Environmental Scoping Report for the Proposed Water Supply Systems to Support Irrigation Demonstration Plots in the Kavango East Region

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ACRONYMS

ADSWAC Resilience Building as Climate Change Adaptation in Drought-Struck South-Western African Communities

AF Adaptation Fund

BID Background Information Document

DAPP Development Aid from People to People

ECC Environmental Clearance Certificate

EIA Environmental Impact Assessment

EMA Environmental Management Act no. 7 of 2007

EMP Environmental Management Plan

FPIC Free Prior Informed Consent

HWC Human Wildlife Conflicts

I&Aps Interested and Affected Parties

MAFWLR Ministry of Agriculture, Fisheries , Water and Land Reform

MEFT Ministry of Environment, Forestry and Tourism

MIME Ministry of Industries, Mines and Energy

NSA Namibia Statistic Agency

OKACOM Permanent Okavango River Basin Water Commission

OSS Sahara and Sahel Observatory

PPP Public Participation Process

WRMA Water Resource Management Act (Act No. 11 of 2023)

EXECUTIVE SUMMARY

This report presents the findings of the environmental scoping process for the proposed irrigation demonstration plots in the Kavango East Region. The project is part of a broader initiative to support communities through the development of demonstration plots linked to Producer Organisations. While the programme covers both Kavango East and West, this report focuses on the twenty (20) sites located in Kavango East.

Agriculture in the region is constrained by unreliable rainfall and recurring droughts. Although the Kavango River provides a reliable water source, most communities lack the infrastructure to use it effectively. Farming therefore remains largely rain-fed, with limited productivity and high vulnerability to climate variability.

The project responds to this by introducing practical irrigation systems at community level. Water supply options have been selected based on site conditions, with river abstraction applied to sites near the Kavango River and boreholes proposed for inland areas.

Most sites are already disturbed or under agricultural use, with generally low environmental sensitivity. No significant biodiversity or heritage constraints were identified during the assessment.

Key issues that require management include sustainable water abstraction, soil protection, infrastructure security, and potential human–wildlife interaction near the river. The anticipated impacts are low to moderate and can be managed through standard mitigation measures. The project is expected to improve crop production, strengthen food security, and build practical skills within the community.

In practical terms, the project supports a shift from rain-dependent farming towards a more reliable and climate-resilient system. With appropriate management in place, it is considered environmentally acceptable and socially beneficial.

1 INTRODUCTION AND BACKGROUND

1.1 Background and Context

The Kavango East and Kavango West regions of Namibia experience semi-arid conditions, with erratic rainfall and recurring droughts that continue to limit agricultural productivity and contribute to ongoing food insecurity. Communities in these regions rely heavily on subsistence farming, which leaves them highly exposed to climate variability and seasonal uncertainty.

Although the Kavango River provides a dependable source of water, access to irrigation infrastructure and practical agricultural training remains limited in many rural areas. Farming is therefore largely rain-dependent, restricting the ability of communities to move towards more reliable and resilient irrigation-based systems.

The proposed project seeks to address this gap through the establishment of irrigation demonstration plots linked to Producer Organisations (POs) across both regions. These plots are intended to serve as practical learning sites where community members can develop hands-on skills in horticultural production, irrigation, and water management.

While the broader programme covers both Kavango East and Kavango West, this report focuses on the Kavango East component, which includes twenty (20) demonstration plots. Each plot, measuring approximately 0.5 hectares, is designed to function as both a production unit and a training platform.

In practical terms, the project aims to strengthen local capacity by enabling community members to apply and replicate improved farming practices at household level. This is expected to improve food security, support more stable agricultural production, and contribute to more resilient livelihoods within Kavango East.

1.2 Project Overview

The project forms part of a broader programme involving forty (40) irrigation demonstration plots across Kavango East and Kavango West, with twenty (20) Producer Organisations located in Kavango East. This report focuses on the Kavango East component.

At the time of the environmental assessment, the demonstration plots each measuring approximately 0.5 hectares were already established. However, many of these plots were not fully functional due to the absence of reliable water supply systems.

The project therefore focuses on equipping the existing plots with the necessary water supply and irrigation infrastructure to support horticultural production and training activities. This includes irrigation systems, water storage facilities, and associated conveyance and pumping infrastructure. Water supply options have been determined based on site-specific conditions, particularly the proximity of each plot to the Kavango River. For sites located near the river, water abstraction is proposed, with pipeline distances limited to approximately 500 metres to ensure technical and economic feasibility. For inland sites, borehole drilling has been identified as the more suitable option.

This approach allows for practical, site-appropriate solutions that respond to local conditions while making the existing demonstration plots fully operational.

1.3 Key objectives

The key objectives of the project are to:

- Improve agricultural productivity at community level by enabling the effective use of existing demonstration plots through reliable water supply systems.
- Strengthen food security by supporting consistent, year-round horticultural production that is less dependent on rainfall.
- Build practical skills within the community through hands-on training in irrigation, water management, and climate-resilient farming practices.

- Promote the efficient and sustainable use of water resources through the application of appropriate technologies, including river abstraction and borehole systems based on site conditions.
- Support the replication of improved agricultural practices at household level, extending the benefits of the demonstration plots beyond the project sites.
- Enhance livelihoods by creating opportunities for increased production, income generation, and local capacity development.
- Reduce vulnerability to climate variability by shifting from rain-dependent farming towards more reliable and controlled irrigation systems.

1.4 Project Intervention

The project intervention focuses on improving the performance and reliability of existing demonstration plots by addressing the key limitation identified during the assessment, namely the lack of dependable water supply systems.

At the time of assessment, the 0.5-hectare plots were already established and, in most cases, operational. However, agricultural activities were largely dependent on rainfall, resulting in low and inconsistent crop production. This reliance on rain-fed practices limits the ability of the plots to function effectively as demonstration and training sites.

The intervention therefore centres on the installation and upgrading of water supply and irrigation infrastructure to support consistent and controlled crop production. This will include the provision of irrigation systems (drip and/or sprinkler), water storage tanks, conveyance pipelines, and pumping systems, with solar-powered options applied where feasible.

Water supply solutions will be implemented based on site-specific conditions. For plots located within close proximity to the Kavango River, water abstraction is proposed, with pipeline distances limited to approximately 500 metres. For inland plots, borehole development has been identified as the more suitable option, subject to appropriate siting and groundwater availability.

In addition to infrastructure improvements, the project includes a capacity-building component aimed at strengthening practical skills within the community. Training will focus on irrigation

practices, water management, soil conservation, and climate-resilient agricultural techniques, ensuring that the infrastructure is effectively utilised and maintained.

In practical terms, the intervention aims to move the demonstration plots from low, rainfall-dependent production towards more stable and reliable irrigation-based systems. This is expected to improve productivity, strengthen food security, and enhance livelihoods at community level.

2 STATUTORY REQUIREMENTS

The protection of the environment is provided for under Article 95l of the Namibia Constitution. The Environmental Management Act (Act No 7 of 2007) (EMA) and its Environmental Impact Assessment Regulation 2012, has listed Water Resource Developments activities not to be undertaken without an Environmental Clearance Certificate (ECC) as follows;

a) 8.1 The abstraction of ground or surface water for industrial or commercial purposes
b) 8.2 The abstraction of groundwater at a volume exceeding the threshold authorized in terms of a law relating to water resources.

To fulfil the above statutory requirements, Red-Dune Consulting CC (RDC) was appointed to undertake an Environmental Scoping and develop an Environmental Management Plan (EMP) for proposed river water abstraction and Borehole drilling for demonstration irrigation plots along the Kavango River, Kavango East Region

In addition to EMA, there are other statutory requirements that would need to be fulfilled. The Ministry of Agriculture, Water and Land Reform as the custodian of the Water Resources Management Act, No.11 of 2013 instructs that a permit must be obtained prior to any borehole drilling activities can be undertaken.

3 TERMS OF REFERENCE

The scope of conducting this Environmental Scoping Study is guided by the Terms of References as provided in the EIA Regulation 2012, Section 9 (a-b) but, not limited to the following.

- Provide a comprehensive description of the proposed Project.
- Identify relevant legislation and guidelines for the project.
- Identify potential environmental (physical, biological and social) conditions of the project • location and conduct risk assessment.
- Inform Interested and Affected Parties (I&APs) and relevant authorities about the proposed project to enable their participation and contribution.
- Develop an Environmental Management (EMP) that would be a legal guideline for the environmental protection by the project.

4 PROPONENT

The proponent for the proposed project is DAPP Namibia (Development Aid from People to People), a non-governmental organisation responsible for the overall coordination and implementation of the irrigation demonstration plots programme. DAPP Namibia works in collaboration with community-based Producer Organisations (POs), which serve as the primary beneficiaries and are responsible for the day-to-day management of the demonstration plots at site level.

4.1 Project Alternatives

The EMA requires impact assessment to explore various project alternatives which aims to ensure that a chosen project component does not have significant impact to the environment. Project alternatives ranges from not implementing the project (no go alternative), when the environmental impacts are severe, or there is high degree of uncertainty. Other alternative considers the project site, technology, and equipment to be used. The description of alternatives is given in table 1 below.

Table 1. Project Alternatives

Alternative Category	Option	Project-Specific Description	Advantages	Constraints / Risks	Decision & Justification
Strategic Alternative	No-Go Option	No intervention; existing demonstration plots continue to rely on rain-fed agriculture. Field observations indicate underperformance due to unreliable water and, in some cases, absent or non-functional infrastructure.	Avoids additional environmental disturbance and capital expenditure; maintains current environmental baseline.	Does not address the primary constraint (water scarcity); continued low yields and seasonal production; risk of reduced participation and project failure; undermines food security and climate resilience objectives.	Rejected: current conditions already demonstrate this option is not viable.
Water Source Alternative	River Water Abstraction	Abstraction from the Kavango River using pumps with pipelines to PO	Reliable year-round source; shorter pumping distances	Not feasible beyond ~500 m due to higher costs, pressure losses, and	Adopted for sites within ±500 m best balance of

		sites within feasible distance (≤500 m), as confirmed during field assessments.	reduce energy and infrastructure requirements; cost-effective when combined with solar systems; supports continuous irrigation.	maintenance; potential riverbank disturbance; risk of over-abstraction if unmanaged; exposure to Human-Wildlife Conflict (HWC) near river areas.	cost, reliability, and feasibility.
Water Source Alternative	Groundwater Abstraction (Boreholes)	Drilling boreholes to supply groundwater for inland PO sites where river abstraction is not feasible (e.g., Hoha PO).	Provides a reliable, site-specific supply independent of river proximity; suitable for dispersed inland locations; reduces HWC exposure; compatible with solar pumping.	Requires confirmation of aquifer suitability and sustainable yield; risk of depletion if unmanaged; higher upfront drilling costs; ongoing monitoring of water levels and quality required.	Adopted for inland sites (>500 m) most practical and technically appropriate solution.
Energy Source Alternative	Diesel-Powered Pumping Systems	Use of diesel generators to power pumps for river and borehole abstraction in off-grid areas.	Lower upfront capital cost; widely available and familiar technology.	High recurring fuel costs; dependence on fuel supply; noise and air pollution; not aligned with sustainability objectives; increased burden on communities.	Rejected : long-term costs and environmental impacts outweigh benefits.

