: For sustainability and reliability in service provision of water, communities need to be adequately informed and actively participate in the management of communal resources to ensure transparency and accountability.

- Facilitated the roll out and subsequent follow-up on implementation of the Complaints and Feedback Mechanism through WAJWASCO. The use of this mechanism has registered great success which was aided by WAJWASCO setting up a complaints and feedback office and employing competent staff to solve the received complaints.

Replicable and scalable business models for sustainable WASH and livestock service delivery: The water desalination technology piloted in Wajir through a PPP is providing easy access to large volumes of safe water for households and has reduced the need for bottled water. The need for the solar desalination system was informed by the highly saline and brackish water which characterizes Wajir Town's underground water sources.

- Conducted a feasibility study with the county government and Boreal Light on the possibility of scaling up the PPP model to other two sites in Wajir East and Wajir North. The model has been successful and regarded as one of the county flagship-projects. Due to this initiative, the county, in its annual FY20/FY21 budget, provided for procurement of desalination systems to reduce the cost of water trucking in areas with high water salinity. The county also realized the sustainability of PPP model in water provision as the system's operation and maintenance are guaranteed by the private sector partner.

Data and ICT tools available, accessible, and utilized for improved decision-making:

- Facilitated close monitoring of the borehole sensors in partnership with Sweet Sense through regular visits and follow up with sub-county water officers and WAJWASCO staff. The information generated from the dashboard has been helpful in reducing wait time for operation and maintenance of the boreholes and also for creating transparency of revenue collection.
- Identified, in partnership with WAJWASCO, 17 additional borehole sites that were fitted with the sensors and six boreholes where sensors were replaced after malfunctioning. This brings the total number of sensors installed in Wajir to 35.

- Facilitated continued monitoring of the livestock bulk water meter installed at Haraghal. It has continued to function effectively and records and transmits real time data to a dashboard has greatly helped WAJWASCO staff reduce operation costs related with field visits since the meter functionality can be remotely accessed and monitored through the system. From the dashboard, authorized personnel easily track the amount of water dispensed and daily sales.

Communities have increased access to sustainable WASH services and improved rangeland management:

- Supported the County Department of Health to ensure communities adhere to the recommended hygiene practices and sanitation standards with increased attention during during the advent of COVID-19. This has ensured that the gains previously realized in safe sanitation, including declaration of 26 villages as ODF, aren't eroded.
- Conducted monitoring of previous villages that were declared ODF and found that the households had erected toilets and equipped them with tippy taps for handwashing.

Progress on the SDC cross-cutting themes on gender, governance and human rights

The program worked closely with county government staff, NGO partners, other stakeholders, and communities to ensure involvement of both men and women in planning and implementation of all program interventions. Due to the critical role of women in food security and poverty alleviation, RAPID worked to strengthen their capacity, participation and involvement in decision-making and ensured that women were not left behind by ensuring that women were at least one third of the membership of Rangeland Management Committees (RMC) and Water Management Committees (WMCs). RAPID also provided trainings targeting improvement of women's skills and knowledge on a range of issues including small-scale food crop production, value addition, market linkages, entrepreneurial skills and financial inclusion. The small-scale farming coupled with agrinutrition training, social behavior change and communication interventions consistently led to positive adoption of improved practices by various women's groups and female individuals. These women now have access to income from the sale of horticultural crops, including dried vegetables such as Moringa powder, as well as increased access to diverse foods from kitchen gardens they established after trainings and dialogue sessions. The program's monitoring and evaluation system supports performance management and provides for gender-disaggregated data collection and gender performance indicators. The Kenya RAPID program design included elements that accommodated women's traditional gendered role of caring for children and being responsible for household nutrition, promoted kitchen gardens and education on food diversification, and encouraged deployment of Community Health Workers for nutrition promotion. Furthermore, the program promoted use of labor-saving technologies at water points, potentially reducing the time burden on women for water collection, and promoted

economic opportunities for women, youth, and the disabled through strengthening women's cooperatives and savings and lending committees.

