Third Party Monitoring Report of Integrated Water Resource Management (IWRM) Project in Puntland

Constructed earth dam with a dam liner in Jedad location

Implemented by

Ministry of Environment, Agriculture and Climate Change (PUNTLAND)

Jan-June 2022

Submitted to
UNDP Somalia

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ACRONYMS

BoQ	Bill of Quantity
IP	Implementing Partner
IWRM	Integrated Water Resource Management
LoA	Letter of Agreement
MoECC	Ministry of Environment & Climate Change
NRM	Natural Resources Management
PWDA	Puntland Water Development Authority
TPM	Third Party Monitoring
UN	United Nations
UNDP	United Nations Development Program

EXECUTIVE SUMMARY

Introduction: The third party monitoring exercise sought to verify the completion of earth dams and auxiliary works e.g. water tank elevators, kiosks, solar systems and animal troughs in Jedad and Bixin in Qardho and Bandarbeyla districts. The monitoring also focused on the existence of community water committees (and if they were trained), and the level of community ownership.

Water infrastructure: The TPM team confirmed that the agency completed the construction of earth dam in Jedad village and sub-surface sand dam in Bixin village. Respondents at PWDA noted that the agency signed the LOA in June, 2021 – this was followed by assessments and procurement activities in the subsequent months. They confirmed that construction works for the both facilities have been completed in March, 2022. The completion of the infrastructure in both locations was also confirmed by the monitoring team that visited both locations and interviewed the beneficiary communities. However, it is important to note that the facilities are yet to be used by the local communities due to the failed Gu rains in both villages. The IP (PWDA) also reported the handover of the constructed facilities to the local administration and communities was yet to be undertaken. Based on the interviews with the IP staff and community members, an estimated population of 4000-4500 composed of both residents and pastoral communities will benefit from the water infrastructures. Generally, the quality of the water facilities installed were good, however, the elevated water tank had no strong and stable climbing ladder challenging its accessibility and maintenance according to the local FGDs participants.

Community engagement: PWDA conducted community mobilization activities in the preparatory stages before any on-site construction activities commenced. The project teams noted that they conducted community mobilization and consultation activities briefing the local communities on project's components, intended objectives and expected benefits, implementation processes and the role of the communities. The community mobilization activity was participated by a total of 32 individuals in Jedad and 21 in Bixin. Representatives from the local communities and village administration were the main stakeholders engaged.

Environmental impact assessment was also conducted with the local populations during the project initiation phase. Further, the agency team reported the outcomes of the community mobilization meeting was, improved awareness among the local communities on the project intervention, its intended objective and impact on both human and livestock development, and understanding of the expected long-term impacts to be gained from the project infrastructure.

Establishment& training of water committees: To enhance sustainability and management of the water facilities, the agency in consultation with local administrators and community members established water management committees at the village level. Each committee was comprised of 7 members with one female representative in each village. The main roles of the water committees include; management of the water infrastructure and surrounding natural resources, including rangelands; lead and undertake participatory methods for the development and operation and maintenance of the facilities; ensure adaptation of customary rules for accessing and using the water sources; prevent any contaminations risking both public and animal health; conflict resolution mechanisms, and liaising with local and national government on water quality monitoring, sanitation and hygiene promotion.

The water committee members interviewed further reported that the established water committees were trained on water resource management to improve their management capacity. Similarly, standard operating procedures, record management, reporting, basic financial management, and conflict resolution were key thematic areas of the trainings delivered by the agency.

Expected outcomes: According to the PWDA officials, it is projected that approximately a total population of 4,500 people in Jedad and 4,200 people in Bixin village will benefit from the program. Similarly, an estimated 2,000 Goats/sheep and 750 Camels in Jedad and 3,000 Goats/sheep and 1500 Camels in Bixin are also projected to benefit from the installed facilities. Besides, these figures are expected to increase during the rainy seasons when pastoralists converge at those villages. Furthermore, based on the interviews with both the IP staff and local communities, the infrastructure is expected to improve accessibility to adequate and clean water while also improving hygiene and sanitation aspects. The IP staff further reported that the improvement of water and sanitation services will have positive ripple effects through improving social services such as improved access to education and health. Besides, the respondents believe that the improved access to water and pasture will also help nomads to be stationed around formal settlements, enabling children to access education and health care.