Energy Source Alternative	Solar-Powered Pumping Systems	Use of solar panels to power pumping systems for both river and borehole abstraction across PO sites.	Renewable and sustainable; very low operating costs after installation; suitable for remote areas; aligns with climate adaptation goals.	Higher initial capital cost; requires maintenance and asset protection; risk of theft/vandalism noted in some areas.	Adopted most sustainable and cost-effective long-term energy option.
Site Alternative	Relocation of Demonstration Plots	Relocating existing PO sites closer to the river to reduce pumping distance and infrastructure.	Reduces conveyance distance and system complexity; potential cost savings on pipelines.	Existing plots are established and accepted; relocation may trigger land conflicts; disrupts community organisation; loss of prior investments in land preparation and infrastructure.	Rejected: socially disruptive and unnecessary given viable supply options at current sites.
Supplementary Alternative	Rainwater Harvesting	Collection and storage of rainfall to support irrigation at demonstration plots, considered as a supplementary source.	Environmentally friendly; reduces pressure on surface and groundwater; can supplement during rainy season.	Seasonal and variable rainfall; limited storage; insufficient to meet irrigation demand in dry periods; cannot support continuous production.	Rejected: as primary option may only supplement other sources.

5 DESCRIPTION OF THE RECEIVING ENVIRONMENT

5.1 Regional Population demography

Kavango East is among the more densely populated regions in Namibia, with a population of approximately 218,421 recorded in the 2023 Census (NSA, 2024). Population growth has been most noticeable around Rundu, where access to services and economic opportunities is relatively better.

The region has a predominantly young population, with a large proportion falling within the working-age group. This presents an opportunity in terms of available labour, but also places increasing pressure on food supply, employment, and basic services (NSA, 2025).

While Rundu serves as the main economic hub, the majority of the population resides in rural constituencies such as Ndiyona, Mashare, Mukwe, and Ndonga-Linena. In these areas, livelihoods are largely based on subsistence farming, with limited access to infrastructure and high exposure to drought and climate variability. Women play a central role in household food production, particularly in crop cultivation and small-scale agriculture.

Under these conditions, agricultural productivity remains closely tied to rainfall, which is often unreliable. This limits food production and reinforces vulnerability at household level. The proposed irrigation demonstration plots directly address this constraint by introducing more reliable water supply systems, improving the consistency of crop production.

By focusing on Producer Organisations in rural constituencies, the project targets communities where the need is greatest. At the same time, proximity to Rundu provides a practical pathway for accessing local markets, which can support income generation and small-scale agricultural development.

In practical terms, the project responds to existing demographic pressures by supporting more stable and productive agricultural systems, while also creating opportunities for skills development and improved livelihoods within the community.

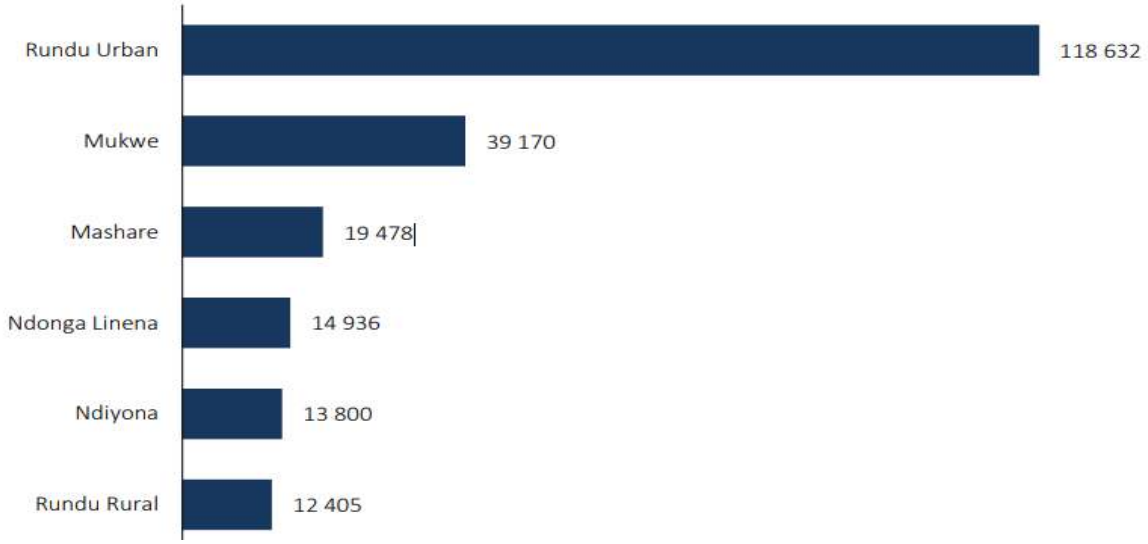

Figure 1 Population size by constituency: Kavango East Region (Source: NSA,2023)

5.2 Regional Geology and Topography

The Kavango East Region, located in north-eastern Namibia, is underlain predominantly by sediments of the Kalahari Basin, which shape both the landscape and soil conditions across the area.

The geology is dominated by unconsolidated sands of the Kalahari Group, deposited during the Tertiary to Quaternary periods. These aeolian sands, together with localized alluvial deposits along the Kavango River, form deep and relatively uniform soil profiles (Mendelsohn et al., 2010; Miller, 2008). Across much of the region, soils are sandy and have low water retention capacity, while more fertile conditions occur along the river where seasonal flooding deposits finer materials such as silts and clays.

Underlying basement formations, including parts of the Damara Sequence, are largely obscured by the thickness of the Kalahari sediments. Groundwater occurs within the Kalahari aquifers, although yields are generally low to moderate due to the high permeability and limited storage capacity of the sandy materials (Christelis & Struckmeier, 2011). This has direct implications for borehole development, which requires careful siting and monitoring.

Topographically, the region is generally flat to gently undulating, forming part of the Kalahari Plateau, with elevations ranging between approximately 1,000 and 1,200 metres above sea level. The landscape is characterised by stabilised linear sand dunes that create subtle variations in relief (Lancaster, 2020).

The Kavango River is the dominant landscape feature, with a narrow floodplain that lies slightly lower than the surrounding sandy uplands and is subject to seasonal flooding. This floodplain supports more productive soils and denser vegetation compared to inland areas. Ephemeral drainage channels (omurambas) also play a role in directing surface runoff and redistributing sediments during rainfall events.

These conditions influence both water availability and agricultural potential in the region. Sandy soils limit moisture retention, and groundwater availability is variable, which places greater reliance on dependable surface water sources such as the Kavango River and well-managed water supply systems.

5.3 Regional Climate

The Kavango East Region experiences a semi-arid to sub-humid tropical climate and is considered one of the relatively wetter regions in Namibia. Rainfall follows a clear seasonal pattern, with the wet season occurring from October to April and a dry season extending from May to September (Mendelsohn et al., 2010).

Mean annual rainfall ranges between 450 mm and 600 mm, with the highest precipitation typically recorded between January and February. Despite these totals, rainfall remains highly variable across both time and location. This variability often results in alternating periods of drought and localized flooding, particularly along the Kavango River floodplain (Kwembeya & Shikangalah, 2023).

Temperatures are generally high throughout the year, with mean annual values of approximately 22–23°C. Summer temperatures frequently exceed 30°C, while winters are mild with cooler nights. High evapotranspiration rates further reduce the availability of soil moisture, limiting the effectiveness of rainfall for crop production (Moses et al., 2025).

While the climate supports savanna woodland ecosystems and seasonal agriculture, rainfall variability and increasing climate unpredictability continue to constrain agricultural productivity and water availability. These conditions reinforce the need for reliable water supply systems to support more consistent agricultural production in the region.

5.4 Site Description of Shighuru Demonstration plot

5.4.1 Name of site

Shighuru Demonstration Plot (PO Site)

Figure 2 Shighuru PO board

5.4.2 Location

The Shighuru demonstration plot is located in Shighuru Village within the Ndonga-Linena Constituency of the Kavango East Region, Namibia. The site is situated in a rural communal setting where subsistence agriculture is the primary livelihood activity.

The geographical coordinates of the site are approximately 17.905440° S and 20.396603° E. The plot is located approximately 123 metres from the Kavango River, which is proposed as the source for water abstraction to support irrigation development. The short distance makes the site highly suitable for river-based water conveyance with minimal infrastructure requirements.

5.4.3 Topography

The terrain in Shighuru Village is generally flat, consistent with the Kavango East floodplain. This topography is favourable for small-scale agricultural activities and the installation of irrigation infrastructure, as it allows for efficient water distribution with limited need for land modification.

The soils are predominantly sandy with low water retention capacity, which limits productivity under rain-fed conditions and increases reliance on a consistent and controlled water supply for improved agricultural output.

Figure 3 Topography of Shighuru PO

5.4.4 Biodiversity

5.4.4.1 Flora

The Shighuru demonstration plot is currently under rain-fed cultivation, indicating an already modified agricultural landscape. Crops are present on-site, although their productivity is constrained by dependence on seasonal rainfall.

The surrounding vegetation is characteristic of a semi-arid savannah ecosystem influenced by proximity to the Kavango River. This includes natural grasses, shrubs, and scattered woody species adapted to sandy soils. Common species are likely to include mangetti (*Schinziophyton rautanenii*) and camelthorn (*Vachellia erioloba*), as well as seasonal grasses that support grazing.