Select examples from RAPID of women influenced decision-making processes or women's management of program initiatives include:

- The Shauri Yako Women's Group is managing the Shauri Yako water prepaid kiosk which is performing well in terms of revenue collection and water scheme governance.
- IWASCO contracted women water vendors at the Attir, Tegemeo, Wiukereria, Wabera, Kambi juu and Mwangaza kiosks. The selection processes for management of these water kiosks were competitive (e.g. no affirmative action), and women's groups won the bids. Many stakeholders viewed the performance of women's groups as better than that of men's groups, due to their distinct management styles.
- In sanitation promotion, women took leading roles in construction of latrines, thereby contributing to disease prevention, safety and the well-being of their family members. Moreover, increased social mobilization of women in the community to participate in other development activities resulted in the emergence of additional women leaders. Further, there is increased capacity building of women's groups to become suppliers of latrine slabs and hand-washing stations.
- Women's participation and engagement in program activities increased through involvement in various project meetings, contributing useful ideas on how to implement activities, following-up on project progress and assisting in monitoring project initiatives. In Bilal and Bula Mpya villages in Isiolo County for instance, women were at the forefront in following-up on project progress and monitoring construction activities. As a result, they were given responsibility over water vending in these sites through which they continue to earn additional income for their households which they use in meeting household needs such as buying food and clothing and paying school fees.
- The increased role of women in owning or leasing land for small-scale irrigation has led to increased crop production in areas such as Attir, Bullesa, Garfasa, Kambi ya Juu, Merti and Garbatulla farms. In these areas, women now have a greater say on cropping patterns, water and soil management, and farm produce.
- Promotion of an entrepreneurial culture targeting women-led Micro- Small and Medium Enterprises (MSMEs) proved successful in enhancing household livelihood security. The Mwangaza Women's Group is an example of a MSMEs; this group is engaged in hatching poultry chicks and production of hydroponics for commercial sale through which they have boosted their income leading to purchase of other assets such as goats, poultry and household consumables.

The Kenyan constitution 2010 recognizes that access to safe and sufficient water is a basic human right and provides that every person has the right to reasonable standards of sanitation. It assigns

the responsibility for water supply and sanitation provision to county governments. It is on this premise that Kenya RAPID worked with the five county governments to improve the legal framework which ensures that county-wide and cross-border water, rangeland management and land tenure rights are respected. Thus, the program contributed to enhancement of the enabling environment for water access and agriculture and livestock production for increased resilience through policy and regulatory reforms.

The program continuously provided support to the five county governments in fast tracking finalization of water, sanitation, rangeland management and other agriculture related policies and bills which contributed towards improving the institutional and legal framework in the operationalization of the devolution agenda. RAPID prioritized using the program implementation through facilitation approach (PIFA), which focuses on government in a leadership role, for joint planning, budgeting and implementation of projects with county government departments. This approach promoted ownership of roles, engagement of stakeholders through regular consultative meetings and community involvement in decision-making. Community involvement included public participation in making laws at the county level as well as empowering community members to demand improved services from the county government.

Chapter 3: Outputs and Performance based on Program Plan of Operation

SO1: A responsive and accountable governance framework is in place and operational at county level that ensures sustainable provision of water and pasture

IR 1.3: Empowered communities effectively exercise rights and responsibilities for their WASH and rangeland resources

Indicator	Program Target	Actual
1.3.1: Number of individuals utilizing the community complaints mechanism at county level	226,250	287,090

- Kenya RAPID strengthened the county water service delivery through enhanced feedback management for both rural and urban water supply systems. Complaints were received across the five counties from 287,090 individuals who utilized the framework to share complaints about their water facilities. Most of these complaints were addressed by the relevant county departments.