Challenges

1. Due to change in administration in Bandarbeyla, the project implementation was delayed. The new mayor posed series of challenges; however, this was resolved and implementation resumed immediately.
2. Fluctuation in prices of construction materials due to the global inflation affected implementation of designed activities as planned. Revision (variation) to infrastructure sizes and

scope of work (in consultation with UNDP) was employed as a measure to adjust the project budget and planned activities.

3. Accessibility and coordination mechanisms with the field teams and contracted companies was a key challenge during the implementation process due to poor accessibility of the remote villages and the lack of internet services.
4. FGD participants in Bixin village lamented of lack of proper communication and coordination from PWDA officials and the contractors on site during actual construction of the infrastructure.
5. Community members in both locations complained that the elevated water tank does not have a strong and stable stairs to access the water tank, hence posing a challenge to the maintenance of the facility.
6. Community members in both Bixin and Jedad noted that the water pipeline has not been placed under the soil/earth hence lying outside. They were concerned about the risks that the pipes are not secure and can be vandalized by livestock or careless persons.
7. In Bixin, community members were also concerned that the water points have not been fenced, hence the risk of contamination of faecal matters from livestock.

Recommendations:

1. Project team reported some slight amendments to the scope of work of the infrastructure due to the ongoing global inflation. Future projects involving infrastructure development should have budget flexibility and have clauses for price variation due to external factors such as inflation to ensure that scope of works for proposed works are not affected.
2. There is need for implementing partners and contractors to have seamless communication and coordination with pre-identified community focal persons so as not to keep beneficiary communities in the dark about progress of project activities.
3. There is need to construct permanent staircases to access the water tanks in both Jedad and Bixin location to ease work for the water committees to clean and maintain the water tanks.
4. There is need to consider laying the water pipelines underground in both locations to ensure they are secured from vandalism.
5. There is need to fence both water points in Jedad and Bixin locations so as to avoid chances of the water contamination.

INTRODUCTION

1.1 Background on the project

Climate change has increased the frequency and intensity of droughts, leaving over 90 per cent of Somalia in severe drought after three consecutive failed rain seasons, with some places experiencing their driest season in 40 years. A fourth failed seasonal rain, which is highly likely to threaten the lives and livelihoods of millions of Somalis. According to the WASH cluster, an estimated 4.2 million people are facing acute water shortages with over 159 strategic communal boreholes in need of urgent upgrading to restore their functionality. As Somalia's severe drought continues to escalate, an estimated 4.2 million people face life-threatening water shortages, with over 159 strategic communal boreholes in urgent need of repairs.[1]

Water scarcity is a serious threat to Somalia and is hindering the country's economic and social development.[2] Throughout the country, trends of reduced surface water and groundwater reserves and increased occurrences of droughts and floods have been observed and are predicted to worsen.[3] Compounding the economic impacts on agro-pastoralism is the lack of basic water governance structures. The Integrated Water Resources Management has been an internationally recognized methodology since 1992 when the Dublin Principals were jointly concluded at the International Conference on Water and the Environment. These principals emphasize that water management and development should be participatory, including with the involvement of women and that water is an essential and crucial economic good.[4]

The IWRM project directly supports integrated water resources development and management for agro-pastoralists across Somalia. The development of a multi-sectorial Integrated Water Resources Management (IWRM) Strategy as well as technical and operational capacity building will support Somalia in planning sustainable water resources development schemes for all states down to local levels, particularly for states that were formed as recently as 2015 and 2016. The

1 Somalia Humanitarian Situation Report 2022 No. 4

2 Ministry of Energy and Water Resources, 7 March 2017, Priority Needs, Institutional and Human Capacity Building Program in IWRM

