

# PARLIAMENT OF UGANDA



## REPORT OF THE COMMITTEE ON AGRICULTURE, ANIMAL INDUSTRY AND FISHERIES ON A FIELD VISIT TO KARAMOJA AND TESO SUB-REGIONS TO ASSESS WATER FOR AGRICULTURAL PRODUCTION FACILITIES

Office of the Clerk to Parliament  
November, 2023

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## LIST OF ACRONYMS

AfDB	African Development Bank
AVCDP	Agricultural Value Chain Development Project
GoU	Government of Uganda
IDA	International Development Association
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MoFPED	Ministry of Finance, Planning and Economic Development
MWE	Ministry of Water and Environment
NDP III	National Development Plan III
NGO	Non-Government Organisation
PAPs	Project Affected Persons
SAS	Senior Assistant Secretary
SSD	Sub Surface Dam
UBOS	Uganda Bureau of Statistics
UKEF	United Kingdom Export Fund
VIP	Ventilated Improved Pit-latrine
VT	Valley Tank
WfAP	Water for Agricultural Production
WM	Windmill
WP	Water Pond



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## **DEFINITIONS**

### **Valley Dam**

A Valley dam is a structure/barrier constructed across a valley, river or stream, to capture, conserve, store or to control the flow of water.

### **Valley Tank**

A Valley tank is an excavation reservoir basin for capturing run-off water impounded for use during the period of water shortages.

### **Earth dam**

An Earth dam is an impermeable structure built across a waterway from rivers, run-off and/or direct rainfall to impound water in a reservoir for flow regulation and use during the period of water shortages.

### **Irrigation**

Irrigation is the application of a specific amount of water in order to meet the requirements of a crop growing in amounts that are appropriate to the crops' stage of growth. It can also mean the application of water in amounts necessary to bring soil to the desired moisture level prior to planting.

### **Irrigation Systems**

Irrigation systems are composed of infrastructure, water, enterprise management, institutional arrangements and human resources for irrigation. The system can be referred to as Irrigation Scheme which supplies irrigation water to farmers so that they can obtain higher yields than they could without irrigation.

### **Irrigation Schemes (Sizes)**

Irrigation Schemes are categorised into four types: Micro Scale Irrigation Schemes which serves less than 5 hectares; Small Scale Irrigation Schemes which serve between 5-100 hectares, Medium Scale Irrigation Schemes which serve between 100-1,000 hectares and Large Scale Irrigation Schemes which serve more than 1,000 hectares of land.

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## 1.0 INTRODUCTION

In accordance with Rule 159 (c) and (d), 189 (b), (e) and (f) of the Rules of Procedure of Parliament; the Committee on Agriculture, Animal Industry and Fisheries conducted a field visit to Karamoja and Teso sub-regions to assess water for agricultural production facilities.

The Committee now reports, in accordance with Rule 34 of the Rules of Procedure of Parliament.

## 2.0 BACKGROUND

Globally, water for production accounts for over 80% of water drawn for use. According to the Ministry of Water and Environment, less than 2% of water available in the country is used in production; but there is a sharp increase in demand primarily due to climate change and degradation of natural resources. Consequently, 83% of the agricultural communities in Uganda continue to depend on rainfall as a source of water for production. About 21% of agricultural communities utilise wetlands, 14% utilise streams while the least used operational sources of water for production include valley tanks (0.2%) and rock catchment rainwater harvesting (0.3%) (UBOS, 2022).

The Uganda Bureau of Statistics (2022) states further that the country is increasingly facing major challenges of prolonged droughts and unexpected floods due to climate change variability. It is predicted that Uganda will be water stressed by the year 2025.

Cognisant of the climate variability and the importance of water for production; the Government of Uganda (GoU) prioritised increased access and use of water for agricultural production in the National Development Plan (NDP) III through five sub-interventions:

- i) Completion of irrigation schemes under construction/rehabilitation namely: Doho Phase II, Mubuku Phase II, Wadelai, Tochi, Rwengaju and Olweny;
- ii) Construction of new irrigation schemes: Ngenge, Acomai, Atari, Amagoro, Nabigaga, Rwimi, Nyimur, Musambya, Kibimba, Kabuyanda, Matanda, Igogero, Angololo, Namatala, Namulu, Sipi, Unyama, Lumbuye, Palyec, Porongo, Lopei and Imvepi;
- iii) Development of infrastructure and services for bulk water storage and transfer including water abstraction systems, transmission mains, water pumping systems, storage tanks and water distribution networks;
- iv) Development of solar-powered small-scale irrigation systems for smallholder farmers outside conventional irrigation schemes and
- v) Promotion of water use efficiency in agricultural production.

In addition to the above interventions, the Government through the Ministry of Water and Environment (MWE) and Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) has been providing infrastructure for water for production facilities in the country since the 1960s to date. The infrastructure includes valley dams, valley tanks, earth dams and irrigation schemes, among others.

Financing of the above interventions is either externally-funded through loans or internally funded by Government through domestic funding or funding by a mix of both. Currently, there are five (5) externally funded projects which aim at providing water for agricultural production. Most of the projects which the Committee visited were/are being implemented under the five projects.

Government together with development partners have invested in the above five projects.

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**Table 1: Water for agricultural production loan projects in Uganda**

Project Title	Creditor / Donor	Implementing Agency	Date of Effectiveness	Initial closure date	LOAN Amount Committed (US\$ m)	Disbursed to date (US\$ m)	% Disbursed	Implementation Areas
<b>Farm Income Enhancement &amp; Forestry Conservation II</b>	AfDF	MWE	17-Apr-2016	30-Jun-2021	76.70	66.40	86.6%	Five districts of Nebbi-Wadelai (1,000 ha), Oyam-Tochi (500ha), Butaleja-Doho II (1,178ha), Kween-Ngege (880 ha) and Kasese-Mubuku II (480 ha).
<b>Irrigation for Climate Resilience Project</b>	IDA	MWE	17-Dec-2020	30-Apr-2026	173.68	9.65	5.6%	Isingiro, Kanungu, Lamwo, Lira, Tororo, Mukono, Wakiso, Mpigi, and Rukungiri. (Matanda, Olweny, Amagoro, Nyimur)
<b>Agricultural Value Chain Development Project</b>	AfDF	MAAIF	07-Dec-2018	30-Jun-2023	79.05	18.09	22.9%	Acomai Irrigation Scheme in Bukedea
<b>Development of Solar powered water supply system project</b>	UKEF	MWE	12-Feb-2021	12-Jul-24	116.27	39.94	34.4%	376 irrigation systems countrywide (spread across all regions countrywide)
<b>The Intergovernmental Fiscal Transfers Programme</b>	IDA	MOFPE D	29-May-2019		251.96	86.07	34.2%	25,193 small scale subsistence farmers countrywide

**Source: Report on public debt, grants, guarantees and other financial liabilities for FY 2022/23 published by MoFPED as at March, 2023**

However, the Government's efforts to reduce reliance on rain-fed agriculture and mitigate the effects of climate change remain unsatisfactory as the plans are not yielding the desired results. Several challenges have been recorded with these projects during the course of their implementation and utilisation, including among others:

- Lack of a sustainability plan for the infrastructure;
- Poor location and siting of the facilities, placing them in areas that are far from people who are in dire need;
- Misuse of the established facilities by the beneficiary communities;

- Abandonment of the projects by the contractors at implementation phase, thus causing loss of funds to Government;
- Absence of a clear policy framework streamlining the roles of MAAIF and MWE. A recent Cabinet directive placed the responsibility of establishing and managing water for agricultural production facilities for on-farm activities under MAAIF while MWE is supposed to establish and manage facilities for off-farm activities;
- Poor or inappropriate project design;
- Poor coordination during implementation;
- Shoddy and incomplete work in most of the facilities.

The Committee visited the two sub-regions of Karamoja and Teso based on the background information highlighted below:

### **Karamoja sub-region**

Karamoja's prevailing pastoral and agro-pastoral production systems are characterised by a long dry season (October-March) and cyclical droughts that are exacerbated by climate change. The scarcity of water associated with the drought is considered the greatest risk to agricultural development. The consequence is that water resources needed for livestock farming are insufficient in the remaining rangelands.

In addition, a considerable number of small valley tanks (up to 20,000 m<sup>3</sup>) and wells have been constructed across the sub-region, but most have dried up due to the long dry season. Much of the existing water storage infrastructure suffered from consequences of years of utilisation without proper operation and maintenance. Furthermore, water catchment areas supplying water to the water storage sites are under threat due to over-grazing, forest destruction, bush fires and increasing charcoal production.

### **Teso sub-region**

Like all other regions in the country, Teso sub-region depends on agriculture as a key economic activity. However, the area has been experiencing erratic and unpredictable rainfall which has resulted into frequent floods, water logging and severe prolonged droughts, contributing to food insecurity.

The Government has established a number of water for production facilities, but the demand is still high and there are challenges associated with the facilities.

It is against the background above that the Committee conducted a field visit to Karamoja and Teso sub-regions to assess selected water for production facilities. The facilities assessed by the Committee included valley dams, valley tanks and small scale irrigation schemes.

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### 3.0 OBJECTIVES OF THE FIELD TRIP

The field trip was guided by the following terms of reference:

- (i) To assess the state of Water for Agriculture Production facilities in selected districts in Teso and Karamoja sub-regions;
- (ii) To ascertain land ownership on which the water for production facilities are located;
- (iii) To assess the relationship among key stakeholders

### 4.0 METHODOLOGY

In order to achieve the above objectives, the Committee utilised the following methods.

#### 4.1 Meetings

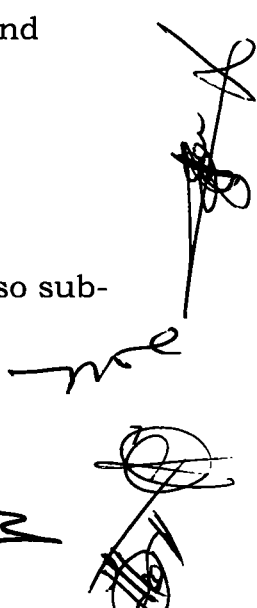
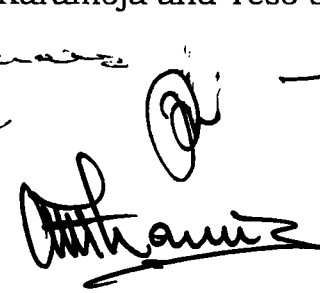
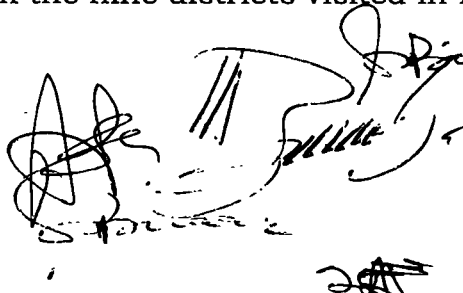
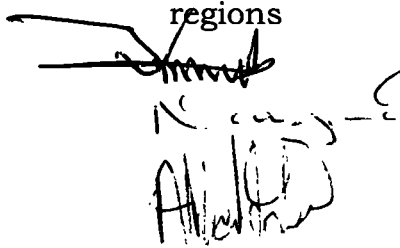
The Committee held meetings with leaders of the districts visited and held discussions at the project sites with the district officials, local leaders, local communities and project contractors for ongoing/completed projects.