Vegetation closer to the Kavango River tends to be denser due to higher moisture availability, contributing to ecological functions such as soil stabilisation, erosion control, and habitat provision

Figure 4 *Amaranthus thunbergii* found in Shighuru PO

5.4.4.2 Fauna

The site supports typical rural fauna found in communal agricultural landscapes in the Kavango East Region. This includes birds, insects, reptiles, and small mammals, which contribute to ecological processes such as pollination, pest regulation, and nutrient cycling.

The presence of cultivated crops may attract birds and small animals, occasionally resulting in minor crop damage. Livestock such as cattle, goats, and donkeys are commonly present in the surrounding areas and contribute to grazing pressure on natural vegetation.

Due to the proximity of the Kavango River, there is potential for periodic movement of wildlife, particularly smaller species that rely on water sources. No endangered or protected species were observed during the assessment

5.4.5 Surface Water

The Kavango River is the primary surface water resource in the area and is proposed as the source for water abstraction. The river is perennial, although its flow and water levels vary seasonally.

At the time of assessment, the site had no water infrastructure, including storage tanks, solar panels, pumps, or irrigation systems, limiting agricultural activities to rain-fed cultivation.

The proposed river water abstraction is therefore a critical intervention to improve water availability and support irrigation development. Given the relatively short distance of approximately 123 metres, the site is highly suitable for a solar-powered abstraction system. However, abstraction must be managed sustainably to prevent adverse impacts on the river system and downstream users.

Figure 5 River Abstraction Point at Shighuru PO

5.4.6 Land use

The Shighuru demonstration plot is currently utilised for rain-fed crop production, indicating existing agricultural use. However, productivity is limited due to unreliable rainfall and the absence of irrigation infrastructure.

Land use in Shighuru Village is predominantly communal and centred on subsistence agriculture and livestock rearing. Households largely depend on rain-fed farming, making them vulnerable to climate variability and drought conditions.

The introduction of a reliable irrigation system through river water abstraction has the potential to significantly enhance agricultural productivity, improve food security, and strengthen community resilience to climate change.

5.5 Site description for Shikenge 1 and Shikenge 2

5.5.1 Name of Site

Shikenge Demonstration Plots 1 & 2 (POs)

Figure 6 Shikenge 1& 2 PO Site board

5.5.2 Location

The two demonstration plots are located adjacent to each other in Shikenge Village, within the Ndonga Linena Constituency of the Kavango East Region, Namibia. The area is rural and primarily used for subsistence agriculture.

The coordinates of the site are approximately 17.905440° S and 20.396603° E. The proposed water abstraction point is along the Kavango River, situated approximately 143 metres from the plots.

5.5.3 Topography

The terrain is generally flat to gently sloping, typical of the Kavango East floodplain. This makes the area suitable for small-scale agriculture and irrigation development. However, low-lying sections may be influenced by seasonal flooding, while sandy soils are prone to wind erosion during dry periods.

5.5.4 Biodiversity

5.5.1.1 Flora

Vegetation in the area reflects a mix of riverine and savannah woodland. The plots themselves are already cultivated, predominantly with maize and a few legume crops, while surrounding areas support scattered trees, shrubs, and grasses. Common species include mangetti (*Schinziophyton rautanenii*), camelthorn (*Vachellia erioloba*), and natural grasses used for grazing.

5.5.1.2 Fauna

The area supports typical rural fauna, including birds, small mammals, reptiles, and insects. Livestock such as cattle, goats, and donkeys are common and form an important part of local livelihoods. Although the plots are fenced, livestock presence in surrounding areas still places pressure on vegetation and agricultural land. Occasional wildlife may occur closer to the river.

5.5.5 Surface Water

The Kavango River is the main surface water resource in the area and is proposed as the source for water abstraction. The river is perennial, although water levels fluctuate seasonally.

Currently, the plots depend largely on rainfall, which limits productivity. The introduction of controlled water abstraction for irrigation is expected to improve crop yields and reliability. However, abstraction must be managed carefully to avoid impacts on the river system and downstream users.

Figure 7 Surface water close to the PO

5.5.6 Land Use

Shikenge Plots 1 and 2 are currently under subsistence cultivation, mainly producing maize and a small number of legumes. The plots are fenced, which provides some level of protection against livestock intrusion. However, productivity remains low due to the absence of water infrastructure such as storage tanks, solar-powered pumps, and irrigation systems.

Land use in Shikenge Village is predominantly communal, centred on subsistence crop farming and livestock rearing. Most households rely on rain-fed agriculture, supplemented by the use of natural resources such as grazing land and firewood. The Kavango River plays a vital role in supporting livelihoods by providing water for domestic use, livestock, and small-scale irrigation. Increasing pressure on land resources, including grazing and cultivation, is evident in some areas.

5.6 Site Description for Hoha PO

5.6.1 Name of Site

Hoha Demonstration Plot (New PO Site)

Figure 8 Hoha PO Site Board

5.6.2 Location

The proposed demonstration plot is located in Hoha Village within the Ndonga-Linena Constituency of the Kavango East Region, Namibia. The site is situated in a rural communal setting where subsistence agriculture is the dominant livelihood activity.

The geographical coordinates of the site are approximately 18.019321° S and 20.739059° E. The Kavango River is the nearest major surface water source in the area; however, the distance from the river to the proposed PO site exceeds 500 m, which is the established threshold for technically and economically feasible river water abstraction under this project.

On this basis, river abstraction is not considered a viable option for the site. Borehole drilling is therefore proposed as the most suitable and reliable water supply option to support irrigation at the demonstration plot.

5.6.3 Topography

The area is generally flat with slight undulations, typical of the Kavango East landscape. This terrain is suitable for small-scale agricultural activities and the installation of basic irrigation infrastructure. The soils are predominantly sandy, which supports crop cultivation but has low water retention capacity, making crop production highly dependent on rainfall or supplementary irrigation.

Figure 9 Topography of Hoha PO (New Site)

5.6.4 Biodiversity

5.6.4.1 Flora

The vegetation at the site consists mainly of grasses, shrubs, and scattered trees typical of a semi-arid savannah environment. The area has already been influenced by human activities such as cultivation and settlement, resulting in relatively low ecological sensitivity.

Figure 10 Vegetation in Hoha PO and Surrounding the PO

5.6.4.2Fauna

The site supports common rural fauna, including birds, small mammals, reptiles, and insects. Domestic animals such as cattle, goats, and donkeys are prevalent in the area. No protected or endangered species were observed at the site during the assessment.

5.6.5 Surface Water

There are no water supply systems currently available at the site. The community relies on manual watering methods, using a bucket system to irrigate crops in the nursery before transplanting them to prepared seedbeds. This method is labour-intensive and limits agricultural productivity.

The proposed development involves abstraction of water from the Kavango River to support irrigation activities at the demonstration plot. The river is a perennial water source, although its flow varies seasonally. The introduction of controlled water abstraction is expected to improve crop production and reduce dependence on rainfall. However, proper management will be required to avoid over-abstraction and potential impacts on the river ecosystem and downstream users.

5. 6.6 Land Use

The demonstration plot is located at the Headwoman's homestead and was voluntarily allocated to the community following conflict at the previous project site. The new site is currently used for small-scale agricultural activities, including nursery development and seedbed preparation.

At the time of the environmental assessment, the plot was not yet fenced, as the community was in the process of retrieving fencing materials from the previous site. As a result, the area remains temporarily exposed to livestock intrusion, which may affect crop establishment. There is currently no water infrastructure on-site, including storage tanks, solar systems, pumps, or irrigation systems.

The relocation has resolved previous land-use conflicts, and the new site is free from disputes, with no displacement of people and no impact on biodiversity or heritage resources. Land use in Hoha Village is predominantly communal, centred on subsistence crop farming and livestock rearing. Most households depend on rain-fed agriculture, supplemented by small-scale gardening where water is accessible. Natural resources such as grazing land and woody vegetation are used for livestock and household needs. Limited access to reliable water remains a key constraint to agricultural productivity in the area.

5.7 Site Description for Katere PO

5.7.1 Name of Site

Katere Demonstration Plot (PO)

Figure 11 Katere PO site Board

5.7.2 Location

The demonstration plot is located in Katere Village within the Ndonga Linena Constituency of the Kavango East Region, Namibia. The site falls within a rural communal setting where subsistence and small-scale horticultural activities are practiced.

The geographical coordinates of the site are approximately 18.030218° S and 20.783581° E. The nearby Kavango River is proposed as the source for water abstraction to support and enhance irrigation at the plot

5.7.3 Topography

The area is generally flat with slight undulations, characteristic of the Kavango East landscape. The terrain is suitable for agricultural activities and supports the installation of irrigation infrastructure. Sandy soils dominate the area, which are easy to cultivate but have low water retention, making consistent water supply important for sustained crop production.

Figure 12 Topography of Katere PO site

5.7.4 Biodiversity

5.7.4.1 Flora

The plot is actively cultivated and supports a variety of crops, including eggplants (*Solanum melongena*), maize, green peppers, carrots, and legumes. In addition, there are locally significant plant species such as the monkey orange tree (*Strychnos* spp.) and Ombidi (*Cleome gynandra*), which contribute to both nutrition and biodiversity. Surrounding vegetation consists of grasses, shrubs, and scattered trees typical of semi-arid savannah systems.

Figure 13 *Strychnos spinosa* commonly known as monkey orange

5.7.4.2 Fauna

The area supports common rural fauna, including birds, insects, reptiles, and small mammals. Domestic animals such as cattle and goats are present in the wider area. Due to the presence of crops, there may also be occasional crop-raiding by small animals.

5.7.5 Surface Water

The Kavango River is the main surface water resource in the area and is proposed as the source for water abstraction. The river is perennial, although water levels vary seasonally.

The site already has some water infrastructure, including a water tank, water pumping generator, and PVC piping system, which supports current irrigation activities. The proposed river water abstraction will enhance water reliability and efficiency, allowing for improved crop production and expansion of activities. Careful management of abstraction will be required to ensure sustainable use of the resource.

Figure 14 River water abstraction point for Katere PO

5.7.6 Land Use

The Katere demonstration plot is actively used for small-scale irrigated agriculture and is currently productive. The presence of a nursery, existing irrigation infrastructure, and a variety of cultivated crops indicates a well-established system. The proposed development will build on this existing capacity by improving water access and overall efficiency.

Land use in Katere Village is predominantly communal, focused on subsistence farming and livestock rearing. Crop cultivation includes both rain-fed and small-scale irrigated agriculture, particularly near water sources. Natural vegetation areas are used for grazing, firewood collection, and other household needs. The Kavango River plays a central role in supporting agricultural and domestic activities within the village.