3 IPCC, 2014. Climate Change 2014: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA

4 UNEP-DHI Centre for Water and Environment. 2008. IWRM in Action. The UN World Water Assessment Programme

project further envisages that water mobilization from diversified ground and surface water sources as well as construction of water diversion infrastructure will promote rural water supply and increased resilience in flood prone areas. Rural population's resilience will be further enforced by enabling them to exploit their agro-pastoral value chains and increase their asset bases.[5]

1.2 Project Objectives & Outcomes

In Puntland the IWRM project's main objective is to support establishment of earth and sand dam infrastructure to harvest rain water for both domestic and livestock use in selected project sites in Qardho and Bandarbayla districts. The project specifically envisages that water mobilization from diversified groundwater and surface water sources as well as construction of water infrastructure promote rural water supply and increase resilience in drought prone areas.

1.3 Purpose of the Third-party Monitoring

The TPM was expected to carrot Verification on the following:

- Verification/ the completion of an Earth Dam + auxiliary including water tank elevator, Kiosk, Solar and animal troughs)
- Verify the existence of community water committees and if trained, whether functionality plan is available and the level of community subproject ownership
- Verification/ the completion of Completion of sub-surface sand dam and it's auxiliary works including water tanks, solar system and animal troughs
- Verify the existence of community water committees and if trained, whether functionality plan is available and the level of community subproject ownership

[5] Community mobilization report for IWRM, PWDA

METHODOLOGY

2.1 Approach

The Third Party Monitoring mission targeted the staff of the implementing partner of the IWRM project i.e., Puntland Water Development Agency. The TPM adopted the use of document review and key informant interviews and physical verification of implemented activities during the monitoring process. The TPM conducted site visits in all the project locations where the earth dams were constructed i.e., Jedad in Qardo district and Bixin in Badarbeyla district of Puntland.

2.2 Data collection

The monitoring adopted the use of qualitative data collection tools to gather relevant information related to the project under review. The researcher administered key informant interview guides with project stakeholders at both IP level and at project location level. FGDs were also conducted with the beneficiary communities in both sites visited, to capture the perspectives of the actual project beneficiaries. Geo-tagged photos were also collected from the constructed water infrastructures at the project sites.

2.3 Data processing

After the data collection phase of the monitoring exercise, the team collated the raw data for analysis. Findings of the qualitative data, collected as transcripts from all interviews with project staffs were analyzed in detail to inform this report. Further, observation notes from the field were also used to complement the information collected.

2.4 Data quality

The data collected were validated and triangulated to ensure quality. The rationale for triangulation was that the use of multiple methods and sources overcomes the weaknesses associated with using single methods and sources. Any inconsistent information, errors were communicated/cross-referenced with the field teams and corrected before finalizing the fieldwork. Geo-tagged photography was also adopted to ensure it complements our narrative report.

FINDINGS

3.1 Introduction

The third party monitoring exercise sought to verify whether the completion of earth dams and auxiliary works including water tank elevators, kiosks, solar systems and animal troughs in Jedad and Bixin in Qardho and Bandarbeyla districts respectively. The monitoring also focused on the existence of community water committees (and if they were trained), and the level of community ownership.

3.2 Completion of water infrastructure

The TPM team confirmed that the agency completed the construction of an earth dam in Jedad village and sub-surface sand dam in Bixin village. Respondents at PWDA noted that the agency signed the LOA in June, 2021 which was followed by assessments and procurement activities in the subsequent months. They confirmed that construction works for the both facilities have been completed in March, 2022.

The completion of the infrastructure in both locations was also confirmed by the monitoring team that visited both locations and interviewed the beneficiary communities. However, it is important to note that the facilities are yet to be used by the local communities due to the failed Gu rains in both villages. The IP (PWDA) also reported the handover of the constructed facilities to the local administration and communities was yet to be undertaken. But they noted that in the meantime, management of the water infrastructure should be handled jointly by the water committees and the local administration and ministry regional focal persons.

IWRM project completion report

IWRM quarterly project report

Sub-surface dam at Bixin Village

The TPM confirms that PWDA completed the installation of sub-surface sand dam and water facilities including elevated water tank, water kiosk, animal (camel and goat/sheep) troughs and a caretaker room. Based on the interviews with the IP staff and community members, an estimated population of 4000-4500 composed of both residents and pastoral communities will benefit from the water infrastructures. Generally, the quality of the water facilities installed were good, however, the elevated water tank had no a temporary climbing ladder challenging its accessibility and maintenance according to the local FGDs participants in the long term.