The Committee also held meetings with MAAIF, MoFPED and MWE to seek further clarification on findings by the Committee while in the field.

#### 4.2 Document review

The Committee reviewed and made reference to the following documents:

- Rules of Procedure of the Parliament of Uganda
- 2014 National Census Main Report by UBOS
- The National Service Delivery Survey, 2021 by UBOS
- Presentation from the Ministry of Agriculture, Animal Industry and Fisheries
- Presentation from the Ministry of Water and Environment
- Written submissions from MoFPED
- Presentations from the nine districts visited in Karamoja and Teso sub-regions



- National Development Plan III
- Ministry of Water and Environment-Improving Livelihoods Through Water for Production, September, 2019
- National Irrigation Policy, 2017

#### 4.2 Site visits

The Committee conducted site visits of the following water for production facilities in the selected districts as shown in Table 2 below.

**Table 2-water for agricultural facilities visited by the Committee**

S/NO	District	Facility
KARAMOJA SUB-REGION		
01.	Moroto	Nakonyen Valley Dam
02.	Amudat	Katotin Small Scale Irrigation Scheme
		Kosike Valley Dam
03.	Kaabong	Longoromit Valley Dam
		Usake Valley Dam
04.	Kotido	Kaoyangorok Valley Dam
		Kailong Valley Dam
05.	Abim	Kawomeri Valley Dam
		Kanu Valley Dam
TESO SUB-REGION		
06.	Soroti	Alere Small Scale Irrigation Scheme
07.	Bukedea	Acomai Irrigation Scheme
		Akero Valley Tank
08.	Kumi	Amosingo Small Scale Irrigation Scheme
		Agurut Valley Tank
09.	Serere	Opapa Small Scale Irrigation Scheme

#### 5.0 SCOPE

The geographical scope of the report are the districts covered while the content scope are the terms of reference.

## **6.0 FINDINGS, OBSERVATIONS AND RECOMMENDATIONS**

### **6.1 STATE OF WATER FOR PRODUCTION FACILITIES**

#### **6.1.1 STATE OF WATER FOR PRODUCTION FACILITIES IN KARAMOJA SUB-REGION**

##### **NAKONYEN VALLEY DAM**

Nakonyen Valley Dam is located in Moroto district, Tapac sub-county and was under construction by the time the Committee visited the facility. The project is being implemented by MAAIF. The facility will have a capacity of 1,580,000 cubic metres and will serve the people of Tapac and neighbouring communities.

The Committee was informed that work at Nakonyen Valley Dam was supposed to start in November, 2022 but it started in January, 2023 to allow farmers harvest their crops that were on the site identified for the dam, and also to allow the district to iron out differences over the siting of the dam. The works were supposed to last nine months and the expected month of completion is November, 2023. At the time of the Committee visit, progress on site was 45%-50%.

The Committee was further informed that the project will cost UGX 9.1 billion and the source of funds is force on account.



**Work in progress at Nakonyen Valley Dam**

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### ***Some Members of the Committee at Nakonyen***

#### ***Committee observations***

*The cost of the project has been increasing over time. The original cost was UGX 8.1 billion. At the time of the Committee visit, it had increased to UGX 9.1 billion. As of October, 2023 MAAIF had revised the cost to UGX 10.9 billion.*

*After nine months, the project is behind schedule and may not be completed within the planned timelines since the expected date of completion keeps on being extended. While in Moroto, the Committee was informed that construction of the valley dam would end in November, 2023. When the Committee interacted with MAAIF, the date was extended to December, 2023.*

*The project design provides for watering points for livestock but lacks a provision for irrigation, aquaculture and provision of clean water for domestic consumption.*

*There was no adherence to social and environmental standards. There were no trees around the project site to reduce soil erosion and consequently, silting in case of heavy rains. A look at the project design shows that sanitary facilities are supposed to be part of the construction works. On a positive note, the contractor had provided for watering points for livestock even as construction was going on.*

### **Committee recommendations**

***MAAIF should ensure that the contractor expedites completion of the remaining works without compromising the quality to avoid additional costs. This should be done under close supervision of the Ministry.***

***The project design should be revised to make provisions for irrigation, fish farming and clean water provision. This should be done within the available resource envelope.***

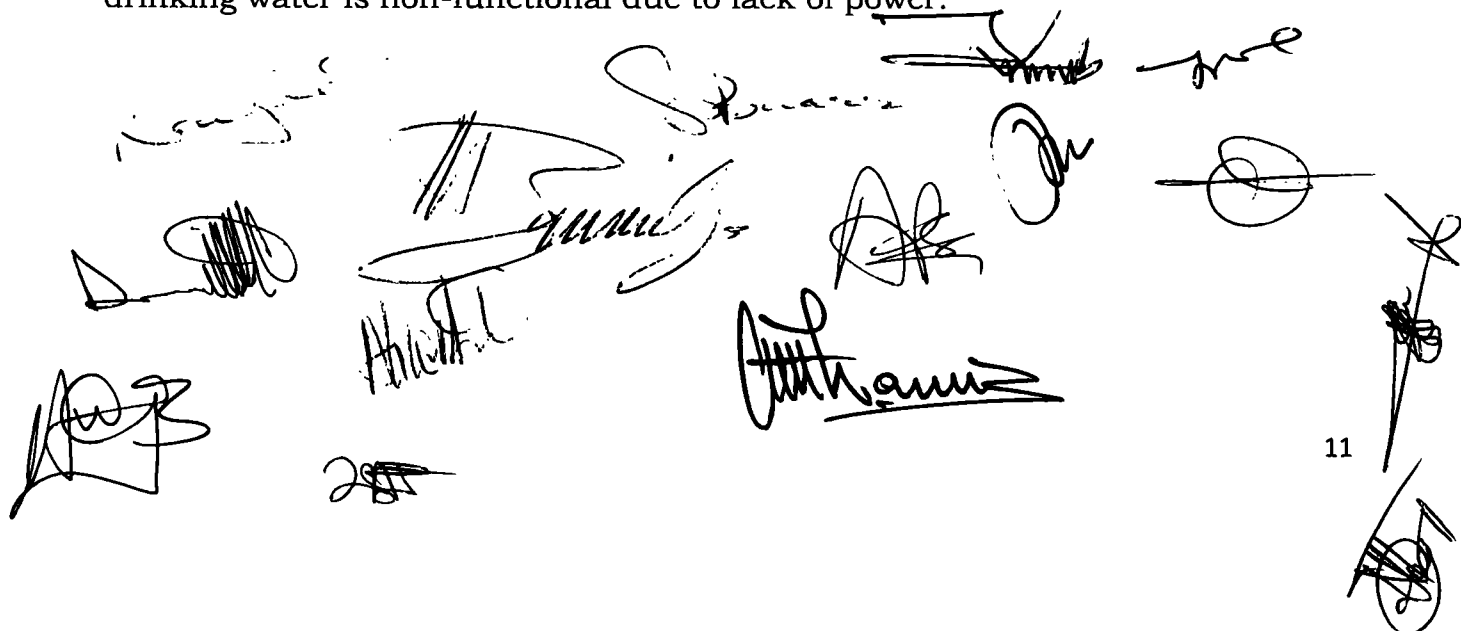
***MAAIF should ensure that the contractor adheres to environmental and social safety standards by planting trees around the project site and constructing places of convenience.***

### **KATOTIN SMALL SCALE IRRIGATION SCHEME**

Katotin Small Scale Irrigation Scheme is located in Amudat district and was constructed by the Ministry of Water and Environment under a project called Disaster in Northern Uganda (DINU). It was started on 11<sup>th</sup> May, 2021 and completed on 20<sup>th</sup> January, 2022 at a cost of UGX 1.9 billion. Although the project has not been handed over to Amudat district local government, when the Committee visited the site, it was being utilised by the local people out of desperation. The project has three components: small scale irrigation, animal watering and clean water for domestic use.

The Committee established that the solar-powered irrigation scheme has two sources of water; underground water and rain water. The scheme is serving 10 acres of vegetables owned by 20 members of the community. The 10 acres were divided among 20 active members of the community with each getting half an acre to plant vegetables.

The Committee further established that one of the three 10,000 litre water tanks has a leakage; one of the pipes taking water to the tanks had burst and the fence demarcating the 10 acres has wide holes which goats and other small ruminant animals pass through to destroy the vegetables (egg plants, cabbages). In addition, the borehole on site which is supposed to provide drinking water is non-functional due to lack of power.





***Crops under irrigation at Katotin Small Scale Irrigation Scheme***



***The valley tank at Katotin Small Scale Irrigation Scheme***

### *Committee observations*

*The project has not been handed to Amudat District Local Government. This is hampering rehabilitation works on the facility.*

*The criteria for allocation of the 10 acres of land to the 20 community members is not clear and this is a recipe for future conflicts.*

### **Committee recommendation**

***The Ministry of Water and Environment should hand over Katotin Irrigation Scheme to Amudat District Local Government which should establish a facility user committee. The facility user committee should set a clear criterion for allocating plots to the farmers and sharing of proceeds from the harvest. This arrangement will also pave way for renovation/rehabilitation works on the project whenever needed.***

### **KOSIKE VALLEY DAM**

Kosike Valley Dam is located in Amudat district in Lobruin sub-county. This project is being implemented by MAAIF. The dam is not yet complete and construction works have stalled. Earth works were done and the dam foundation (wall) were excavated. There was no machinery or equipment on site when the Committee visited the place. The storage capacity of the dam will be 2,788,000 cubic metres while the cost of construction will be UGX 11,666,800,000. The value of works so far done was UGX 1,680,000,000 (14.4%). Construction of the dam is supposed to end on 28<sup>th</sup> February, 2024. The total number of households in Lobruin is estimated at 1,443 with a population of 6,792.

The Committee established that construction started in June 2022 but the project has stalled since December, 2022 due to lack of involvement of the local leaders and demand for compensation by the land owners.

The project does not seem to have received community acceptance for a number of reasons due to a cultural tree which was cut down to pave way for project activities without performing the necessary rituals as demanded by the community. This forced the contractor to withdraw equipment from the site.