5.8 Site Description for Makena Demonstration Plot

5.8.1 Name of Site

Makena Demonstration Plot (PO Site)

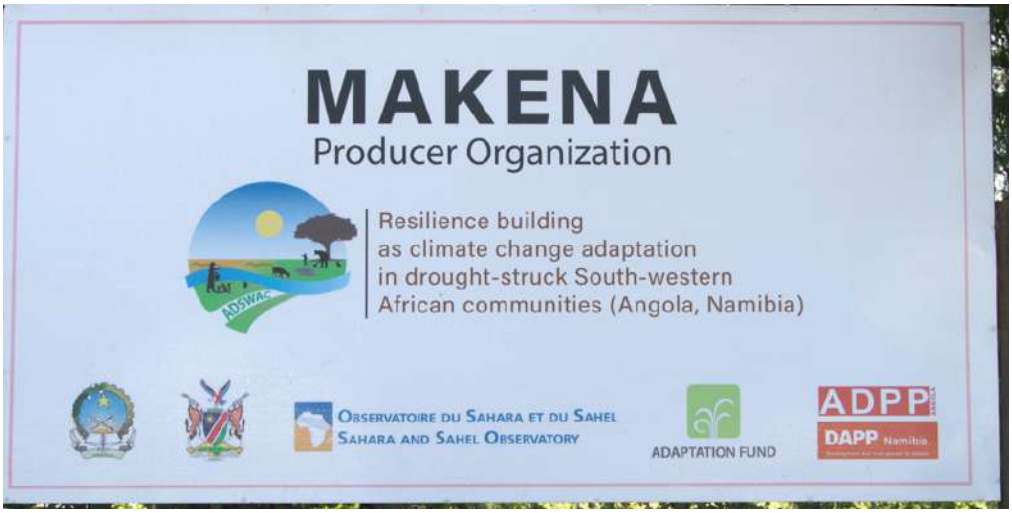

Figure 15 Makena PO Site Board

5.8.2 Location

The Makena demonstration plot is located in Makena Village within the Kavango East Region of Namibia. The site lies in a rural communal setting where subsistence agriculture is the primary livelihood activity. The geographical coordinates of the site are approximately 18.038266° S and 20.843085° E. The plot is situated approximately 350–400 metres from the Kavango River, which is proposed as the primary source for water abstraction.

5.8.3 Topography

The terrain in Makena Village is generally flat, consistent with the broader Kavango East floodplain. This makes the area suitable for small-scale agricultural activities and irrigation development. However, sandy soils with low water retention capacity limit productivity under rain-fed conditions and increase dependence on reliable water supply systems.

Figure 16 Topography of Makena PO

5.8.4 Biodiversity

5.8.4.1 Flora

The vegetation at the Makena site reflects a typical Kavango East riverine savannah transition zone, influenced by its close proximity to the Kavango River. The area supports a mix of natural grasses, shrubs, and scattered trees that are adapted to sandy soils and semi-arid climatic conditions. Common woody species are likely to include camelthorn (*Vachellia erioloba*), mangetti (*Schinziophyton rautanenii*), and other drought-resistant species, while seasonal grasses dominate the ground layer. Due to ongoing human activities such as land clearing and cultivation, the natural vegetation has been partially modified, resulting in reduced plant density within the plot itself. However, the surrounding riparian zone closer to the river exhibit relatively higher vegetation density and diversity due to improved moisture availability. This vegetation plays an important role in soil stabilization, microclimate regulation, and supporting local livelihoods, particularly through grazing and the use of natural plant resources.

5.8.4.2 Fauna

The area supports a range of common rural fauna typical of communal agricultural landscapes in the Kavango East Region. This includes bird species, small mammals, reptiles, and a variety of insects, all of which contribute to ecosystem functioning such as pollination and pest control. Domestic animals, particularly cattle, goats, and donkeys, are prevalent in the surrounding areas and exert pressure on vegetation through grazing. The proximity of the site to the Kavango River also increases the likelihood of occasional wildlife presence, particularly smaller species that depend on water sources. Although no endangered or protected species have been recorded at the site, the interaction between agricultural activities, livestock grazing, and natural ecosystems highlights the need for sustainable land and water management practices to prevent further degradation and to maintain ecological balance.

5.8.5 Surface Water

The Kavango River is the main surface water resource in the area and is proposed for abstraction to support irrigation. The river is perennial, although its flow fluctuates seasonally. Currently, the plot is non-productive due to lack of functional water infrastructure. The site previously had two 5000-litre water storage tanks, solar panels, and a submersible pump, all of which were stolen, rendering the system inoperative. The community had temporarily relied on a nearby borehole shared with Makena Senior Primary School for irrigation purposes; however, this practice was discontinued due to unsustainable water consumption. The proposed river water abstraction is therefore considered a critical intervention to restore and improve agricultural productivity at the site. Proper management measures will be required to ensure sustainable abstraction and avoid impacts on the river system and downstream users.

Figure 17 River abstraction point at Makena PO

5.8.6 Land Use

The Makena plot is currently underutilized and non-productive due to the absence of water infrastructure. Despite previous investments in water storage and solar-powered pumping systems, theft has significantly affected operations and halted irrigation activities.

Land use in Makena Village is predominantly communal, centred on subsistence crop farming and livestock rearing. Most households depend on rain-fed agriculture, which is highly vulnerable to climate variability. Access to reliable water sources remains a major constraint to agricultural productivity, highlighting the importance of developing sustainable irrigation systems linked to the Kavango River.

5.9 Site Description for Kashira Demonstration Plot

5.9.1 Name of Site

Kashira Demonstration Plot (PO Site)

Figure 18 Kashira PO Site Board

5.9.2 Location

The Kashira demonstration plot is located in Kashira Village within the Ndiyona Constituency of the Kavango East Region, Namibia. The site is situated in a rural communal area where subsistence agriculture is the main livelihood activity. The geographical coordinates of the site are approximately 18.038096° S and 20.839086° E. The plot is located in close proximity to the Kavango River, at an estimated distance of 50–80 metres, making it highly suitable for water abstraction.

5.9.3 Topography

The terrain is generally flat, characteristic of the Kavango East floodplain. This topography is favourable for small-scale agricultural activities and irrigation development. However, the sandy soils in the area have low water retention capacity, increasing reliance on consistent and controlled water supply for sustainable crop production.

Figure 19 Topography of Kashira PO

5.9.4 Biodiversity

5.9.1.1 Flora

The vegetation at the Kashira site reflects a typical Kavango East riverine savannah transition zone, influenced by its close proximity to the Kavango River. The area supports a mix of natural grasses, shrubs, and scattered trees that are adapted to sandy soils and semi-arid climatic conditions. Common woody species are likely to include camelthorn (*Vachellia erioloba*), mangetti (*Schinziophyton rautanenii*), and other drought-resistant species, while seasonal grasses dominate the ground layer. Due to ongoing human activities such as land clearing and cultivation, the natural vegetation has been partially modified, resulting in reduced plant density within the plot itself. However, the surrounding riparian zone closer to the river exhibit relatively higher vegetation density and diversity due to improved moisture availability. This vegetation plays an important role in soil stabilization, microclimate regulation, and supporting local livelihoods, particularly through grazing and the use of natural plant resources

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Figure 20 Riparian Vegetation overview surrounding the Kashira Water Abstraction Point

5.9.4.2 Fauna

The area supports a range of common rural fauna typical of communal agricultural landscapes in the Kavango East Region. This includes bird species, small mammals, reptiles, and a variety of insects, all of which contribute to ecosystem functioning such as pollination and pest control. Domestic animals, particularly cattle, goats, and donkeys, are prevalent in the surrounding areas and exert pressure on vegetation through grazing. The proximity of the site to the Kavango River also increases the likelihood of occasional wildlife presence, particularly smaller species that depend on water sources. Although no endangered or protected species have been recorded at the site, the interaction between agricultural activities, livestock grazing, and natural ecosystems highlights the need for sustainable land and water management practices to prevent further degradation and to maintain ecological balance.

5.9.5 Surface Water

The Kavango River is the primary surface water resource in the area and is proposed as the source for water abstraction. The river is perennial, although water levels vary seasonally. Currently, the plot is non-productive despite the presence of partial infrastructure, including solar panels and a 5000-litre water storage tank. However, the absence of essential components such as PVC piping and a complete irrigation system limits the functionality of the site.

The proposed development involves river water abstraction to support irrigation activities. Given the close proximity of the plot to the river, the site presents a strong opportunity for efficient water supply. However, abstraction must be carefully managed to prevent overuse and ensure sustainability of the river system.

Figure 21 River abstraction point for Kashira PO

5.9.6 Land Use

The Kashira demonstration plot is currently underutilized due to incomplete irrigation infrastructure. Although some investment has been made in solar energy and water storage, the lack of a distribution system has resulted in limited agricultural activity and low productivity.

Land use in Kashira Village is predominantly communal, centred on subsistence farming and livestock rearing. Most agricultural activities depend on rainfall, making productivity highly variable. The proximity to the Kavango River provides an important opportunity for irrigation-based agriculture, which can enhance food security and livelihoods if properly developed and managed.

5.10 Site Description for Mukuvi Demonstration Plot

5.10.1 Name of Site

Mukuvi Demonstration Plot (PO Site)

Figure 22 Mukuvi PO site Board

5.10.2 Location

The Mukuvi demonstration plot is located in Mukuvi Village within the Ndiyona Constituency of the Kavango East Region. The site lies within a rural communal setting where subsistence and small-scale horticultural activities are the main livelihood strategies. The geographical coordinates of the site are approximately 17.982248° S and 20.982144° E.

The plot is situated at a distance of more than 500 metres from the Kavango River, making direct river water abstraction less feasible. As a result, borehole drilling (subject to proper siting) has been proposed as the most appropriate water supply option for irrigation.

5.10.3 Topography

The terrain in Mukuvi Village is generally flat, consistent with the broader Kavango East landscape. This topography is suitable for agricultural activities and the installation of irrigation infrastructure. The soils are predominantly sandy, which are easy to cultivate but have low water retention capacity, making a reliable and consistent water supply essential for sustained crop production.