Based on the interviews with the beneficiary community, the project intervention will have a sustainable impact and contribute to mitigating effects of droughts on pastoral communities in and around the village, as well as strengthening the local community's resilience. Bixin facility was built in a gulley area aimed at retaining sediments and water flowing downstream during and after rainfall. This, according to the respondents at PWDA allows the accumulation of sediments to hold moisture, infiltrate and re-charge the water table for domestic and pastoral uses. Similarly, sub-surface dams prevent seepage and retains the underground water preventing evaporation, highly empower regeneration and improve vegetation cover. Further, the respondent argued that the sub-surface dam recharges the neighboring shallow wells serving as water reservoirs.

The project teams explained the construction work has been advertised, applying companies shortlisted and awarded Dangarad Construction Company. The respondents further noted the agency maintained regular monitoring and quality checks of the work undertaken by the contracted company. Additionally, jointly with UNDP team, PWDA conducted joint assessment on the quality of the works implemented.

Photos of constructed infrastructure at Bixin location

Earth dam at Jedad Village

The TPM through site visits confirmed the construction of an earth dam with auxiliary facilities in Jedad village. The auxiliary works completed include animal (camel and goat) troughs, water kiosks, caretaker room, elevated water tank and a solar system. The construction works were conducted by Jibril Construction and Commercial Company (Jibccon). Based on the TPM field assessment, the construction works undertaken by the company was good, however, pipeline system in Jedad were exposed and vulnerable to vandalism.

The IP teams noted Jedad as one of the areas most affected by drought, and due to the limited existing water structures in the area, is vulnerable to the recurrent shocks due to the inability to store sufficient water for the surrounding pastoral and rural communities. Therefore, the constructed infrastructure will improve the water accessibility for the community and their livestock and support better resilience to shocks of the recurrent droughts.

The IP staff noted, the agency has routinely undertaken regular monitoring visits jointly with UNDP to track progresses, compliance and the quality of the works implemented in line with the bill of quantities and designs of the project. This was employed as a measure to ensure the project's intended objectives were met in line with constructing a sustainable water system.

Photos of constructed infrastructure at Jedad location

The TPM team also sought to understand the procurement process through which the contractors of the infrastructure were selected. The IP staff explained that the following procedure was followed: -

1. 1st step: Develop TORs for designs and construction of dams and associated structures
2. 2nd step: Specifications, tenders and contract awards for constructions
3. 3rd step: Contract award
4. 4th step: Construction of dams and associated auxiliary works

3.3 Community mobilization/engagement

Based on the interviews with the agency staff, PWDA conducted community mobilization activities in the preparatory stages before any on-site construction activities commenced. Community engagement meetings and environmental impact assessment were conducted with

the local populations during the project initiation phase. This, according to the respondents at PWDA provided the critical baseline information for informed decision-making that ensured that the project's design, objectives, and results framework were well informed by evidence and hence in line with community priorities.

The project teams note that they conducted community mobilization and consultation activities briefing the local communities on project's components, intended objectives and perceived benefits, implementation processes and community roles. The community mobilization activity was participated by a total of 32 individuals in Jedad and 21 in Bixin. Representatives from the local communities and village administration were the main stakeholders engaged. The gender composition of the meeting participants was reported as follows;

Location	Description	Gender		
		Female	Male	Total
Jedad Village	Community Mobilization	18	14	32
Dhuudo(Bixin village)	Community Mobilization	11	10	21

Further, the agency team reported the outcomes of the community mobilization meeting was improved awareness among the local communities on the project intervention, its intended objective and impact on both human and livestock development, and understanding of the perceived long-term impacts to be gained from the project infrastructure in water reservation, minimization of drought casualties and impacts. Key informant interviews with village representatives and FGDs with community members showed evidence that there was indeed local community mobilization as almost all those who participated in the FGDs and KIIs know well about PWDA and confirmed there was community mobilization. The direct community engagement has contributed to garnering community support and collaboration across all the phases of the project implementation, agreements on community ownership of the water assets, donation of public land and selection of Water Management Committees.