In addition, the contractor required clay soil and murram as one of the raw materials for the project to enhance the banks of the dam. The contractor proceeded to get them from a source outside the project area and that led to increased hostility towards the project.



### ***Kosike Dam foundation***

#### ***Committee observations***

*The Government is likely to lose money if the issues that led to stalling of the project are not addressed to enable the project continue.*

*The Ministry of Agriculture, Animal Industry and Fisheries did not adequately engage the community in the project from inception, leading to resistance from the locals.*

#### ***Committee recommendations***

***MAAIF should expedite the process of compensating the land owners so as to pave way for faster and safer project implementation.***

***MAAIF should, as a matter of urgency, adequately engage stakeholders to resolve the diverse interests and concerns of the community.***

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## LONGOROMIT VALLEY DAM

Longoromit Valley Dam is located in Dodoth West in Kaabong district. It was constructed by the Ministry of Water and Environment at the same time with Arechek Dam in Napak district and Kobebe dam in Moroto district. It has a capacity of 1.4M m<sup>3</sup> built at a cost of UGX 7,219,353,573. It has a valley tank and a micro irrigation scheme. The Committee learnt that by 2019, the infrastructure and equipment at the dam was dilapidated and worn out.

By the time the Committee visited the dam, it was non-functional and completely run down. Only a small puddle could be seen with floating algae and a lot of silt in the water catchment area.

The Committee was informed that wild animals from Kidepo Valley National Park strayed and destroyed people's food crops which were grown using the now dilapidated irrigation system. The animals also drink from the valley dam, leading to a lot of silting of the water body. There is no fence securing the land on which the project is located and therefore prone to vandalism.



**Longoromit Valley Dam**

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### *Committee observations*

*The wild animals from Kidepo Valley National Park have escalated the rate of silting of the dam.*

*Longoromit Valley Dam is dilapidated to a large extent and would require a substantial amount of resources to rehabilitate.*

### **Committee recommendations**

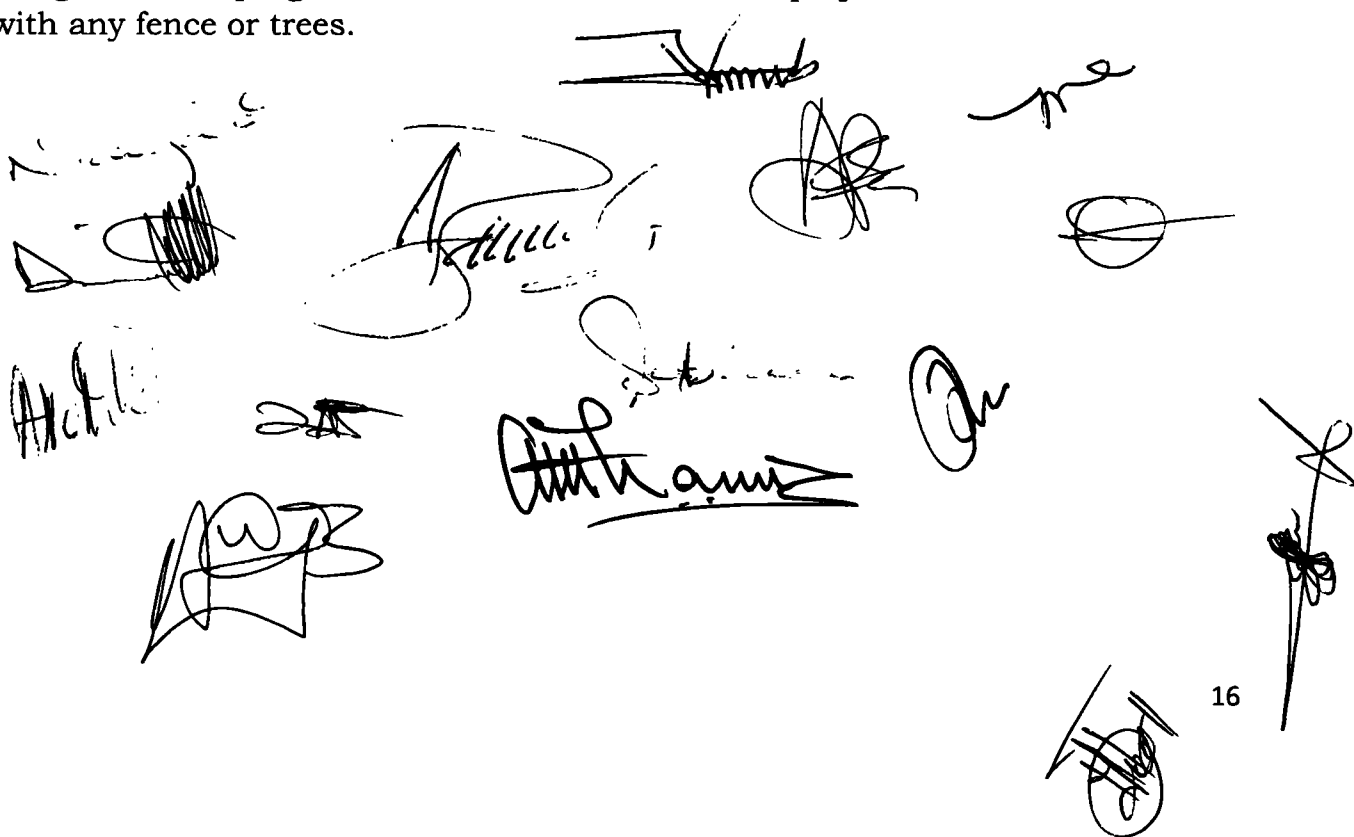
***The Ministry of Water and Environment should budget for fencing and rehabilitation of Longoromit Earth Dam in the budget for the Financial Year 2024/2025. The funds should be released during the first quarter of the next financial year so that the procurement process can begin on time.***

***Effective Financial Year 2024/2025, Uganda Wildlife Authority should budget for fencing of Kidepo National Park to stop the animals from escaping from the park and provide drinking water points to the animals.***

### **USAKE VALLEY DAM**

This project is located in Kamion sub-county, Ik Constituency in Kaabong district. The current construction started on 15<sup>th</sup> July, 2022 and is projected to end by 30<sup>th</sup> November, 2023. The project is being implemented by MAAIF. When completed, the dam will have a capacity of 2,880,000 cubic metres and will cost UGX 6,968,557,260 of which UGX 4,750,860,000 has been spent.

When the Committee visited the facility, the project contractor informed the delegation that progress of works was at 70%. The project area was not secured with any fence or trees.





## **KAOYONGOROK VALLEY DAM**

Kaoyongorok Valley Dam is located in Kacheri sub-county, Kotido district. This construction was done by the MAAIF at a cost of UGX 9 billion. This project was started in November, 2018 and completed in January, 2021. The capacity of the dam is 1.7 million cubic metres. The Committee found out that the water was covered with algae, water weeds and swamp vegetation which made it hard for domestic animals to drink from the dam.

During the visit by the Committee, the district officials reported that the dam had never been handed over to Kotido District Local Government.



***Kaoyongorok Valley Dam covered with water weeds and swamp vegetation***

### ***Observations***

*The dam is located in the wilderness in a very remote and insecure area. The place is uninhabited and there is no road, making it hard for the intended beneficiaries to access and utilise it.*

*The water was covered with algae, water weeds and swamp vegetation which made it difficult for livestock animals to drink from the dam and was not functional.*

### **Recommendations**

***The Ministry of Agriculture, Animal Industry and Fisheries should complete the project and hand it over to Kotido District Local Government.***

***MAAIF through the Department of Agricultural Mechanisation and Infrastructure should support the construction of an access road to the facility.***

***Plans for maintenance of the facility should be put in place.***

### **KAILONG VALLEY DAM**

Kailong Valley dam is located in Lokitelaebu sub-county in Kotido district. According to the MoFPED, this dam was constructed at a cost of UGX 1,095,857,000 and handed over for utilisation in February, 2013. The scope of works included construction of the dam embankment and spillway chute in concrete lining, stone riprap, concrete weir, excavations for dam reservoir, construction of control chamber, construction of access road to the dam site, landscaping, grassing of downstream embankment slope and catchment management upstream.

When the Committee visited, the facility was in the wilderness with no access road and the water source was covered with algae, shrubs and all types of invasive weeds.

#### ***Committee observations***

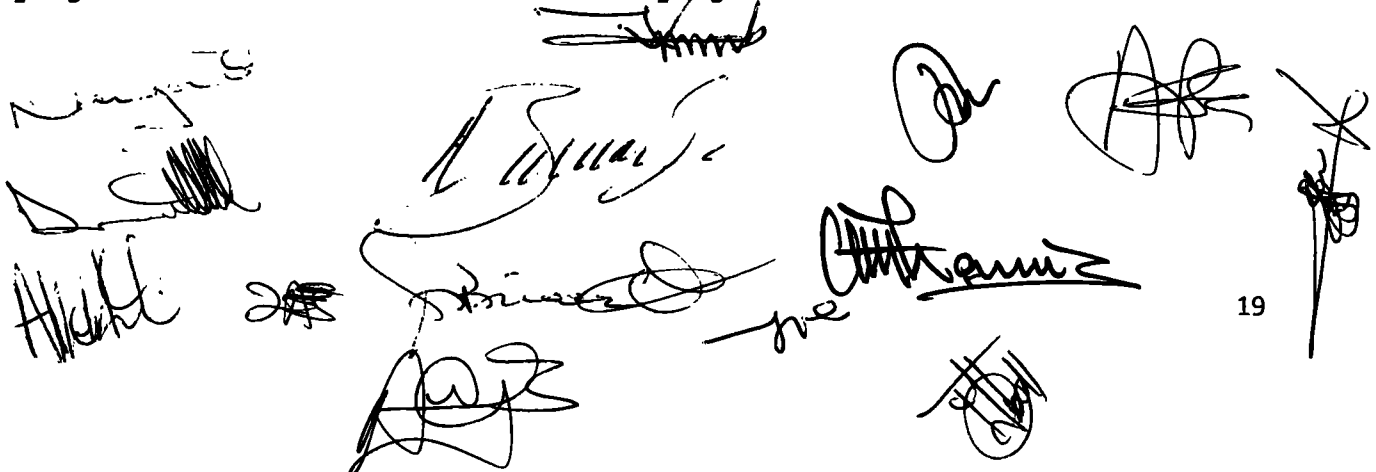
***The facility was not completed and was not handed over to the district local government.***

***There are discrepancies in the project cost as reported by the different entities.***

### **Recommendations**

***The project should be completed and handed over to Kotido District Local Government which will hand it to the user communities.***

***The Auditor General should carry out a Value for Money audit of the project and also ascertain the actual project cost.***

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## **KAWOMERI VALLEY TANK**

Kawomeri Valley Tank is located in Magamaga sub county in Abim district. It was established by the Ministry of Water and Environment at a cost of UGX 3.5 billion. The project scope included dam embankment and spillway, excavation for dam reservoir, construction of control chamber, construction of the access bridge to the upstream, landscaping and grassing of downstream embankment slope.