Figure 23 Topography of Mukuvi PO

5.10.4 Biodiversity

5. 10.4.1 Flora

The Mukuvi site is already under active cultivation, with crops such as green peppers, tomatoes, and maize, indicating a modified agricultural landscape. Natural vegetation in the surrounding areas consists of grasses, shrubs, and scattered trees typical of a semi-arid savannah ecosystem.

Although cultivation has reduced the presence of natural vegetation within the plot, surrounding areas still support indigenous plant species that contribute to soil stability, nutrient cycling, and

local ecosystem functioning. These natural plant resources are also important for grazing and other community uses.

5.10.4.2 Fauna

The area supports common rural fauna, including birds, insects, reptiles, and small mammals, which play key ecological roles such as pollination and pest control. Domestic animals such as cattle, goats, and donkeys are prevalent in the surrounding communal areas and contribute to grazing pressure on vegetation.

Unlike sites located closer to the Kavango River, the Mukuvi plot is less directly influenced by aquatic ecosystems; however, ecological interactions between agricultural land, livestock, and surrounding natural habitats remain important. No endangered or protected species have been recorded at the site.

5.10.5 Surface Water

There is currently no reliable water supply system at the site to support sustained irrigation. Although the plot has a 5000-litre water storage tank, the absence of critical infrastructure such as a water pumping generator and PVC piping system limits its functionality.

Due to the site's distance from the Kavango River, borehole drilling has been proposed as the most viable water supply solution. This will require proper siting to ensure groundwater availability and sustainability. The development of a borehole-based water system is expected to significantly improve irrigation capacity and agricultural productivity. However, groundwater abstraction must be carefully managed to avoid over-extraction and long-term depletion of the resource.

5.10.6 Land Use

The Mukuvi demonstration plot is productive and actively cultivated, with crops such as green peppers, tomatoes, and maize currently being grown. This indicates strong agricultural potential. However, productivity is constrained by inadequate water infrastructure, limiting the ability to expand and sustain production throughout the year. Land use in Mukuvi Village is predominantly communal, centred on subsistence farming and livestock rearing. Most households rely on rain-fed agriculture, making them vulnerable to climate variability. The introduction of a reliable groundwater supply through borehole development has the potential to enhance food security, improve livelihoods, and support climate-resilient agriculture in the area.

5.11 Site Description for Katenture Demonstration Plot

5. 11.1 Name of Site

Katenture Demonstration Plot (PO Site)

Figure 24 Katenture PO Board

5.11. 2 Location

The Katenture demonstration plot is located in Katenture Village, Ndiyona Constituency within the Kavango East Region . The site lies in a rural communal setting where subsistence agriculture is the primary livelihood activity. The geographical coordinates of the site are approximately 17.955029° S and 21.058815° E.

The plot is situated approximately 300–350 metres from the Kavango River, which is proposed as the main source for water abstraction to support irrigation activities. Access to the site requires crossing a swampy area, which presents logistical and seasonal accessibility challenges.

5.11.3 Topography

The terrain is generally flat, consistent with the Kavango East floodplain; however, the presence of a swampy section indicates localized low-lying conditions and poor drainage. These areas may become waterlogged during the rainy season, affecting accessibility and potentially limiting infrastructure development. The soils are predominantly sandy, which are suitable for cultivation but have low water retention capacity, necessitating reliable irrigation.

Figure 25 Topography of Katenture PO

5.11.4 Biodiversity

The vegetation at Katenture reflects a transition between wetland (swamp) and savannah ecosystems, resulting in a mix of moisture-tolerant grasses, reeds, and sedges in the swampy areas, alongside shrubs and scattered trees typical of semi-arid conditions in the surrounding landscape.

5.11.4.2 Fauna

The Katenture area supports a variety of fauna associated with both wetland and terrestrial environments. Common species include birds, amphibians, insects, reptiles, and small mammals, many of which depend on the swampy habitat for breeding and feeding.

The proximity to the Kavango River increases the likelihood of aquatic and semi-aquatic species, including crocodiles (*Crocodylus niloticus*) and hippopotamuses (*Hippopotamus amphibius*), which inhabit the river system. These species are ecologically significant but also pose potential safety risks to community members, particularly where access routes to the site pass through wet or river-adjacent areas.

Domestic livestock such as cattle and goats are present in the wider area and contribute to grazing pressure on vegetation. The interaction between wetland ecosystems, riverine habitats, and human activities highlights the need for careful environmental management and safety considerations.

5.11.5 Surface Water

The Kavango River is the primary surface water resource in the area and is proposed for abstraction to support irrigation. The river is perennial, although water levels vary seasonally.

Currently, the site has no water infrastructure, including storage tanks, solar systems, pumps, or irrigation piping. As a result, agricultural production is limited to small-scale nursery activities and low levels of crop cultivation.

The proposed river water abstraction presents an opportunity to significantly improve water availability and agricultural productivity. However, consideration must be given to sustainable abstraction practices, as well as the challenges posed by the swampy access route, which may affect installation, operation, and maintenance of infrastructure.

5.11.6 Land Use

The Katenture demonstration plot is currently used for small-scale agricultural activities, including nurseries and limited crop production of maize, green peppers, and carrots. Productivity remains

low due to the absence of water infrastructure and accessibility constraints associated with the swampy terrain. Land use in Katenture Village is predominantly communal, centred on subsistence farming and livestock rearing. Wetland areas play an important role in supporting ecological functions and seasonal resource use, while the Kavango River remains a key source of water for domestic and agricultural purposes. Improved access to reliable water supply has the potential to enhance agricultural productivity and strengthen local livelihoods, provided that environmental and safety considerations are adequately addressed.

5.12 Site Description for Tjova Demonstration Plot

5.12.1 Name of Site

Tjova Demonstration Plot (PO Site)

Figure 26 Tjova PO Site Board

5.12.2 Location

The Tjova demonstration plot is located in Tjova Village within the Mukwe Constituency of the Kavango East Region, Namibia. The site is situated in a rural communal setting where subsistence agriculture is the dominant livelihood activity. The geographical coordinates of the site are approximately 17.946592° S and 21.111056° E.

The plot lies in close proximity to the Kavango River, at an estimated distance of 140 metres, making it well-positioned for river water abstraction to support irrigation.

5.12.3 Topography

The terrain in the area is generally flat, characteristic of the Kavango East floodplain. This makes it suitable for agricultural activities and the installation of irrigation infrastructure. However, the soils are predominantly sandy, which have low water retention capacity, increasing dependence on reliable irrigation systems for sustained productivity

Figure 27 Topography of Tjova PO

5.12.4 Biodiversity

5.12.4.1 Flora

The vegetation at the Tjova site reflects a riverine savannah ecosystem, influenced by its close proximity to the Kavango River. Natural vegetation includes grasses, shrubs, and scattered trees adapted to semi-arid conditions, with relatively denser vegetation occurring closer to the river due to higher moisture availability.

The plot itself shows signs of prior agricultural use but is currently unproductive. As a result, some natural vegetation may be re-establishing in parts of the site. The surrounding vegetation plays an important role in soil stabilization, erosion control, and supporting local ecological processes, while also providing resources for grazing and community use.

Figure 28 Overview of vegetation cover surrounding Tjova PO Site, (Source : Red Dune Consulting)

5.12.4.2 Fauna

The area supports a range of fauna typical of both terrestrial and riverine environments. This includes birds, insects, reptiles, and small mammals, which contribute to ecological functions such as pollination and pest control.

Given the proximity to the Kavango River, the area is also associated with aquatic and semi-aquatic species, notably crocodiles (*Crocodylus niloticus*) and hippopotamuses (*Hippopotamus amphibius*), which inhabit the river system. Their presence is ecologically significant but also presents potential safety risks, particularly in areas where water abstraction and maintenance activities are conducted near the riverbank. Domestic livestock such as cattle and goats are common in the surrounding communal areas and contribute to grazing pressure on vegetation.

5.12.5 Surface Water

The Kavango River is the primary surface water resource and is proposed for abstraction to support irrigation. The river is perennial, although water levels fluctuate seasonally.

The site already has water infrastructure in place, including a water storage tank, solar panels, PVC piping, and a water pump system. However, despite this investment, the infrastructure has never been functional since installation, and the system has not supported irrigation activities. The community has also removed the submersible pump from the river for security reasons, further limiting water access. The proposed activity involves rehabilitation and effective utilization of the existing infrastructure through river water abstraction. Addressing technical failures and improving system security will be critical to restoring functionality and ensuring sustainable water supply for agricultural use.

Figure 29 River Abstraction point for Tjova

5.12.6 Land Use

The Tjova demonstration plot is currently unproductive, despite the presence of installed infrastructure. The site was previously privately owned but has since been relinquished to the community, making it available for communal agricultural use. The lack of a functional water system remains the primary constraint to productivity.

Land use in Tjova Village is predominantly communal, centred on subsistence farming and livestock rearing. The Kavango River plays a critical role in supporting livelihoods by providing water for domestic use, livestock, and small-scale irrigation. Improving access to reliable and functional irrigation infrastructure at the site has the potential to enhance agricultural productivity,

strengthen food security, and support community development, provided that environmental sustainability and safety considerations are adequately addressed.

5.13 Site Description for Mbapuka Demonstration Plot

5.13.1 Name of Site

Mbapuka Demonstration Plot (PO Site)

Figure 30 Mbapuka PO Site Board

5.13.2 Location

The Mbapuka demonstration plot is located in Mbapuka Village within the Mukwe Constituency of the Kavango East Region, Namibia. The site is situated in a rural communal setting where subsistence agriculture remains the main livelihood activity.

The geographical coordinates of the site are approximately 17.938619° S and 21.144840° E. The plot is located approximately 189 m from the Kavango River, which is proposed as the source of water abstraction for irrigation. This short distance makes the site suitable for the development of a river-based irrigation system, as water can be conveyed to the demonstration plot with relatively limited pipeline infrastructure.

5.13.3 Topography

The terrain in Mbapuka Village is generally flat to gently sloping, consistent with the Kavango East floodplain. This topography is favourable for small-scale agricultural development and the installation of irrigation infrastructure.

However, the soils are predominantly sandy with low water retention capacity, which limits productivity under rain-fed conditions and increases reliance on supplementary irrigation.