Community mobilization report

3.4 Establishment and training of water committees & Community ownership

To enhance sustainability and management of the water facilities, the agency in consultation with local administrators and the community established water management committees at the village level. Each committee was comprised of 7 members with one female representative in each village. This was further corroborated by the FGD participants and KIIs with the water committee members interviewed by the TPM.

Based on the interviews, the water committees are generally accepted due to their representation of the different local community groups. The main roles of the water committees include; management of the water infrastructure and surrounding natural resources, including rangelands; lead and undertake participatory methods for the development and operation and maintenance of the facilities; ensure adaptation of customary rules for accessing and using the water sources; prevent any contaminations risking both public and animal health; conflict resolution mechanisms, and liaising with local and national government on water quality monitoring, sanitation and hygiene promotion.

The respondents at PWDA and water committee members interviewed further reported that the established water committees were trained on water resource management to improve their management capacity. Similarly, standard operating procedures, record management, reporting, basic financial management, and conflict resolution were key thematic areas of the trainings delivered by the agency. KIIs with water committees in the localities reported the trainings provided have improved their capacity in water resources protection, strengthening traditional regulations that govern use of water resources for communities and promoting efficient water use preventing any contaminations.

The IP teams also stated the training program was aimed at increasing the committees understanding on the importance of water resources management and drought risk mitigation. The respondents further explained the trainings built the appropriate management capacity of communities to maintain investment infrastructure through application of local and water resource management principles and take care of the facilities in the long run. Further the

project team noted the training included hygiene promotion and sensitization agendas with emphasis on scaling up Community Led Total Sanitation (CLTS) to prevent contamination of the water point.

The programs' complete employment of appropriate community engagement strategies initiated from the inception stage in EIA and site selection, alignment of project infrastructure with community needs, participation in implementation processes through casual labor, training participants and stakeholder meetings has extensively promoted ownership of the project according to the program teams. This was further confirmed by the respondents interviewed in the respective villages that reported high levels of community ownership within the beneficiary communities.

3.5 Expected Outcomes

The project's intended purpose was to invest in and support the construction of earth and sand-dam infrastructures to harvest rain water for both domestic and livestock use for both the rural population and pastoral communities in the surrounding villages. According to the PWDA officials, it is projected that a total population of about 4,500 people in Jedad and 4,200 people in Bixin village will benefit from the program. Similarly, 2,000 Goats/sheep and 750 Camels in Jedad and 3,000 Goats/sheep and 1500 Camels in Bixin are also projected to benefit from the installed facilities. Besides, these figures are expected to increase during the rainy seasons when pastoralists converge at those villages.

Furthermore, based on the interviews with both the IP staff and local communities, the infrastructure is expected to improve accessibility to adequate and clean water while also improving hygiene and sanitation aspects. The IP staff further reported that the improvement of water and sanitation services will have positive ripple effects through improving social services such as improved access to education and health. Besides, the respondents believe that the improved access to water and pasture will also help nomads to be stationed around formal settlements, enabling children to access education and health care.

The IP focal persons also noted that water points with accessible pasture are very scarce in the area and is also linked to resource conflict. Availability of water from sustainable water sources will reduce mobility of pastoralists thus reducing potential inter-clan conflicts, encourage community stability and voluntary settlement of pastoralists. Therefore, with the support of the project, extensive trans-boundary movements of livestock will be reduced.

Beneficiary community and PWDA respondents concurred that since the main economic mainstay for Puntland State is livestock - with its largest population directly or indirectly depending on livestock and its products for their livelihoods, the improved community water infrastructures will increase productivity and reduce expenditure on water and health. They further argued that the constructed water facilities will sustainably contribute to the states development strategies in preventing risks of losing the main economic mainstays, improving accessibility to water and building community resilience enabling Puntland's' communities to adapt the recurrent drought shocks.