The Committee found the facility surrounded by bushes. The water inlet system was functional, but the outlet system was not. The facility had algae and water hyacinth. Swamp vegetation had enjoined the edges of the facility. The Committee findings on this facility agree with the Ministry of Finance monitoring report which states that, "the reservoir dried up due to degradation of the water catchment areas and silting. The facility is no longer in use."

The Committee found that the facility was not fenced and four children had reportedly drowned in the valley tank.

The Committee was further informed that although the facility is in dire need of renovation, an offer by an NGO to renovate it could not be accepted since the facility has never been handed over.

### *Committee observations*

*Kawomeri Valley Tank has a non-functional outlet system, affecting its ability to provide water to the beneficiaries in a controlled manner and poses a risk of flooding during overflow and drowning of children.*

*Whereas the MoFPED reported that the project was commissioned, the district and community reported that construction of the facility has neither been completed nor handed over to the district.*

### **Committee recommendations**

**The Ministry of Water and Environment should complete construction of the project and hand it over to Abim District Local Government.**

**The facility should be fenced with immediate effect while the Ministry is putting in place arrangements for comprehensive rehabilitation.**

## KANU VALLEY DAM

Kanu Valley Dam is located in Abim sub-county in Abim district. Construction of this facility was launched in April, 2022 by Her Excellency the Vice-President. Work at the facility has stalled due to land wrangles at the site. Since the launch, only preliminary works have been done and the equipment has been withdrawn. The preliminary works include ground breaking, digging a trench and bush clearing.

Upon completion that was planned for 28<sup>th</sup> February, 2024, the facility is expected to have a capacity of 870,000 cubic metres at a cost of UGX 4.2 billion. The location of the initial site was changed to Kanu owing to the suitability of the location.



***The progress of works so far at Kanu Valley Tank***

### *Committee observations*

Although the MAAIF claimed they consulted the district leadership about the choice of the project site, the Committee was informed by the community and local government that they were not consulted about the choice of the project site.

There was no sign of any works commencing on the ground nor was the site secured.

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*The MAAIF has not worked with the district officials to resolve issues of land ownership.*

*Whereas members of the community had agreed to avail land for the project, Government has not honoured its commitment to compensate the land owners and had stopped them from using the land, causing uncertainty and apprehension among the owners.*

**Committee recommendations**

**The Committee recommends that MAAIF should work with the Government valuer and local leaders to verify the list of all land owners so that they are compensated and construction starts as soon as possible.**

**6.1.2 STATE OF WATER FOR PRODUCTION FACILITIES IN TESO SUB-REGION**

**ALERE SMALL SCALE IRRIGATION SCHEME**



**Alere solar powered irrigation scheme**

Alere Small Scale Irrigation Scheme is located Katine sub-county in Soroti district. The facility was constructed by the Ministry of Water and Environment at a cost of UGX 608,920,723,000. Construction commenced on the 5<sup>th</sup> of October, 2020. It has a chain link and concrete poles with a metallic lockable gate that was constructed at UGX 352,400,000. According to MoFPED, this scheme was functional and benefiting farmers as at 30<sup>th</sup> June, 2022.

The facility has a valley tank with a capacity of 20,000 cubic metres, a solar abstraction system, irrigation network and modern nursery bed, among others.

The farm management structures have been premised in the Community-Based Management Systems where the farmers are facilitated by development actors to take charge of their own farming activities. Under the arrangement, the beneficiary farmers have formed a farmers' forum to select their own leadership. In the User Agreement, the farmers have undertaken to: -

- Open up a joint farm account in the names of "*Alere Small Scale Irrigation Project savings account*" with 3 members as signatories to this account, which includes a Sub county Technical person for checks and balances.

In the first season, the ministry provided a seed loan of 12 million to farmers which is used as recovery fund in the farm.

From every harvest, the farmers pay 10 % of the sales from weighed farm produce, which is banked to the account for Operation Maintenance of the Irrigation scheme infrastructure.

Upon completion of construction of the physical infrastructure of the facility, the ministry did not hand over the facility, but had extended their presence by 18 months for the purpose of training farmers on irrigation and dam maintenance procedures. It was expected that farmer apprentice would be conducted for 3 seasons, with farmers becoming more efficient with every harvest.

#### *Committee observations*

*The facility has not been handed over to Soroti District Local Government yet it is being utilised.*

*The farmers lack skills in good agricultural practices and agri-business management.*

#### **Committee recommendations**

***MWE should hand over the project to Soroti District Local Government.***

***The district through the production department should ensure that farmers are trained in irrigation practices, agriculture as a business, and supported to maintain the infrastructure.***

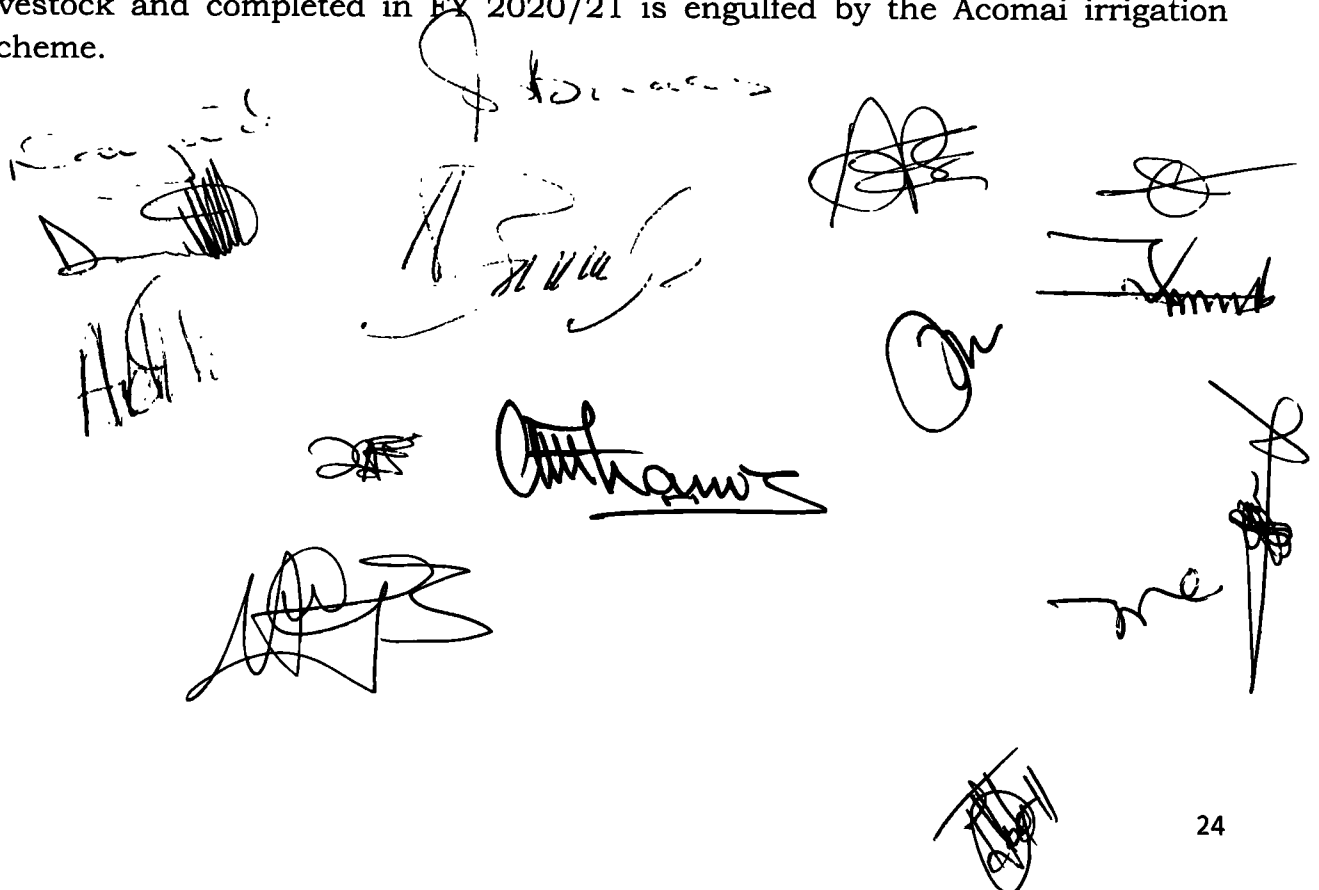
## **ACOMAI IRRIGATION SCHEME**

Acomai Irrigation Scheme is located in Kamutur sub-county, Bukedea district and is still under construction by MAAIF under the Agricultural Value Chain Development Project (AVCDP).

According to MoFPED, construction of this project commenced in November 2021 and is expected to be completed in July 2024. The project works include construction of 6 secondary canals, 8.4km of scheme roads, storage building, residential and office buildings, drop structures, flood protection works, storage tank, embankment filling and compaction and construction of a bridge over Sironko River at the intake site to connect Bukedea and Bulambuli districts.

The scheme is estimated to cover 1,608 ha where the net irrigable area will be 1,480ha with its water resource from Sironko River with a total cost estimated at US\$ 37.802 million.

The Committee established that Tajar valley tank with a capacity of 30,000m<sup>3</sup> constructed by MAAIF under the Resilience Project to provide water for livestock and completed in FY 2020/21 is engulfed by the Acomai irrigation scheme.





**Acomai under construction**



**River Sironko**

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### *Committee observations*

*The project implementation is slow. Whereas MoFPED reported that the progress of the works had reached 47% by July, 2023, the Committee estimates that the project was in the initial stages and progress was less than 30%.*

*Construction of the canals had rendered an old Government valley dam Tajar valley tank accessible to animals.*

### **Committee recommendations**

***The Committee recommends that a provision be made to retain Tajar Valley Tank operational so as to save Government money from getting wasted. The committee was informed that the facility was established at close to UGX 2 billion.***

***Government should undertake deliberate efforts to source market for the scheme produce when operational, to motivate farmers.***

### **AKERO VALLEY TANK**

Akero Valley Tank is located in Bukedea sub-county, Bukedea district. Constructed in the 1960s, Akero Valley Tank was established to serve as a source of water for irrigation, watering livestock and domestic use. The infrastructure was vandalised during the civil wars in the 1970s and 1980s, leaving only the valley tank.

The Committee further established that the valley tank has since silted with its shallow ends having been encroached upon by swamp vegetation. Recently, a church NGO – SOCADIDO, fenced it for protection of its banks and the users, but the facility is still semi-functional.