SO 2: Replicable and scalable business models for sustainable WASH and livestock service delivery have been developed and operationalized

I.R 2.1: Data and ICT tools available, accessible and utilized for improved decision-making

Indicator	Program Target	Actual
2.1.1: Number of county E-maji Manager systems developed and utilized by county staff	5	5
2.1.2: Number of devices on which the first pilot E-maji Manager system has been installed	435	2,252

- Kenya RAPID, through SweetSense, offered onsite and remote technical support to counties to ensure functionality of borehole sensors. SweetSense shared weekly reports with 75 selected county and NDMA staff. The weekly reports provided a summary of several aspects of the performance of each borehole. IBM trained and interacted with the IT staff in the counties for knowledge transfer and for obtaining and incorporating feedback for continual improvement of the E-maji Manager (formerly WMaaSP) as well as monitoring and maintenance of the platform. Further, the 146 borehole sensors which were installed across the five counties provided timely functionality and abstraction data to county Departments of Water and the water utilities which helped to inform timely decision-making for repair and maintenance.

IR 2.2: Financially viable public, private and/or PPP models for WASH service delivery and livestock operationalized

Indicator	Program Target	Actual
2.2.1: Number of SMEs assisted to newly provide or expand existing products and/or services to the WASH sector	50	50
2.2.2: Number of SMEs assisted to newly provide or expand existing products and/or services to the livestock sector	50	50

IR 2.3: Expanded public and private finance available and invested

Indicator	Program Target	Actual
2.3.1: Volume of loans taken by SMEs to provide products and/or services to the WASH sector.	\$100,000	0

- In order to promote sustainability in WASH and livestock service delivery Kenya RAPID supported business development and support services to micro- small and medium enterprises (MSMEs) in WASH, livestock and agriculture across the five program counties. RAPID conducted this market development work with the support of Smart Regional Consultants (SRC) and in collaboration with other partners of the program including Cooperative bank, KCB Foundation, and County Departments of Water, Agriculture and Trade. The program support to MSMEs and SMEs included taking them through Business Development Support (BDS) training which focused on creating awareness of business practices relating to entrepreneurial innovation, financial management, product sales and distribution, marketing, organization capacity/governance, strengthening of internal processes (such as revenue collection and management), and processing and packaging of their products. Approximately 100 MSMEs and SMEs benefitted from this support to improve and expand their products and services for the WASH and livestock sectors. The MSMEs and SMEs were also supported to develop business plans and to establish market and financial linkages to enhance their service delivery opportunities. These MSMEs and SMEs were then linked with various financial institutions for possible financing.
- Commercial financing in terms of loans for WASH MSEMES and SMEs remained a challenge, due in great part to stringent financing requirements and low business potential in these sectors, and more specifically in the ASALs. However, community groups from Isiolo, Wajir and Turkana County accessed loans from Women Enterprise Funds and SACCOs to expand

their agricultural and livestock enterprises which totaled \$13,110.

SO3: Communities have increased access to sustainable WASH services and improved rangeland management.

IR 3.2: Improved access to sustainable water for livestock and other productive uses

Indicator	Program Target	Actual
3.2.1: Number of individuals participating in Kenya RAPID food security programs	58,350	59,180
3.2.2: Number of individuals receiving nutrition related professional training through Kenya RAPID supported programs	5,500	4,917

- To improve household member’s nutritional status through consumption of diversified diets and adoption of other appropriate nutritional practices, RAPID assisted smallholder farmers to produce vegetables and other high value food crops using water efficient farming technologies and techniques. Various trainings were supported to increase awareness on food production and utilization through farmer field days and cooking demonstrations. Individuals from farmer groups in the five counties participated in various nutrition, agriculture and food security activities.
- The program facilitated agrinutrition training for 4,917 professionals, mainly Community Health Volunteers and front-line county staff from Departments of Water, Livestock, Agriculture and Health. The trained Community Health Volunteers were then involved in community level nutrition education targeting care givers with the aim to promote appropriate maternal infant and young child nutritional practices.