Figure 31 Topography of Mabapuka PO

5.13.4 Biodiversity

5.13.4.1 Flora

The vegetation within and around the Mbapuka demonstration plot reflects a semi-arid savannah system with riverine influence, given its proximity to the Kavango River. The PO site itself is currently non-productive and shows signs of disturbance and low vegetation cover, likely due to previous land clearing and limited agricultural activity. Surrounding areas support a mosaic of natural grasses, shrubs, and scattered woody species adapted to sandy, nutrient-poor soils. Dominant species include drought-resistant trees such as mangetti (*Schinziophyton rautanenii*) and camelthorn (*Vachellia erioloba*), alongside seasonal grasses that form the primary grazing resource for livestock. Vegetation closer to the river corridor exhibit higher density and diversity due to improved moisture availability, playing an important role in soil stabilisation, erosion control, and microclimate regulation. However, ongoing pressure from grazing and wood harvesting may contribute to gradual vegetation degradation in the wider area.

5.13.4.2 Fauna

The site supports a range of common rural fauna typical of communal agricultural landscapes in the Kavango East Region. This includes bird species, insects, reptiles, and small mammals, which contribute to key ecological functions such as pollination, seed dispersal, and pest regulation. The surrounding environment is heavily influenced by human activity and livestock presence, with cattle, goats, and donkeys dominating the landscape and exerting significant grazing pressure on vegetation. This interaction often results in reduced habitat complexity and limits the presence of more sensitive wildlife species. Given the proximity to the Kavango River, there is potential for occasional movement of wildlife, particularly smaller terrestrial and semi-aquatic species that depend on water sources. While no endangered or protected species were observed during the assessment, the ecological link between the riverine system and the surrounding savannah highlights the importance of sustainable land and water management to maintain ecosystem balance.

5.13.5 Surface Water

The Kavango River is the primary surface water resource in the area and is proposed for abstraction to support irrigation. The river is perennial, although water levels vary seasonally. Currently, the site has limited water infrastructure, consisting of a water storage tank. However, the absence of essential components such as solar panels and a submersible pump renders the system non-functional, significantly constraining agricultural productivity. The proposed river water abstraction is therefore a critical intervention to establish a reliable water supply. Careful management of abstraction will be required to ensure sustainability and to prevent negative impacts on the river system and downstream users.

Figure 32 River abstraction point for Mbapuka PO

5.13.6 Land Use

The Mbapuka demonstration plot is currently underutilised and non-productive due to the lack of functional irrigation infrastructure. Although a water tank is present, the absence of a complete system limits agricultural activities. The site was voluntarily relinquished to the community by the Headwoman, ensuring secure land access for communal use and eliminating potential land-use conflicts.

Land use in Mbapuka Village is predominantly communal, centred on subsistence crop farming and livestock rearing. Most households rely on rain-fed agriculture, which is highly vulnerable to climate variability. Improved access to reliable water through river abstraction has the potential to enhance agricultural productivity, strengthen food security, and build resilience to climate change within the community.

5.14 Site Description for Kangongo Demonstration Plot

5.14.1 Name of Site

Kangongo Demonstration Plot (PO Site)

Figure 33 Kangongo PO site Board

5.14.2 Location

The Kangongo demonstration plot is located in Kangongo Village within the Mukwe Constituency of the Kavango East Region, Namibia. The site lies in a rural communal setting where subsistence agriculture is the primary livelihood activity.

The geographical coordinates of the site are approximately 17.966312° S and 21.231405° E. The plot is situated approximately 189 metres from the Kavango River, which is proposed as the source for water abstraction to support irrigation development. The relatively short distance to the river makes the site suitable for a river-based irrigation system.

5.14.3 Topography

The terrain in Kangongo Village is generally flat, consistent with the Kavango East floodplain. This topography is suitable for small-scale agricultural activities and the installation of irrigation infrastructure. The soils are predominantly sandy with low water retention capacity, which limits productivity under rain-fed conditions and increases dependence on a reliable and controlled water supply.

5.14.4 Biodiversity

5.14.4.1 Flora

The vegetation within and surrounding the Kangongo plot reflects a semi-arid savannah ecosystem with riverine influence due to its proximity to the Kavango River. The plot itself is currently unproductive and shows signs of low vegetation cover and previous disturbance, likely linked to past land preparation activities. Surrounding areas support a mix of natural grasses, shrubs, and scattered woody species adapted to sandy soils and seasonal rainfall patterns. Common species are likely to include drought-tolerant trees such as mangetti (*Schinziophyton rautanenii*) and camelthorn (*Vachellia erioloba*), as well as seasonal grasses that provide grazing for livestock. Vegetation closer to the river corridor is expected to be relatively denser due to improved moisture availability, contributing to soil stabilisation, erosion control, and local ecological functioning.

Figure 34 Vegetation cover surrounding Kangongo PO mostly woody Shrubs

5.14.4.2 Fauna

The site supports common rural fauna typical of communal agricultural landscapes in the Kavango East Region. This includes bird species, insects, reptiles, and small mammals, which contribute to ecological processes such as pollination, seed dispersal, and pest control. The surrounding environment is strongly influenced by livestock grazing, with cattle, goats, and donkeys present in the area. This contributes to vegetation pressure and reduced habitat complexity, which may limit the presence of more sensitive wildlife species. Due to the proximity of the Kavango River, there is potential for occasional movement of wildlife, particularly smaller terrestrial and semi-aquatic species that rely on water sources. However, no endangered or protected species were observed during the site assessment.

5.14.5 Surface Water

The Kavango River is the primary surface water resource in the area and is proposed as the source for water abstraction. The river is perennial, although water levels fluctuate seasonally. Currently, the site has no water infrastructure, including storage tanks, solar panels, pumps, or irrigation systems, rendering it non-functional for irrigation purposes. As a result, agricultural productivity at the site is currently absent. The proposed river water abstraction is therefore a critical intervention to establish a reliable water supply for irrigation. Given the proximity of approximately 189 metres, the site presents favourable conditions for efficient water conveyance. However, abstraction must be carefully managed to ensure sustainability and to avoid impacts on the river system and downstream users.

Figure 35 River abstraction point for Kangongo PO

5.14.6 Land Use

The Kangongo demonstration plot is currently unutilised and non-productive due to the absence of irrigation infrastructure. No conflicts, displacement of people, or impacts on biodiversity and heritage resources were identified at the site, making it suitable for development.

Land use in Kangongo Village is predominantly communal, centred on subsistence crop farming and livestock rearing. Most households depend on rain-fed agriculture, which is highly vulnerable to climate variability.

The introduction of a reliable irrigation system through river water abstraction has the potential to significantly improve agricultural productivity, enhance food security, and strengthen community resilience to climate change.

5.15 Site Description for Thikanduko Village Demonstration Plot

5.15.1 Name of Site

Thikanduko Demonstration Plot (PO Site)

5.15.2 Location

The Thikanduko demonstration plot is located in Thikanduko Village within the Mukwe Constituency of the Kavango East Region, Namibia. The site is situated in a rural communal setting where subsistence agriculture is the primary livelihood activity.

The geographical coordinates of the site are approximately 17.937587° S and 21.205429° E. The plot is located at a distance exceeding 500 metres from the Kavango River, making direct river water abstraction technically and economically less feasible.

5.15.3 Topography

The terrain in Thikanduko Village is generally flat, consistent with the Kavango East floodplain. This makes the site suitable for small-scale agricultural development and the installation of irrigation infrastructure. However, the soils are predominantly sandy with low water retention capacity, which limits productivity under rain-fed conditions and increases reliance on a reliable groundwater supply.

5.15.4 Biodiversity

5.15.4.1Flora

The vegetation within and surrounding the Thikanduko plot reflects a semi-arid savannah ecosystem, characterised by natural grasses, shrubs, and scattered drought-resistant tree species.

The plot itself has been mechanically ripped in preparation for cultivation, indicating prior land preparation activities. However, at the time of assessment, there were no rain-fed or horticultural crops established, and vegetation cover within the plot was minimal. Surrounding areas support natural vegetation adapted to sandy soils and seasonal rainfall, including species such as mangetti (*Schinziophyton rautanenii*) and camelthorn (*Vachellia erioloba*), alongside seasonal grasses used for grazing. This vegetation plays an important role in soil stabilisation and supporting local livelihoods.

5.15.4.2 Fauna

The site supports common rural fauna typical of communal agricultural landscapes in the Kavango East Region. This includes birds, insects, reptiles, and small mammals, which contribute to ecological functions such as pollination and pest control. The surrounding environment is influenced by livestock grazing, with cattle, goats, and donkeys present in the area. Grazing pressure contributes to reduced vegetation cover and habitat disturbance, which may limit the presence of more sensitive wildlife species. Unlike sites closer to the Kavango River, the Thikanduko plot has limited direct interaction with riverine or aquatic species, and no endangered or protected species were observed during the assessment.

5.15.5 Surface Water

There is currently no water infrastructure available at the site, including storage tanks, solar systems, pumps, or irrigation piping, rendering the plot non-functional for agricultural production. Due to the site's distance from the Kavango River (exceeding 500 metres), river water abstraction is not considered feasible. Instead, borehole drilling has been proposed as the most appropriate water supply option. The development of a borehole-based water system will require proper siting to ensure groundwater availability and sustainability. If successfully implemented, it has the potential to significantly improve irrigation capacity and agricultural productivity. However,

groundwater abstraction must be carefully managed to prevent over-extraction and long-term depletion.

5.15.6 Land Use

The Thikanduko demonstration plot is currently non-productive, despite evidence of land preparation through ripping. The absence of crops and water infrastructure limits any meaningful agricultural activity at the site.

Land use in Thikanduko Village is predominantly communal, centred on subsistence crop farming and livestock rearing. Agricultural activities are largely dependent on rainfall, making them highly vulnerable to climate variability. The introduction of a reliable groundwater supply through borehole development has the potential to enhance agricultural productivity, improve food security, and support climate-resilient livelihoods within the community.

5.16 Site Description for Mayara Demonstration Plot

5.16.1 Name of Site

Mayara Demonstration Plot (PO Site)

Figure 36 Mayara PO Site Board

5. 16.2 Location

The Mayara demonstration plot is located in Mayara Village within the Mukwe Constituency of the Kavango East Region, Namibia. The site is situated in a rural communal setting where subsistence agriculture is the primary livelihood activity.

The geographical coordinates of the site are approximately 17.939571° S and 21.222841° E. The plot is located approximately 327 metres from the Kavango River, which is proposed as the source for water abstraction to support irrigation development. The distance is within a feasible range for river-based water conveyance.