The tanks that used to store water for domestic use have become dilapidated, the pipes were dug out and there is no access road. The dam is currently utilised by animals which access it from the shallow end as there are no animal water troughs. The community uses it for washing clothes.

The community emphasised the fact that if fully operational, the facility would be utilised for irrigation and provision of water for domestic use.

### *Committee observations*

*Akero Valley Tank infrastructure is dilapidated and therefore, not serving the purpose for which it was established. This facility was initially serving the community but was vandalized and left in a state of disrepair. There was no access road to the facility.*

*Apart from a new fence constructed by SOCADIDO to protect the site, there were no other established structures.*

### **Committee recommendations**

***The MAAIF should budget for desilting and renovation of Akero Valley Tank. This should include restoration of its banks, renovating inlets and spillways, restoration of pumps, pipes, tanks and treatment plant and construction of animal troughs. Construction of animal troughs will save animals from drowning.***

***The Ministry of Agriculture, Animal Industry and Fisheries should prioritise and expedite rehabilitation of Akero Valley Tank.***

***A facility management committee should be set up at Akero to enable proper maintenance and utilisation of the facilities***

### **AMOSINGO SMALL SCALE IRRIGATION SCHEME**

Amosingo Small Scale Irrigation Scheme is located in Kadami sub-county, Kumi district. The committee was informed that the facility was established by the Ministry of Water and Environment in 2021, without involvement of Kumi district local government. It's a complete irrigation system with a valley tank, water tanks and pipes connected to four (4) plots covering approximately 10 acres in total.

The Committee established that the farmers in the neighbouring communities rent gardens in these plots at a rate of UGX 100,000 per season. Supported by an agronomist from MWE, farmers grow onions, cabbages, pepper, tomatoes and other vegetables and were initially provided with seed capital by the MWE which they returned upon harvest. This enabled them get good seeds.

Based on the briefing the Committee received, the farmers were not properly trained in good agriculture practices like use of fertilisers and lacked access to farm inputs and could be attributed to poor performance of crops.

The district reported that the irrigation scheme faces a number of challenges which include: silting of Omatenga, Kajamaka, Ojiira and Kodukul dams rendering them unproductive; absence of troughs for watering animals in Ariet,

Abileng and Rwatum valley tanks and reducing/drying up of the water level in Amosingo Valley tank, rendering the irrigation scheme unproductive in extreme dry periods.

*Committee observations*

*The crops in the farms looked wilted and may not be able to return the farmers' investments in the farms.*

*The agronomist employed to train the farmers is deployed by the Ministry of Water and Environment instead of Ministry of Agriculture, Animal Industry and Fisheries or the District Local Government.*

**Committee recommendations**

***The Ministry of Water and Environment should hand over the project to the District for future management and sustainability.***

***In light of the low productivity and losses reported by the farmers, the ministry should review the cost of renting land to the farmers with a view of maintaining profitability of the investment.***

***MAAIF and MWE should harmonise the provision of agricultural extension services and personnel.***

***The line ministries, in consultation with the district local governments, should facilitate the formation of a facility management committee to provide a framework for effective maintenance of the facilities and more equitable use of the project's benefits by the target communities.***

**AGURUT VALLEY TANK**

Agurut Valley Tank is located in Nyero sub-county, Kumi district. Construction commenced on 29<sup>th</sup> November, 2018 and was completed on 31<sup>st</sup> October, 2020 by MAAIF. It has a capacity of 30,000m<sup>3</sup> and was established at a cost of UGX 1.5 billion. It is solar-powered. The facility was projected to serve 30,000 heads of cattle. The scope of works included excavations, laying pipes, earth banks, inlets and spillway, watering troughs, VIP latrine and fencing.

*Committee observations*

*The Committee observed that the facility was not complete as per the scope of works. For instance, the inlet and spillway system were not properly constructed, the VIP latrine was not there. In addition, the works which were completed were unable to deliver water to the troughs indicating that the works were shoddy.*

*The water filling method at Agurut requires the operator to climb up to the tanks to open the taps, puts one's life at risk.*

### **Committee recommendations**

***The Ministry of Agriculture, Animal Industry and Fisheries should ensure completion of the project in accordance with the design specifications.***

***Upon completion, the ministry should hand over the project to the Kumi District Local Government to facilitate usage of the facility by the community.***

### **OPAPA SMALL SCALE IRRIGATION SCHEME**

Opapa Small Scale Irrigation Scheme is located in Kateta sub-county in Serere district. It was established by the Ministry of Water and Environment at an estimated cost of UGX 1.2 billion after a request by a group of six (6) citrus farmers, who had been experiencing harsh dry weather which affected their productivity. The scope of works included preliminaries and general items, intake works (inlet channel, culvert line, a sump and pump house fenced), solar abstraction system and power house, transmission pipeline, field preparation and drip irrigation system for two acres of demonstration, distribution and secondary and lateral pipe network to 32 acres of scattered fruit gardens, miscellaneous works (5 tank stands with plastic tanks installed at farm gate, fencing, gates)

Alos Primary School was later included as an additional demonstration site. The project commenced on the 15<sup>th</sup> October, 2018 and completed 15<sup>th</sup> December, 2022. It is currently under test run.

The facility draws water from Lake Kyoga from a point different from what had initially been identified. The source cannot draw enough water for the farmers. This was attributed to the implementer not being able to listen to the advice of the beneficiaries with regard to the source and laying of pipes, which are very shallow and susceptible to cuts by farmers in whose gardens they pass

### **Committee observations**

*During the visit, the Committee learnt that Serere District Local Government was not involved in the process of establishment of this project. Identification of farmers and appropriate facilities was done by the MWE.*

*The facility was established after a request by a group of 6 farmers. Out of the initial six farmers, only one farmer was accessing the water. The committee is not aware of the procedure under which such an arrangement is implemented and if it's open to any group of farmers in any part of the country.*

*The current point from which the facility draws water has eventually become inefficient leading to insufficient water for the project as had earlier been anticipated.*

*The project extended water to the farms of the beneficiaries but there are no systems at the farmers' points to use the water for irrigation apart from the school farm. The farmers visited just open water to flood the garden, which is detrimental compared to the original project purpose. The citrus trees looked unhealthy, contrary to what was expected.*

*The sustainability of the project is not assured since the solar panels installed don't have capacity to serve the project at peak times and the back-up generator installed has a high fuel consumption which the beneficiaries cannot afford.*

*The Ministry of Water and Environment was providing extension services and agricultural inputs to the target community without involvement of the local government extension workers or MAAIF.*

### **Committee Recommendations**

***Learning from the arrangement under which this project was established, the committee recommends that there should be a clear documented criterion, known to everyone under which such projects can be established, so as to benefit everyone.***

***The project needs to be redesigned to incorporate the district's recommendation for positioning the intake system into the deeper part of the lake to avoid blockage and silting effect in the dry season.***

***The project should be handed over to the district local government which will hand over the facility to the community.***

### **6.2 LAND OWNERSHIP ON FACILITY SITES**

The Committee had the following findings in relation to land ownership on which the facilities are located

#### **Teso sub-region**

The Committee observed that in the Teso sub-region, arrangements had been made by the ministries and local government to negotiate and resolve matters of land ownership and no conflicts were reported.

### **Karamoja sub-region**

The Committee observed that in Karamoja sub-region, some of the ongoing projects visited had unresolved land wrangles, resulting into underlying discontent by the communities, delayed commencement and completion of the projects.

### **Committee recommendations**

***The Government, through the Ministry of Water and Environment and MAAIF should work with the political and cultural leaders and local governments to establish ownership of the land on which the projects are located.***

***The MAAIF and MWE should work with the Chief Government Valuer to open up the boundaries of the project areas and value the land with a view of compensating the land owners before commencing physical works on the sites.***

***For future projects, the ministries and local governments should ensure that various stakeholders sign memoranda of understanding spelling out the roles and responsibilities of each party before siting and commencement of project design.***

***For subsequent and ongoing projects, the arrangement adopted for Alere Small Scale Irrigation Scheme should be replicated in other areas of the country.***

### **6.3 RELATIONSHIP AMONG KEY STAKEHOLDERS**

The Committee sought to establish the relationship between different stakeholders of the project from inception to handover. The stakeholders included Ministry of Agriculture, Animal Industry and Fisheries, Ministry of Water and Environment, local governments, local leaders and the communities.

#### **MAAIF, MWE and the local leaders**

The Committee was informed that the implementing agencies (MAAIF/MWE) most times do not involve district officials in the entire lifecycle of the projects from inception to completion. The local governments are not informed or consulted about planned construction of water for production facilities, siting the project location and are not involved in supervision, monitoring and evaluation. There are no site meetings held for the projects under construction.

*The Committee observed that lack of collaboration between the implementing agencies and local governments has led to mistrust, speculation, friction and lack of harmony, thus leading to delays in implementation of some projects.*

***The Committee recommends that the Ministry of Agriculture, Animal Industry and Fisheries and Ministry of Water and Environment should always involve the local governments during every stage of the project.***

#### **5.4 GENERAL OBSERVATIONS AND RECOMMENDATIONS**

The Committee made the following general observations in regard to water for production facilities visited.

##### **Disparities in costs of projects**

*Whereas the Committee received submissions on finances from key implementing ministries, the Committee is yet to harmonise the different figures provided in a tripartite meeting involving MAAIF, MWE and MoFPED.*

##### **Remote location of the facilities**

*The Committee observed that most of the water for production facilities are located in very remote areas where there are no settlements, no livestock and are very hard to reach.*

***The Committee recommends that feasibility studies about future projects should assess the community need for the facilities and ease of access by the users.***

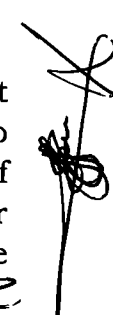
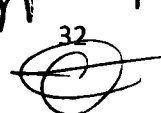
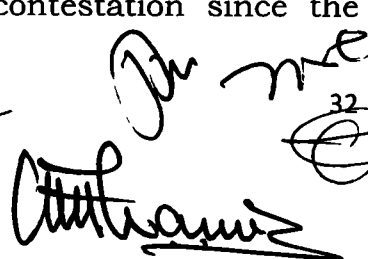
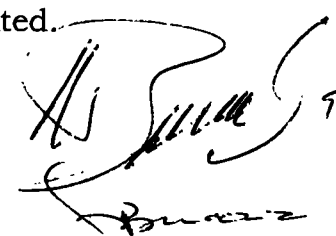
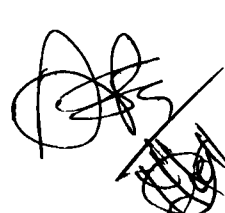
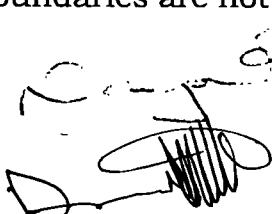
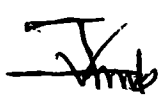
##### **Source of water for the facilities**