IR 3.3: Improved sanitation and hygiene practices

Indicator	Program Target	Actual
3.3.1: Number of basic sanitation facilities provided in institutional settings as a result of Kenya RAPID assistance	600	585
3.3.2: Number of individuals trained to implement improved sanitation methods	25,000	21,397

- To improve sanitation conditions within public schools, the program supported rehabilitation and new establishment of 585 latrines, thereby benefitting 81,097 (43,333 W, 37,764 M)

individuals. Furthermore, 24,008 households were supported to establish handwashing stations with soap and water for use by the family members and 21,397 (10,097 W, 11,300 M) individuals were trained to implement improved sanitation methods in Marsabit, Isiolo, Turkana, Wajir and Garissa. Improved sanitation facilities within the learning institutions has enhanced personal and menstrual hygiene, as well as improved retention of female students in schools.

IR 3.4: Improved rangeland management at county level

Indicator	Program Target	Actual
3.4.1: Number of rangeland management committees trained and registered	75	81
3.4.2: Number of conflict and pasture management forums held with traditional elders	75	101

- The program supported registration and training of 81 RMCs across the program counties on holistic rangeland management, governance and leadership, fodder production and management of wet and dry seasons grazing areas. The program also assisted the RMCs in the development of grazing bylaws and plans to operationalize proper management of their grazing areas.
- To ensure proper utilization of the rangeland resources and support conflict prevention and mitigation measures, 101 conflict and pasture management forums were held with traditional elders and RMCs in the five counties.
- In collaboration with RCMRD SERVIR program, digitization of 12 grazing plans was completed and plans were disseminated to the counties and communities through the RMCs.

Implementation constraints and ways that they were overcome

The following constraints were experienced and addressed as follows during Kenya RAPID:

Constraints/Issues/Challenges	Actions taken/recommendations to address them
<p>COVID-19 contributed to high morbidity and mortality within the country and globally with community infection reported in counties. The MOH restrictions on public gatherings and social distancing adversely affected program activities.</p>	<p>The program worked with staff in the counties to implement its activities. The implementing partners' staff worked in the counties while adhering to government safety measures. The other staff (e.g. partners supporting the program via Nairobi Offices and the PCU), mainly worked from home and provided virtual support to county-based staff.</p>
<p>Delayed disbursements of funds from national to county governments slowed implementation of jointly planned activities.</p>	<p>Following the resolution of the funding stalemate, the program fast tracked implementation of joint activities.</p>
<p>The emergency cycle of drought and heavy rainfall resulted in water scarcity and flooding and affected the operational context. The program counties have, over the past years, transitioned from prolonged drought to flooding due to heavy rainfall resulting in changes to county priorities and a subsequent adverse affect on co-financed activities.</p>	<p>Kenya RAPID worked closely with the county governments and other partners to find long-lasting solutions to the perennial development challenges of drought and flooding in the counties.</p>
<p>Incidences of intercommunity conflicts in some sections of Isiolo, Turkana and Marsabit counties, as well as terrorist attacks in Garissa and Wajir, hindered movement of program teams and implementation of activities.</p>	<p>Community dialogue sessions were convened by tribal and clan elders, with assistance from the respective county governments, when necessary to reconcile the warring communities. Implementing partners were continually advised to take necessary security and safety precautions and avoid risk prone areas.</p>
<p>Locust invasions in some parts of the target counties was a threat to food security as they affected crops in farms and kitchen gardens previously supported by the program.</p>	<p>The National Government responded in most areas by undertaking aerial and ground residual spraying to kill the pests.</p>
<p>Frequent changes of County Water Ministers slowed down implementation of certain activities as some Minsters who were responsive and supportive of</p>	<p>RAPID provided orientation for the new Minsters and other senior county staff whenever there were changes.</p>

Constraints/Issues/Challenges	Actions taken/recommendations to address them
the program work were redeployed while new ones required time to adjust to their new roles.	
Investment risks associated with Northern Kenya hindered rapid uptake of business opportunities in the water and livestock sectors by private sector partners.	The program continued to sensitize the private sector partners on the existing business opportunities in the Northern Kenya counties and how to utilize these opportunities and also mitigate the risks.
Delays by county governments in honoring their commitments on joint program activities affected the pace of implementation of some cost shared interventions.	The program, through the PSC and CPSCs, continued lobbying county governments for prompt financing of projects and the need to ring fence co-allocated funds under Kenya RAPID to secure development partner support for specific interventions.