5.16.3 Topography

The terrain in Mayara Village is generally flat, consistent with the Kavango East floodplain. This topography is suitable for small-scale agricultural activities and the installation of irrigation infrastructure. The soils are predominantly sandy with low water retention capacity, which limits productivity under rain-fed conditions and increases dependence on a reliable and controlled water supply.

Figure 37 Topography of Mayara PO

5.16.4 Biodiversity

5.16.1.1 Flora

The Mayara demonstration plot is currently under rain-fed cultivation, indicating an already modified agricultural landscape. Crops are present on-site; however, productivity is constrained by the absence of a reliable water supply. Surrounding vegetation reflects a semi-arid savannah ecosystem with riverine influence, characterised by natural grasses, shrubs, and scattered woody species adapted to sandy soils. Common species include mangetti (*Schinziophyton rautanenii*) and camelthorn (*Vachellia erioloba*), alongside seasonal grasses that support grazing Vegetation near the Kavango River is typically denser due to increased moisture availability, contributing to soil stabilisation, erosion control, and local ecological balance.

5.16.4.2 Fauna

The site supports common rural fauna typical of communal agricultural landscapes in the Kavango East Region. This includes birds, insects, reptiles, and small mammals, which play important roles in ecological processes such as pollination, pest control, and nutrient cycling. The presence of cultivated crops attracts small animals and birds, which can result in minor crop-raiding activities. In addition, livestock such as cattle, goats, and donkeys are prevalent in the surrounding areas and contribute to grazing pressure on vegetation. Given the relative proximity to the Kavango River, there is potential for occasional movement of wildlife, particularly smaller terrestrial species that depend on water sources. No endangered or protected species were observed during the assessment.

5.16.5 Surface Water

The Kavango River is the primary surface water resource in the area and is proposed as the source for water abstraction. The river is perennial, although water levels fluctuate seasonally. Currently, the site has no water infrastructure, including storage tanks, solar panels, pumps, or irrigation systems, limiting agricultural productivity to rain-fed cultivation. The proposed river water abstraction is therefore a critical intervention to improve water availability and support irrigation. Given the distance of approximately 327 metres, the site is suitable for the installation of a solar-

powered water abstraction system. However, abstraction must be carefully managed to ensure sustainability and to avoid impacts on the river system and downstream users

Figure 38 River abstraction point for Mayara PO

5.16.6 Land Use

The Mayara demonstration plot is currently used for rain-fed crop production, indicating existing agricultural activity and potential for expansion. However, productivity remains limited due to the absence of irrigation infrastructure. Land use in Mayara Village is predominantly communal, centred on subsistence farming and livestock rearing. Most households depend on rain-fed agriculture, making them vulnerable to climate variability. The introduction of a reliable irrigation system through river water abstraction has the potential to significantly enhance agricultural productivity, improve food security, and strengthen resilience to climate change within the community.

5.17 Site Description for Bagani Village Demonstration Plot

5.17.1 Name of Site

Bagani Demonstration Plot (PO Site).During the time of the assessment the Bagani PO, was not yet placed on site

5.17.2 Location

The Bagani demonstration plot is located in Bagani Village within the Mukwe Constituency of the Kavango East Region. The site is situated in a rural communal area where subsistence agriculture and livestock rearing are the dominant livelihood activities.

The geographical coordinates of the site are approximately 18.109744° S and 21.618934° E. The plot is located approximately 400 metres from the Kavango River, which is considered a feasible source for water abstraction. However, the alignment of the proposed pipeline would require crossing a private access road, which may have implications for project planning, permissions, and infrastructure design.

5.17.3 Topography

The terrain at Bagani Village is generally flat to gently undulating, characteristic of the broader Kavango East landscape. This type of topography is suitable for small-scale irrigation development and agricultural activities. The soils are predominantly sandy with low fertility and poor water retention capacity. These conditions limit agricultural productivity under rain-fed systems and increase reliance on supplemental irrigation to sustain crop production.

5. 17.3 Biodiversity

5.17.4.1 Flora

At the time of assessment, the Bagani demonstration plot was observed to be non-productive, with no active crop cultivation taking place. The absence of irrigation infrastructure has likely contributed to limited agricultural use of the site.

The surrounding vegetation is typical of semi-arid savannah systems influenced by the Kavango River. It consists of natural grasses, shrubs, and scattered trees adapted to sandy soils and variable rainfall conditions. Common species in the area are likely to include mangetti (*Schinziophyton rautanenii*), camelthorn (*Vachellia erioloba*), and other drought-resistant woody plants.

Vegetation closer to the Kavango River tends to be denser due to higher moisture availability, playing an important role in stabilising soils, reducing erosion, and supporting local biodiversity.

5.17.4.2 Fauna

The site supports typical rural fauna found within communal agricultural landscapes of the Kavango East Region. This includes birds, insects, reptiles, and small mammals, which contribute to ecological functions such as pollination, pest control, and nutrient cycling.

Although the site is currently non-productive, surrounding land uses and proximity to the river may attract wildlife. Livestock such as cattle, goats, and donkeys are commonly present in the area and exert grazing pressure on surrounding vegetation. The proximity to the Kavango River may also allow for occasional movement of wildlife species, particularly smaller animals that rely on water sources. No protected or endangered species were recorded during the site assessment.

5.17.5 Surface Water

The Kavango River is the primary surface water resource in the area and is proposed as the source for water abstraction. The river is perennial, although its flow and water levels vary seasonally. At present, the Bagani PO site lacks all forms of water infrastructure, including storage tanks, solar panels, pumps, and irrigation systems. This has resulted in the site being non-productive. The proposed river water abstraction is therefore a key intervention to enable irrigation development. While the distance of approximately 400 metres is within a feasible range, the requirement for the pipeline to cross a private road introduces an additional consideration that must be addressed through proper design, stakeholder engagement, and permitting.

Figure 39 River Abstraction Point for Bagani

5.17.6 Land Use

The Bagani demonstration plot is currently unused for agricultural production. The absence of infrastructure and reliable water supply has limited its utilisation.

Land use in Bagani Village is predominantly communal, with a strong reliance on subsistence farming and livestock rearing. Agricultural productivity is largely dependent on rainfall, making the community vulnerable to climate variability and drought. The introduction of a solar-powered river water abstraction system has the potential to transform the site into a productive agricultural area, thereby improving food security, enhancing livelihoods, and strengthening climate resilience within the community.

5.18 Site Description for Biro Demonstration Plot

5.18.1 Name of Site

Biro Demonstration Plot (PO Site)

Figure 40 Biro PO Site Board

5.18.2 Location

The Biro demonstration plot is located in Biro Village within the Mukwe Constituency of the Kavango East Region. The site is situated in a rural communal setting, where subsistence agriculture is the primary livelihood activity.

The geographical coordinates of the site are approximately 17.99259° S and 21.31939° E. The plot is located approximately 193 metres from the Kavango River, which is proposed as the source for water abstraction to support irrigation development. This distance falls well within the acceptable

range for pipeline installation (not exceeding 500 m), making the site suitable for river-based water conveyance.

5.18.3 Topography

The terrain in Biro Village is generally flat, consistent with the Kavango East floodplain. This topography is favourable for small-scale agricultural activities and the installation of irrigation infrastructure, as it allows for efficient water distribution with minimal land modification. The soils are predominantly sandy with low water retention capacity, which limits productivity under rain-fed conditions and increases reliance on a consistent and controlled water supply for improved agricultural output.

5.18.4 Biodiversity

5.18.4.1 Flora

The Biro demonstration plot is currently under limited rain-fed cultivation, with only a few crops observed on-site at the time of assessment. This indicates an already modified agricultural landscape, although productivity remains low due to dependence on seasonal rainfall. The surrounding area is characterised by dense natural vegetation typical of the Kavango East Region, including savannah woodland species, shrubs, and grasses adapted to sandy soils. Common species likely present include mangetti (*Schinziophyton rautanenii*) and camelthorn (*Vachellia erioloba*), as well as seasonal grasses that support grazing. Vegetation closer to the Kavango River tends to be denser due to higher moisture availability, contributing to ecological functions such as soil stabilisation, erosion control, and habitat provision.

Figure 41 Vegetation cover surrounding Biro River abstraction Point

5.18.4.2 Fauna

The site supports typical rural fauna found in communal agricultural landscapes in the Kavango East Region. This includes birds, insects, reptiles, and small mammals, which contribute to ecological processes such as pollination, pest regulation, and nutrient cycling.

The presence of crops may attract birds and small animals, occasionally resulting in minor crop damage. Livestock such as cattle, goats, and donkeys are commonly present in surrounding areas and contribute to grazing pressure on natural vegetation. Due to the proximity of the Kavango River, there is potential for periodic movement of wildlife, particularly smaller species that rely on water sources. No endangered or protected species were observed during the assessment.

5.18.5 Surface Water

The Kavango River is the primary surface water resource in the area and is proposed as the source for water abstraction. The river is perennial, although its flow and water levels vary seasonally. At the time of assessment, the site had no existing water infrastructure, including storage tanks, solar panels, pumps, or irrigation systems, limiting agricultural activities to rain-fed cultivation. The proposed river water abstraction is therefore a critical intervention to improve water availability

and support irrigation development. Given the relatively short distance of approximately 193 metres, the site is suitable for a solar-powered abstraction system. However, abstraction must be managed sustainably to avoid adverse impacts on the river system and downstream users.

5.18.6 Land Use

The Biro demonstration plot is currently utilised for rain-fed crop production, although only a few crops were observed at the time of assessment, indicating low productivity and underutilisation of the land.

Land use in Biro Village is predominantly communal, centred on subsistence agriculture and livestock rearing. Households rely heavily on rain-fed farming, making them vulnerable to climate variability and drought conditions. The introduction of a reliable irrigation system through river water abstraction has the potential to significantly improve agricultural productivity, enhance food security, and strengthen community resilience to climate change.

5.19 Site Description for Diyogha 1 and Diyogha 2 Demonstration Plot

5.19.1 Name of Site

Diyogha 1 and Diyogha 2 Demonstration Plots (PO Sites

Figure 42 Diyogha 1 & 2 PO Site Boards

5.19.2 Location

The Diyogha 1 and Diyogha 2 demonstration plots are located in Diyogha Village within the Mukwe Constituency of the Kavango East Region, Namibia. The sites are situated in a rural communal setting, where subsistence agriculture is the primary livelihood activity.