*The Committee observed that although Karamoja is a dry area which receives between 700mm and 1,000mm of rainfall per year, the valley dams under construction and those already in existence are all designed to be rain-fed.*

***The Committee recommends that in addition to rainfall as a source of water for the projects, other sources like underground water, seasonal streams, marshlands/swamps should be incorporated into designs of future projects to ensure constant supply of water throughout the year.***

##### **Lack of fencing for the facilities**

*The Committee established that most of the project sites visited were not fenced due to incomplete works and vandalism. This made them vulnerable to destruction by both domestic and wild animals, leading to massive silting of the facility, posed a danger to human beings, especially children who go for swimming and put the security of the land under contestation since the boundaries are not clearly demarcated.*



***The Committee recommends that the contractors should adhere to the project designs by fencing off the land on which the water for production facility is located.***

### **Overlapping mandate between Ministry of Agriculture, Animal Industry and Fisheries and Ministry of Water and Environment**

According to the National Irrigation Policy, 2017 which was jointly developed by MAAIF and MWE:

- Implementation of the policy shall be a joint responsibility of the ministries in charge of agriculture and water. Both ministries will jointly provide guidelines to support implementation.
- The ministry in charge of water shall be responsible for off-farm interventions which refers to development of hydraulic infrastructure and associated engineering works comprising water abstraction and conveyance to farm gates.
- The ministry in charge of agriculture shall be responsible for on-farm aspects of implementation which refers to the development of hydraulic infrastructure, associated engineering works and irrigation accessories comprising conveyance from farm gates to farmers' fields and water use management.

In line with the programme approach of the National Development Plan (NDP III), the two ministries were placed under one programme of Agro-industrialisation. This was aimed at enhancing collaboration and coordination.

#### ***Committee observations***

*The anticipated collaboration and coordination between the two ministries-Ministry of Agriculture, Animal Industry and Fisheries and Ministry of Water and Environment is lacking and this is at the expense of service delivery to the intended beneficiaries.*

*The National Irrigation Policy, 2017 which gives the MWE the mandate of establishing off-farm facilities and MAAIF on-farm facilities does not apply to other aspects of water for production like livestock watering and aquaculture.*

*The MWE is operating outside its mandate by employing agronomists to provide technical guidance to farmers.*

#### **Committee recommendation**

***The Committee recommends that Government should develop a policy on water for production facilities which should streamline the mandates of MWE and MAAIF to solve the issue of overlapping mandates.***

## 7.0 CONCLUSION



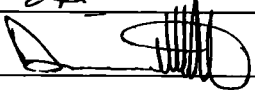
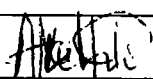
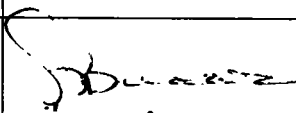
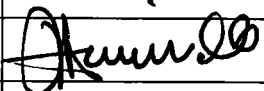

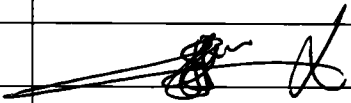
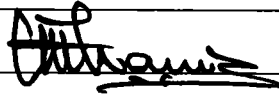
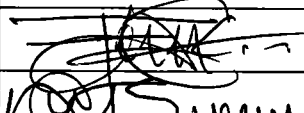
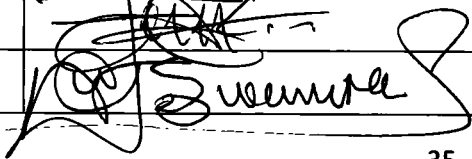
The demand for water for production facilities by communities across the country is ever increasing, especially in a water-stressed area like Karamoja and Teso sub-regions.

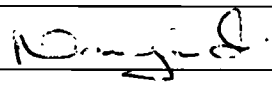
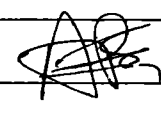
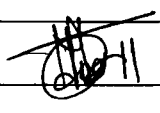
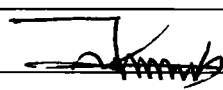
The rate at which the current ones are degenerating is high due to poor construction, failure to adhere to environmental and social safeguards, poor maintenance by the community, lack of hand over of the facility by the responsible ministry, among others.

In areas where the facilities exist, the communities are under-served. The Government therefore, needs to implement the recommendations contained in the report so as to make water for production facilities serve more people and thereby facilitate agriculture which is the backbone of Uganda's economy.



**ENDORSEMENT OF THE REPORT OF THE COMMITTEE ON AGRICULTURE, ANIMAL INDUSTRY AND FISHERIES FOR A FIELD TRIP TO KARAMOJA AND TESO SUB-REGIONS TO ASSESS WATER FOR PRODUCTION FACILITIES**

S/NO	NAME	SIGNATURE
1.	Hon. Okori-Moe Janet Grace-C/P	
2.	Hon. Auma Linda Agnes-D/CP	
3.	Hon. Driwaru Jennifer	
4.	Hon. Magoola Racheal	
5.	Hon. Christine Akello	
6.	Hon. Mbayo Esther	
7.	Hon. Biraaro Ganshanga Ephraim	
8.	Hon. Migadde Robert Ndugwa	
9.	Hon. Anywar Ricky Richard	
10.	Hon. Muhumuza David	
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12.	Hon. Kasaija Stephen Kagwera	
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29.	Hon. Lukwago John Paul M	
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32.	Hon. Mukasa Julius Opondo	
33.	Hon. Namutaawe Joan	
34.	Hon. Tusiime Julius Karuhanga	
35.	Hon. Maj. Gen. Sam Kavuma	
36.	Hon. Obong Vicent Shedrick	
37.	Hon. Ekanya Geoffrey	

## ANNEX 1

### SERERE DISTRICT LOCAL GOVERNMENT

Serere is one of the districts in the eastern region of Uganda with a total area of 1,965.935 sq. km of which land area is 1,494.8 km<sup>2</sup>. According to UBOS, 2014, the population of Serere was 283,630, out of which 137,657 were male and 145,973 were female, with a population growth rate of 3.95% (Uganda Bureau of Statistics, 2016). The major economic activity in the district is farming, although other people depend on trade. However, agriculture remains the main economic activity (76.1%), trade (4.4%), manufacturing (0.1%) and services (2.4%). A total 36,866 households are engaged in agriculture mainly crop farming and 33,179 households are engaged in livestock rearing such of cattle, goats, sheep and pigs (Serere District, 2016).

The rainfall pattern in the district is bi-modal with peaks in April-May and July-August. The mean annual rainfall ranges between 800-1,000mm while the mean annual temperature is 240° C. The district climate is the modified equatorial type. In the recent past, however, rainfall patterns have become erratic and unpredictable which has resulted into frequent floods and severe prolonged droughts and these have contributed to food insecurity in the district.

**Table 2: Facilities for animal watering in Serere district**

Name	Sub County	Notes	Purpose	Status	Suggested Solutions
<b>1</b> Ojama Dam	Kyere	Established in the 1960s by GoU	Watering livestock	Non-functional <ul style="list-style-type: none"> <li>• Silted</li> <li>• Broken embankment</li> <li>• Earmarked for rehabilitation in 2019/2020, but no work done</li> </ul>	<ul style="list-style-type: none"> <li>• Rehabilitation and reestablishment of facility</li> </ul>
<b>2</b> Ongia	Kidetok	Established in the 1960s by GoU	Watering livestock	Non-functional <ul style="list-style-type: none"> <li>• Silted</li> <li>• Broken embankment</li> </ul>	<ul style="list-style-type: none"> <li>• Upgrade to a multi-purpose facility ( animals, fish, irrigation)</li> </ul>
<b>3</b> Ogolai	Bugondo	Established in the 1960s by GoU	Watering livestock	Non-functional <ul style="list-style-type: none"> <li>• Silted</li> <li>• Broken embankment</li> <li>• Under rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>• Upgrade to a multi-purpose facility (animals, fish farming, irrigation)</li> </ul>
<b>4</b> Ongor	Atiira	Established in the 1960s by GoU	Watering livestock	Non-Functional <ul style="list-style-type: none"> <li>• Fully silted</li> <li>• Broken embankment</li> <li>• Under rehabilitation</li> </ul>	<ul style="list-style-type: none"> <li>• Rehabilitation and reestablishment of facility</li> <li>• Upgrade to a multi-purpose facility (animals, fish, irrigation)</li> </ul>

**Source: Serere District Local Government**

**Table 3: Facilities for irrigation in Serere District**

<b>Name</b>	<b>S/C</b>	<b>Notes</b>	<b>Status</b>	<b>Proposed solutions</b>
1 Opapa	Kateta	Established by MWE after a group of 6 farmers made a request for the facility	Functional and under test run	<ul style="list-style-type: none"> <li>• There is a need to stabilize the facility</li> <li>• Connect more beneficiaries to the irrigation facility</li> </ul>
2 Owii	Bugondo	Serves a group of 25 farmers. Constructed by Nexus Green	Functional	<ul style="list-style-type: none"> <li>• Establishment of more facilities to provide water for agricultural production</li> </ul>
3 Kabos	Bugondo	To serve 25 farmers. Construted by Nexus Green	Under construction	<ul style="list-style-type: none"> <li>• Fast-track completion of these</li> </ul>
4 Olio Polytechnic	Serere	This is a micro irrigation demonstration facility	Under construction	
5 Olupot Joseph	Pingire	This is a micro irrigation demonstration facility	Under construction	

**Source: Serere District Local Government**

## **ANNEX 2 KUMI DISTRICT**

Kumi is a district in the Teso sub-region with a population of 239,268 people out of which 117,007 are male and 122,261 female according to the 2014 national census (Uganda Bureau of Statistics, 2016). The population is predominantly peasants who rely on agriculture for livelihood. The district experiences long spells of dry climate. This stresses the importance water for agriculture production in the area to ensure food security and income.