The respondents also acknowledged that the construction phase provided notable short-term employment opportunities and improved service delivery for the local populations. Nevertheless, it is important to note that some FGD respondents from Jedad village, who worked as casual laborers during the construction phase lamented from the lack of payments by the contracted company.

3.6 Challenges

1. Due to change in administration in Bandarbeyla, the project implementation was delayed. The new mayor posed series of challenges; however, this was resolved and implementation resumed immediately.
2. Fluctuation in prices of construction materials due to the global inflation affected implementation of designed activities as planned. Revision (variation) to infrastructure sizes and scope of work (in consultation with UNDP) was employed as a measure to adjust the project budget and planned activities.

3. Accessibility and coordination mechanisms with the field teams and contracted companies was a key challenge during the implementation process due to poor accessibility of the remote villages and the lack of internet services.
4. FGD participants in Bixin village lamented of lack of proper communication and coordination from PWDA officials and the contractors on site during actual construction of the infrastructure.
5. Community members in both locations complained that the elevated water tank does not have a strong and stable stair to access the water tank, hence posing a challenge to the maintenance of the facility.
6. Community members in both Bixin and Jedad noted that the water pipeline has not been placed under the soil/earth hence lying outside. They were concerned about the risks that the pipes are not secure and can be vandalized by livestock or careless persons.
7. In Bixin, community members were also concerned that the water points have not been fenced, hence the risk of contamination of faecal matters from livestock.

RECOMMENDATIONS

1. Project team reported some slight amendments to the scope of work of the infrastructure due to the ongoing global inflation. Future projects involving infrastructure development should have budget flexibility and have clauses for price variation due to external factors such as inflation to ensure that scope of works for proposed works are not affected.
2. There is need for implementing partners and contractors to have seamless communication and coordination with pre-identified community focal persons so as not to keep beneficiary communities in the dark about progress of project activities.
3. There is need to construct permanent staircases to access the water tanks in both Jedad and Bixin location to ease work for the water committees to clean and maintain the water tanks.
4. There is need to consider laying the water pipelines underground in both locations to ensure they are secured from vandalism.
5. There is need to fence both water points in Jedad and Bixin locations so as to avoid chances of the water contamination.

ANNEXES

5.1 List of persons interviewed

Name of person interviewed	Position	Date	Contact
Moahmed Abdi Jamac	Project Coordinator	20-06-22	0907794430
Eng. Mohamed Abdirahman	Ag. Director - PWDA	21-06-22	0907794144
Ruqiyo Hussein Aden	KII - Bixin	23-06-22	0907262050
Said Ahmed Osman	KII - Jedad	24-06-22	0907560100
Mohamed Ahmed Ceynab	KII - Bixin	23-06-22	0907355311
Daud Mohamed Cubeyd	KII - Jedad	24-06-22	0907738032
Osman Mohamed Yussuf	FGD Participant - Bixin	23-06-22	0907463445
Salat Abdi Yussuf	FGD Participant - Bixin	23-06-22	0907310345
Mohamed Ahmed Mohamud	FGD Participant - Bixin	23-06-22	0907450481
Mohamed Abdirisack Diriye	FGD Participant - Bixin	23-06-22	0907329045
Asho Mohamed Yussuf	FGD Participant - Bixin	23-06-22	0906524730
Ahmed Hussien Isse	FGD Participant - Bixin	23-06-22	0907712843
Abshir Saciid Farah	FGD Participant - Jedad	24-06-22	0907353128
Abshir Saciid Mohamed	FGD Participant - Jedad	24-06-22	0907763717
Hassan Bile Ali	FGD Participant - Jedad	24-06-22	0907251884
Abdirisack Saciid Mohamed	FGD Participant - Jedad	24-06-22	0906626286
Mohamud Sulieman Mohamed	FGD Participant - Jedad	24-06-22	0906002764
Asho Mohamed Cubeyn	FGD Participant - Jedad	24-06-22	0907738960

5.2 Data collection tools

 KII Guide 1 _ IWRM.docx	 KII Guide 2_IWRM.docx
 KII Guide 3_IWRM.docx	 FGD Guide _IWRM.docx