Eventual changes of main assumptions

Despite the challenges experienced during the program implementation period, the program assumptions largely remained the same throughout the duration. The achievement of the program goal was premised on four main assumptions including:

1. Strong county institutions are a necessary pre-condition to long-term sustainability.
2. Enhanced coordination and integration of development programs across sectors would result in more coherent and efficient support to county governments and thus increase impact.
3. Private sector participation in WASH and livestock sectors would lead to increased investment and more options for improved and financially viable water service delivery.
4. Communities must be empowered with the knowledge and ability to exercise rights and responsibilities for water and rangeland resources.

Throughout the RAPID program, though challenges were experienced, nothing took place that suggested a need to challenge these main assumptions. All of these are still considered valid and important to take into account for any future opportunities.

Chapter 4: Finances and Management
Summary of the financial report
(To be submitted separately)

Chapter 5: Lessons Learned

The following were key lessons learned during the period of implementation of the Kenya RAPID Program:

- The pace of program implementation improved during the RAPID program across the five program counties which culminated in the successes reported. This is because the Kenya RAPID program's common approach to implementing similar thematic areas or activities across the five counties helped partners and governments to learn from each other, make comparisons of progress across counties and to and filter impediments/challenges. This was made much easier because all counties were working from same design. This approach also helped to understand what components of the program worked best in particular contexts (e.g. prepaid meters were very successful in some locations and not in others) and therefore the ASAL context is now better understood to inform future programming concepts.
- Kenya RAPID considered NDMA and County Departments of Water (through their Rapid Response Teams) as key players in the repair and maintenance of strategic/EDE boreholes during dry seasons. Reliance on borehole functionality data from sensors to aid decision-making on borehole management is critical to strengthening early warning systems and drought contingency planning. Improved monitoring of EDE boreholes was found to be important to building resilience within the ASALs.
- Adoption of resilient and climate proof technologies provided sustainable benefits to ASAL households and communities in the five counties. Solar powered systems proved to run on lower operation and maintenance costs which make them both more sustainable and allows for longer pumping hours. These results allow the boreholes to provide more water for household use and agrinutrition activities. Solar water pumps are particularly more impactful for small holder farmers who engage in small-scale irrigation activities. These farmers have reported significant reduction in cost of production, expansion of farm lands and adoption of sustainable soil and water management practices as they worked to optimize the solar systems.
- Most ASAL counties rely on ground water sources (boreholes) as their major source of water. This reliance on groundwater calls for coordinated and disciplined extraction to avoid issues. The current practice in several counties remains haphazard and so there exists a risk of over exhaustion of the available water resources. This suggests a need for groundwater mapping, monitoring and recharge efforts. Therefore, increased application of Integrated Water Resources Management techniques in the ASALs is needed for enhanced and sustainable water availability and access.
- Private Sector actors do not have a strong presence or coverage in Northern Kenya. The lack of existing private sector entities makes it challenging to create demand through motivational incentives such as social marketing. From this learning, it is recommended that the counties be encouraged to develop legal frameworks such as PPP policies to enhance the

enabling environment and motivate investors. Furthermore it is suggested to undertake in-depth market feasibility studies to unearth gaps to inform market-based areas of need and potential.

- Strong and symbiotic partnerships with the county governments and other Partnership for Resilience and Economic Growth (PREG) partners helped to accelerate the achievement of key interventions. Interventions particularly benefitting from these partnerships included: social behaviour change and communication, poultry rearing, crop farming, and livestock/rangeland management activities. Through joint work planning implementation and monitoring, many opportunities for layering, sequencing and integrating activities between RAPID and other PREG partners were identified and utilized to achieve greater outreach and impact.
- Deficits in community participation and water infrastructure ownership undermine the long-term sustainability and increase running and maintenance costs of water points, even where infrastructure designs are excellent. In Marsabit, Turkana, and Wajir Counties, the use of technology to improve revenue collection and accountability has resulted in local communities having an increased ability to plan and fund operations and maintenance, thereby reducing the service delivery burden on the county Departments of Water.