**Table 4: Water for production facilities in Kumi District**

	<b>Water Source</b>	<b>Sub-county</b>	<b>Type</b>	<b>Capacity (M<sup>3</sup>)</b>	<b>Agency</b>	<b>Status</b>	<b>Purpose</b>
1	Agurut	Nyero	Valley Tank	30,000	MAAIF	Functional	Livestock watering
2	Ariet	Autur	Valley Tank	17,000	MWE	Functional	Irrigation, livestock watering
3	Amosingo	Kadami	Valley Tank	17,000	MWE	Functional	Small scale irrigation (vegetable farming)
4	Abileng	Kanapa	Valley Tank	10,000	MWE	Functional	Livestock watering
5	Omatenga	Kumi	Dam	14,800	GoU	Silted	Livestock watering
6	Kajamaka	Kanyum/ Mukongoro	Dam	5,500	GoU	Silted	Livestock watering
7	Kodukul	Kanapa	Dam	100,000	GoU	Silted	Livestock watering

8	Ojiira	Kanyum TC	Valley Tank	5,500	GoU	Silted	Livestock watering
9	Rwatam	Kanapa	Valley Tank	10,000	SOCADIDO	Functional	Livestock watering

**Source: Kumi District Production office**

**Table 5: Irrigation Facilities in Kumi District**

	Name	Sub-county	Crop	Water source	Acreage Covered	Irrigation Type	Funding	Status
1	Osele Memorial Mixed Farm	Atutur	cabbages, tomatoes, Citrus	Production well	4	Hosepipe	NAADS	Functional
2	Amosingo small scale irrigation project	Kadami	cabbages, tomatoes, onions, green pepper	Valley Tank	9	Drip	MWE	Functional
3	Dr. Odongo Jacob	Kamaca	fruits and vegetables	Production Well	10	Drip		Functional
4	Opiu Mixed Farm	Tisai	pasture	Production Well			NAADS	Functional
5	Okiria Justine	Atutur	passion fruits, water melons and citrus fruits	Valley Tank	1.5	Hosepipe on petrol	UgIFT	Complete and functional
6	Kumi Technical	North Division	water melons	borehole	1.5	Hosepipe on solar power	UgIFT	95% complete (Information provided during site identification and selection indicated that water was sufficient. During the installation, the water was insufficient due to silting which has delayed pump installation.)
7	Isekut John Michael	Tisai	water melons and tomatoes	Lake Opeta	1.5	Hosepipe and sprinkler on petrol	GOU-UgIFT	95% complete (The water at the Opeta swamp receded beyond where it was during site selection by over 100m. This increased the length of transmission required for the demo)

**Source: Kumi District Production office**

## ANNEX 3

### BUKEDEA DISTRICT

Bukedea District is located in the Teso sub-region and was carved from Kumi district in 2007. The district has a total area of 1,049.34 sq km of which the land area is 1,035.84 sq km. The district has a total population of 251,427 people (121,879 male and 129,548 female) in 50,285 households with a Poverty Gap Index of 40.2% against the national average of 24% (Bukedea District, 2021).

Bukedea has a modified equatorial climate with both heavy rainfall and high temperatures. The rainfall pattern is characteristically bi-modal with peaks in April-May and July-August. The rest of the months are relatively hot and dry. Agriculture employs over 95% of the total district population though 98% of the entire agricultural practice is still subsistence. The agricultural sector is primarily rain-fed, prone to drought, poor farmer organisation, use of rudimentary tools for farming, poor agricultural practices and low returns that accrue from low yields and poor marketing capability. The main crops grown include: cassava, beans, cotton, groundnuts, cow peas, sorghum, maize, sunflower, rice, soy beans, finger millet, bull rush millet, sweet potatoes and green grams. In agriculture, crop farming accounts for 60.84%, livestock rearing 48.90%, poultry farming keeping (46.03%), Fish farming (3.44%) and Bee keeping (1.28%).  $(60.84+48.90+46.03+3.44+1.28 = 160.49)$

**Table 6: Water for production facilities in Bukedea District**

Name	Sub-county	Purpose	Agency/Capacity	Status	Proposed solutions
1 Koduono Valley Dam	Malera	Livestock watering Irrigation	GoU	Has water but swamp vegetation has enjoined the edges, lacks equipment for irrigation and watering animals	Rehabilitation and construction of a fence and water troughs and water pumping system and constructing access road
2 Kanyanga Valley Tank	Malera	Livestock watering	MWE/OPM in 2019/20 -30000m <sup>3</sup>	No troughs for animals, inlet and spillways damaged and not fenced	Construction of a fence and water troughs, renovation of inlet and spillways
3 Akero Valley Tank	Bukedea	Livestock watering Irrigation Domestic use	GoU in the 1960s 20,000m <sup>3</sup>	Fenced by SOCADIDO, no troughs, no pumping equipment for irrigation and domestic water. Inlets and spillways damaged	Renovation of inlet and spillways, construct water troughs, pumping station, irrigation channels and lines and access road
4 Kodike Valley Tank	Kabarwa	Livestock watering Irrigation	NUSAF-2/BDLG in 2017	Partially functional. Recently desilted by SOCADIDO but no	Construct water troughs and pumping facility

			20,000m <sup>3</sup>	troughs, no pumping equipment for irrigation, inlet and spillways damaged		
5 Tajar Valley Tank	Kamutur	Livestock	MAAIF in 2020/21	Partially functional		Construct access road and repair water troughs
			30,000m <sup>3</sup>			
6 Akuo-etome Valley Tank	Kamutur	Livestock	MAAIF in 2021	Partially functional; no troughs and not fenced		Construct water troughs and fence the facility
			15,000m <sup>3</sup>			
7 Kawo Valley Tank	Komuge	Irrigation Fisheries	MWE in 2019	Functional		Improve on water pumping and distribution, driplines and reduce rent fees
			15,000m <sup>3</sup>			
8 Okula Valley Tank	Kolir	Livestock	MAAIF in 2021	Non-functional; troughs	no	Construct water troughs and fence the facility
			15,000m <sup>3</sup>			
9 Kokolotum / Omonie Valley Tank	Kocheka	Livestock	GoU in the 1960s	Non-functional; covered with water weed and vegetation		Desilting, establishment of watering points for animals and fencing
10 Acomai	Kamutur	Under Construction	M			

**Source: Bukedea District Local Government**

## **ANNEX 4**

### **MOROTO DISTRICT**

Moroto district is situated in mid north-eastern Uganda covering an area of 3,537.7km.<sup>2</sup> It shares borders with 5 districts namely: Kaabong in the North, Kotido in the North East, Napak in the West, Nakapiripirit in the North West and Amudat in the South. The entire eastern borderline is shared with the Republic of Kenya.

The climate in Moroto is semi-arid characterised by an intense hot season, lasting from November to March. The rainy season is from April to August with marked minimum in June and marked peaks in May and July. Rainfall is in the range of 300mm to 1,200mm per year with the mean annual rainfall of 800mm.

The mean maximum temperature ranges between 280C – 330C during the dry season. Generally, the hottest months are January and February where average maximum temperature may reach 33.50C; while in October – December average maximum temperature is 29.50C. Mean minimum temperature ranges from 150C – 170C. The average relative humidity is 63% during morning hours and 46% during the afternoon. The lowest relative

humidity values are experienced during the months of drought and also higher values are recorded in the morning hours.

The Population and Housing Census of August 2014 put Moroto at 104,539 people comprising of 53,783 females representing 51.9% and 50,756 males.

**Table 8: Water for production facilities in Moroto district**

SN.	Name of Facility	Capacity CM	Sub county	Year of establishment	Purpose of facility	Current status	Proposed solution
01	Kobebe dam	2,300,000	Lotisan	2012	Livestock watering at cross boarder	The water level in the dam reduced drastically and at the time of a filtration assessment and was found below the two transmission main pipes of the intake gallery, there is only point dead storage within the Dam. This has resulted into Cattle watering troughs of the cattle not receiving water. The community Animals are being watered wooden boats within the Reservoir.	There is need for construction of a filtration system with gabion mattress around the intake point There is need for rehabilitation of the cattle watering troughs and installation of Automatic Valves and sealing them off from being accessed by community shepherds as it is the case in Arechek Dam  - There is need for reconstruction of the Toe drain which was damaged and rectification of the inspection chamber
	Akwaapua	10,000	Nadun get		Livestock watering at subcounty level	Water level is low due to climatic factors	
	Ariamoi	10,000	Nadun get		Livestock watering at subcounty level	Water level is low due to climatic factors	
	Namanang	10,000	Tapac		Livestock watering at subcounty level	Water level is low due to climatic factors	
	Lokithile	10,000	Rupa		Livestock watering at	Water level is low due to climatic	

					subcounty level	factors	
	Kalokitakori	10,000	Katikekile		Livestock watering at subcounty level	Water level is low due to climatic factors	
	Kaloye	10,000	Nadunget		Livestock watering at subcounty level	Water level is low due to climatic factors	
	Natapar-Akwangan	10,000	Tapac		Livestock watering at subcounty level	Water level is low due to climatic factors	
	Nakonyen	10,000	Tapac		Livestock watering at subcounty level	Water level is low due to climatic factors	
	Moruatotopungure	10,000	Tapac		Livestock watering at subcounty level	Water level is low due to climatic factors	
	Loputuk	10,000	Loputuk		Livestock watering at subcounty level	Water level is low due to climatic factors	
	Nawanatau	10,000	Nadunget		Livestock watering at subcounty level	Water level is low due to climatic factors	
	Lomerikapel	10,000	Rupa		Livestock watering at subcounty level	Water level is low due to climatic factors	
					subcounty level	factors	
	Kalokitakori	10,000	Katikekile		Livestock watering at subcounty level	Water level is low due to climatic factors	
	Kaloye	10,000	Nadunget		Livestock watering at subcounty level	Water level is low due to climatic factors	
	Natapar-Akwangan	10,000	Tapac		Livestock watering at subcounty level	Water level is low due to climatic factors	
	Nakonyen	10,000	Tapac		Livestock watering at subcounty level	Water level is low due to climatic factors	
	Moruatotopungure	10,000	Tapac		Livestock watering at subcounty level	Water level is low due to climatic factors	

	Loputuk	10,000	Loputu k		Livestock watering at subcounty level	Water level is low due to climatic factors	
	Nawanatauk	10,000	Nadun get		Livestock watering at subcounty level	Water level is low due to climatic factors	
	Lomerikapel	10,000	Rupa		Livestock watering at subcounty level	Water level is low due to climatic factors	

**Source: Moroto district local government**

## **ANNEX 5**

### **KAABONG DISTRICT**

Kaabong district is located in the extreme north-eastern corner of Uganda. It is bordered in the north by South Sudan, east by Kenya, west and north by Karenga and south by Kotido.

According to the UBOS 2014 Population and Housing Census, Kaabong District has an established total host population of 169,274 (79,932 males, 89,342 females). The projected population estimate of the district as of 2020 is 134,600. The total number of households was 19,229. The average household size was 7.

Kaabong has a dry savannah semi-arid climate characterized by an intense hot season lasting from November to March each year, with whirlwinds and dust storms. The rainy season is usually from April to August and provides about 519mm per annum on average, which is spatially and temporarily distributed unevenly, depending on local factors. There are marked minimum in June and marked maximum peaks in May and July. The rain is erratic but distinct wet and dry seasons are a prominent feature; the most important form of precipitation is rain. Dewfall does not occur frequently and hence is unreliable. Precipitation has a big impact on plant growth and available data shows inadequate and unreliable amounts, and uneven distribution, which has significant influence on the economy and life of the district. There is one long dry season from October to February with dry spells in June to August. The

daily temperatures range from 20°C to 32°C degrees; relative humidity can reach 60% between June and July.

The most important economic activity in Kaabong district is Agro-pastoralism. As seen in the 2014 Population and Housing Census Report. About 90 percent of the households depend on cattle keeping and subsistence farming as major sources of income. The population has a very high incidence of poverty, with 91 percent of the population below the poverty line. The communities are engaged in subsistence farming often using old and rudimental tools and methods for cultivating their land. The soils in the district are generally sandy loams with low water holding capacity.

The major crops grown are mainly cereals that include maize, sorghum, millet, finger millet, beans, pigeon peas, groundnuts, sun flower and cotton. Beekeeping, petty trade and mining are other economic activities in the district.

**Table 9: Water for production facilities in Kaabong district**

SN	County	Subcounty	Parish	Village	Facility Name	Source Type	Management Type	Functionality
1	Dodonth	Lodiko	Lobuneit	Lobuneit	Lobuneit	Valley tank	Communal	Functional
2	Dodonth	Sidok	Logerae	Loterea	Loterea	Valley tank	communal	Partially functional
3	Dodonth	Kalapata	Kalopungongole	Kalopungongole	Kalopungongole	Valley tank	Communal	functional
4	Dodonth	Kamion	Lokirimo	Lokirimo	Lokirimo	Valley tank	Communal	functional
5	Dodonth	Kaabong East	Nadomeit	Nadomeit	Nadomeit	Valley tank	Communal	Partially functional
6	Dodonth	Lolelia	Kotor/Naro-egole	Kotor/Naro-egole	Kotor/Naro-egole	Valley tank	Communal	Partially functional
7	Dodonth	Sidok	Loterea	Loterea	Loterea	Valley tank	Communal	Partially functional
9	Dodonth	Loyoro	Zaar	Zaar	Zaar	Valley tank	Communal	Functional
12	Dodonth	Loyoro	Toroi	Toroi	Kapeta	Valley tank	Communal	Functional
13	Dodonth	Sidok	Moruitit	Moruitit	Lokilor	Valley tank	Communal	Functional
14	Dodonth	Kathile	Nariamaoi	Nariamaoi	Lwkipwarangakaliyoi	Valley tank	Communal	Functional

19	Dodoth	Kalapata	Kalapata	Kalapata	Kalapata windmill	Prodn Well	Communal	Not functional
20	Dodoth	Sidok	Longaro	Longaro	Longortopoj	Earth dam	Communal	Not functional
	Dodoth	Kaabong west	Lobongia	Longoromit	Longoromit	Earth dam	Communal	Functional
20	Dodoth	Kalapata	Kalapata	Kathil	Kathil V. Tank	Valley Tank	Communal	Partially functional
24	Dodoth	Kathile	Nariamaoi	Nariamaoi South	Nariamaoi South	Dam	Communal	Functional
16	Dodoth	Kathile	Nariamaoi	Nariamaoi South	Nariamaoi South	Dam	Communal	Functional
26	Dodoth	Sidok	Longaro	Kadukuduk	Kadukuduk V. Tank	Valley Tank	Communal	functional
27	Dodoth	Kaabong TC	Kapilan bar	Kapilan bar	Windmill at Kaboong River side	Production well	Communal	Not functional
28	Dodoth	Kabong TC	Loputuk	Komukuny	Komukuny Wind mill	Production well	Communal	Not functional
29	Dodoth	Kathile	Narengepak	Narengepak	Lokitet Valley Tank	Valley Tank	Communal	Partially functional
30	Dodoth	Kakamar	kakamar	nadwaramukuny	nadwaramuky	valley tank	Communal	Functional
31	Dodoth	Kaabong west	lobongia	longoromit	longoromit	Valley tank	Communal	Functional
32	Dodoth	Kakamar	kakamar	lochurutu	lochurutu	valley tank	Communal	Functional
33	IK	Morungole	morungole	usake	usake	Earth dam	Communal	Ongoing construction

**Source: Kaabong district local government**

## **ANNEX 6**

### **AMUDAT DISTRICT**

Amudat became a district in 2010. The District is bordered in the North by Moroto District, Nakapiripirit to the West, Kapchorwa to the south and Kenya to the East. The District shares 300 Km of borderline with the Republic of Kenya on the Eastern side. The District has an area of about 1,638 sq. km.

The district population is estimated at 111,758 people with females at 53,260 (48%) and 58,498 males (52%) according to the 2014 census. The district had a total of 15,850 households with an average household size at 6.9. Loroo is the most populated sub county with 4,431 people.

Amudat District has a sub-humid climate with orographic and bi-modal rainfall with peaks during the months of May and October. The sub total rainfall lies between 1,130mm and 1,720mm a year with a temperature between 16.2°C to 28.7°C. The relative humidity ranges between 52% to 89% and Amudat town is 1,459.5 meters above sea level

The economy of Amudat is dependent on agriculture in form of cattle rearing and small scale agriculture, which employs over 80% of the total population.

Fertile soils and suitable climate combine to support the cultivation of a number of crops in most parts of the district. Agriculture is mainly subsistence (75%) and takes place on smallholdings of approximately two acres using mainly simple farming tools (hoes, pangas etc). Only 0.35% of the population is engaged in Commercial Agriculture. Family members constitute the single most important source of labour.

**Table 9: Water for production facilities in Amudat District**

Table 3: Water for production facilities in Amudat District							
SN	Facility	Coordinates			Parish	Funding	Remarks
		N (m)	E (m)	Elev (m)			
Amudat Sub County							
1	Lomajanita VT	197935	720640	1221	Amudat	KALIP	Silting
2	Auskuyon VT	204174	708467	1326	Amudat	C&D	Partly functional
3	Auskuyon VT	208433	712222	1268	Amudat	GIZ	Functional
4	Naremit WM				Amudat	MWE	Functional
5	Kakadama VT	206115	718269	1237	Amudat	OPM	Functional
6	Kanareyon VT	188091	709598	1259	Katabok	OPM	Silted
7	Katukuri VT				Katabok	GIZ	Functional
8	Akurion VT	189123	715862	1226	Katabok	OPM	Functional
9	Mootany VT	195229	719863	1200	Katabok		Partially functional
10	Dingdinga WP	188778	719976	1218	Katabok		Functional
11	Kapetawoi VT	192642	708325	1282	Katabok		Silting
12	Solar VT	216921	713090	1243	Lobruin		Functional
13	Kosike SSD	223119	709465	1291	Lobruin	DP	Functional
Karita Sub County							

14	Abongai VT				Karita	OPM	Silted
15	Akurawayon VT	175137	709851		Karita	GIZ	Functional
16	Kapulwo VT	170161	697175		Karita	GIZ	Functional
17	Kaechom VT				Losidok	OPM	P/Functional
18	Kangenoi VT				Losidok	NUSAF II	Silting
19	Kopuna VT				Losidok	OPM	P/Functional
20	Karengeboche WM				Lokales		Functional
21	Karita Market PWSS				Karita	DINU	Functional
<b>Loroo Sub County</b>							
22	Narongit VT				Loroo	OPM	NF
23	Katukomwok VT				Loroo	MWE	Functional
24	Katotin VT				Loroo	GIZ	Functional
25	Abiliyep				Abiliyep	Drylands	Functional
26	Nakigwangaret VT				Abiliyep	MWE	Functional
27	Loyep VT				Abiliyep	OPM	Functional
28	Nakipom VT				Abiliyep	ZOA	Functional
29	Achorichor WM				Achorichor	MWE	Functional
30	Namosing SSD				Achorichor	NUSAF III	Functional

**Source: Amudat District Local Government Development Plan**

## **ANNEX 7**

### **ABIM DISTRICT**

Abim District is located in Karamoja sub-region, northern Uganda and occupies 902 square miles (429,78 square kilometres). A total of 36,025 square kilometres are under subsistence agriculture. The district is bordered by Kotido to the north and east, Napak to the south and south east, Otuke to the south west and Agago to the west.

According to UBOS 2014, the district population stands at 182,800 with 92,300 females and 90,500 males as at 2023.

The district experiences a wet and dry woodland savannah climate with the rainy season normally beginning in March to May and then July to October. The dry season is from May to June.

The main economic activity is subsistence agriculture which is practised in the current crop two livelihood zones namely sorghum livestock zone and the mixed crop zone.

The sorghum livestock zone mainly has infertile sandy soils with rainfall ranging between 500-800mm per annum. Besides sorghum, other crops grown in the zone are groundnuts and cowpeas whereas the major livestock kept are cattle and goats with a growing number of households getting involved in poultry farming.

The mixed crop zone has fertile soils with the main crops grown being maize, beans, simsim and sorghum. This zone also provides grazing land for livestock keeping from the sorghum livestock zone.

With the seasonal rainfall for March to August 2023 which was below the long-term average leading to low crop yields with over 70% crop loss to drought.

**Table 10: Water for production facilities in Abim**

<b>S/ N</b>	<b>Name of facility</b>	<b>Sub-county</b>	<b>Year of establishment</b>	<b>Purpose of facility</b>	<b>Current status</b>	<b>Proposed solutions</b>
1	Puno SSIS	Orwamuge Town Council	2014	Livestock watering and crop farming	Functional	Strengthen management committee
2	Akadamo SSIS	Kiru Town Council	2014	Livestock watering and crop farming	Functional	Strengthen management committee
3	Akeler SSIS	Nyakwai	2014	Livestock watering and crop	Functional	Strengthen management

				farming		committee
4	Kawomeri	Magama	2012	Livestock watering and crop farming	Functional for seasonal livestock only	Redesign the dam to hold water throughout the year
5	Omunga VT	Abim	2018	Livestock watering and crop farming	Non-functional and abandoned	Security to be provided and rehabilitation
6	Omagal VT	Morulem	2021	Livestock watering and crop farming	Functional for seasonal livestock only	Water should be redirected to the valley tank
7	Athelinge VT	Morulem Town Council	2014	Livestock watering and crop farming	Functional for livestock	Water throughout the year Strengthened management committee
8	Agrikweje	Lotukei	2017	Livestock watering and crop farming	Functional	Desilting
9	Okam/kanu	Abim	2022	Livestock watering and crop farming	Non-functional	Construction halted
10	Orapaobang VD	Abim	2014	Livestock watering and crop farming	Functional	Desilting
11	Akudo VT	Abim	2016	Livestock watering and crop farming	Functional for livestock only	Strengthened management committee
12	Opopongo Dam	Opopongo	2016	Livestock watering and crop farming	Functional for livestock	Strengthened management committee

**Source: Abim District Local Government**

## **ANNEX 8**

**SOROTI DISTRICT LOCAL GOVERNMENT**