The geographical coordinates of the central point for the PO sites are approximately 18.08171° S and 21.48203° E. The plots are located approximately 215 metres from the Kavango River, which is proposed as the source for water abstraction to support irrigation development. The two POs are located adjacent to one another, making them suitable for shared or integrated irrigation infrastructure, which may improve efficiency in water distribution and reduce overall development costs.

5.19.3 Topography

The terrain in Diyogha Village is generally flat, consistent with the Kavango East floodplain. This topography is favourable for small-scale agricultural activities and the installation of irrigation infrastructure, as it allows for efficient water distribution with minimal land modification.

The soils are predominantly sandy with low water retention capacity, which limits productivity under rain-fed conditions and increases reliance on a consistent and controlled water supply for improved agricultural output.

Figure 43 Topography of Diyogha 1& 2

5.19.4 Biodiversity

5.19.4.1 Flora

The demonstration plots are currently under rain-fed cultivation, with similar crop types observed across both POs due to their proximity. The main crops include maize and naturally occurring grass species, reflecting typical subsistence farming practices in the area.

The surrounding vegetation is characteristic of a semi-arid savannah ecosystem, consisting of natural grasses, shrubs, and scattered woody species adapted to sandy soils. Common species likely present include mangetti (*Schinziophyton rautanenii*) and camelthorn (*Vachellia erioloba*). Vegetation closer to the Kavango River is generally denser due to higher moisture availability, contributing to ecological functions such as soil stabilisation, erosion control, and habitat provision.

5.19.4.2 Fauna

The sites support typical rural fauna found in communal agricultural landscapes in the Kavango East Region. This includes birds, insects, reptiles, and small mammals, which contribute to ecological processes such as pollination, pest regulation, and nutrient cycling. The presence of maize crops and grasses may attract birds and small animals, occasionally resulting in minor crop damage. Livestock such as cattle, goats, and donkeys are commonly present in surrounding areas and contribute to grazing pressure on natural vegetation. Due to proximity to the Kavango River, there is potential for periodic wildlife movement, particularly among smaller species dependent on water sources. No endangered or protected species were observed during the assessment.

5.19.5 Surface Water

The Kavango River is the primary surface water resource in the area and is proposed as the source for water abstraction. The river is perennial, although water levels vary seasonally. At the time of assessment, the sites had no existing water infrastructure, including storage tanks, solar panels, pumps, or irrigation systems, limiting agricultural activities to rain-fed cultivation.

The proposed river water abstraction is therefore a critical intervention to improve water availability and support irrigation development. Given the relatively short distance of approximately 215 metres, the sites are suitable for a solar-powered abstraction system. However, abstraction must be managed sustainably to avoid adverse impacts on the river system and downstream users.

5.19.6 Land Use

The Diyogha 1 and Diyogha 2 demonstration plots are currently utilised for rain-fed crop production, primarily maize and grass species. Due to their proximity, both POs exhibit similar land use patterns and crop composition, although productivity remains limited due to unreliable rainfall and lack of irrigation infrastructure. Land use in Diyogha Village is predominantly communal, centred on subsistence agriculture and livestock rearing. Households rely heavily on rain-fed farming, making them vulnerable to climate variability and drought conditions.

The introduction of a reliable irrigation system through river water abstraction has the potential to significantly enhance agricultural productivity, improve food security, and strengthen community resilience to climate change.

5.20 Site Description of Shamvhura Demonstration Plot

5.20.1 Name of Site

Shamvhura Demonstration Plot (PO Site)

Figure 44 Shamvhura P O site Board

5.20.2 Location

The Shamvhura demonstration plot is located in Shamvhura Village within the Ndiyona Constituency of the Kavango East Region, Namibia. The site is situated in a rural communal setting, where subsistence agriculture is the primary livelihood activity.

The geographical coordinates of the central point of the PO are approximately 18.03267° S and 20.87086° E. The plot is located approximately 467metres from the Kavango River, which is proposed as the source for water abstraction to support irrigation development. The proximity of the river makes the site suitable for river-based water conveyance, subject to infrastructure development.

5.20.3 Topography

The terrain in Shamvhura Village is generally flat, consistent with the Kavango East floodplain. This topography is favourable for small-scale agricultural activities and the installation of irrigation infrastructure, as it allows for efficient water distribution with minimal land modification.

5. 20.4 Biodiversity

5.20.4.1 Flora

The Shamvhura demonstration plot is currently under limited rain-fed cultivation, with only a few crops observed on-site, alongside naturally occurring grass species. This indicates an already modified agricultural landscape with low productivity levels due to dependence on seasonal rainfall.

The surrounding vegetation is characteristic of a semi-arid savannah ecosystem, consisting of grasses, shrubs, and scattered woody species adapted to sandy soils. Common species likely present include mangetti (*Schinziophyton rautanenii*) and camelthorn (*Vachellia erioloba*).

Vegetation closer to the Kavango River tends to be denser due to higher moisture availability, contributing to ecological functions such as soil stabilisation, erosion control, and habitat provision.

Figure 45 Vegetation cover Surrounding Shamvhura PO

5.20.4.2 Fauna

The site supports typical rural fauna found in communal agricultural landscapes in the Kavango East Region. This includes birds, insects, reptiles, and small mammals, which contribute to ecological processes such as pollination, pest regulation, and nutrient cycling.

The presence of crops and grasses may attract birds and small animals, occasionally resulting in minor crop damage. Livestock such as cattle, goats, and donkeys are commonly present in surrounding areas and contribute to grazing pressure on vegetation.

Due to the proximity of the Kavango River, there is potential for periodic wildlife movement, particularly among smaller species dependent on water sources. No endangered or protected species were observed during the assessment.

5.20.5 Surface Water

The Kavango River is the primary surface water resource in the area and is proposed as the source for water abstraction. The river is perennial, although water levels vary seasonally.

At the time of assessment, the site had no existing water infrastructure, including storage tanks, solar panels, pumps, or irrigation systems, limiting agricultural activities to rain-fed cultivation.

The proposed river water abstraction is therefore a critical intervention to improve water availability and support irrigation development. The feasibility of the abstraction system will depend on the confirmed distance between the PO and the river.

5.20.5 Land Use

The Shamvhura demonstration plot is currently utilised for rain-fed crop production, although only a few crops were observed at the time of assessment, indicating low productivity and underutilisation of the land.

Land use in Shamvhura Village is predominantly communal, centred on subsistence agriculture and livestock rearing. Households rely heavily on rain-fed farming, making them vulnerable to climate variability and drought conditions. The introduction of a reliable irrigation system through

river water abstraction has the potential to significantly enhance agricultural productivity, improve food security, and strengthen community resilience to climate change.

5.21 Baseline Description of the Kavango River

The Kavango River is a major transboundary system originating in the Angolan highlands, flowing through Namibia and discharging into the Okavango Delta in Botswana, and within the Kavango East Region it serves as the primary and most reliable source of surface water supporting rural livelihoods, subsistence agriculture, and ecosystem functioning in a landscape characterised by low and variable rainfall (Mendelsohn et al., 2013). The river is perennial, with flows driven by upstream rainfall patterns, typically peaking between March and May and declining during the dry season from June to October, which makes it a dependable but seasonally variable resource where abstraction during low-flow periods may increase pressure on the system, particularly when considered cumulatively across multiple abstraction points (OKACOM, 2011).

Water quality is generally good and suitable for irrigation and domestic use with minimal treatment, although it is influenced by upstream land use, localised human activities, and seasonal sediment loads, requiring careful management to safeguard both human health and agricultural productivity (Mendelsohn et al., 2013). Ecologically, the river supports diverse aquatic and riparian systems, including fish species such as *Oreochromis andersonii* and *Clarias gariepinus*, as well as dense vegetation that stabilises riverbanks and maintains habitat integrity, while also supporting wildlife such as crocodiles and hippopotamuses that are ecologically significant but present safety risks in areas of human activity (Hay et al., 2000; Ramberg et al., 2006) . Socio-economically, the river is central to community resilience, providing water for domestic use, irrigation, livestock, and fishing, and therefore plays a critical role in supporting food security in the region.

Despite its importance, the river is subject to increasing pressures, including rising abstraction demand, climate variability, and localised disturbance, and its hydrological connection to the Okavango Delta further elevates its environmental sensitivity (OKACOM, 2011) . In the context of the proposed project, the Kavango River represents a reliable and practical water source for irrigation; however, sustainability depends on controlled abstraction, protection of riparian zones,

and effective monitoring to ensure that socio-economic benefits are achieved without compromising ecological integrity.

6 THE NEED AND DESIRABILITY OF THE PROJECT

Agricultural production in the Kavango East and Kavango West regions remains largely dependent on rainfall, which has become increasingly unreliable due to recurring droughts and high temperatures. This has resulted in low and inconsistent crop yields, seasonal food shortages, and limited income opportunities for many rural households.

Although the Kavango River provides a dependable source of water, access to irrigation infrastructure is limited, particularly in rural constituencies. At the time of the assessment, the demonstration plots were already established and in use; however, their productivity was constrained by reliance on rainfall. This limits their effectiveness as both production areas and training sites.

The project addresses this constraint by introducing reliable water supply systems that are suited to local conditions. River water abstraction is proposed for plots located near the Kavango River, while borehole development is planned for inland sites. This approach improves access to water in a practical and location-specific manner, allowing for more consistent crop production throughout the year.

In addition to improving production, the project strengthens the role of demonstration plots as practical learning platforms. Community members will gain hands-on experience in irrigation, water management, and improved agricultural practices, which can be applied at household level. The intervention also contributes to broader development outcomes. It supports food security, creates opportunities for income generation, and strengthens resilience to climate variability. The project aligns with national priorities, including Vision 2030 and the National Climate Change Policy, which emphasise sustainable resource use, rural development, and climate resilience.

Based on these considerations, the project addresses a clear need and represents a practical and appropriate response to current agricultural challenges in the region.

7 POLICY AND LEGAL FRAMEWORK

Table 2. Policy and Legal Framework

Legislation	Relevant authority	Applicability
The Namibia Constitution	**Government Republic of Namibia**	The Namibian constitution is the supreme law of the country and makes provision for environmental protection and sustainable development.
Environmental Management Act No. 7 of 2007	**Ministry of Environment, Forestry and Tourism**	The environmental management act No.7 of 2007 aims to promote the sustainable use of natural resources and provides the framework for the environmental and social impact assessment, demands precaution and mitigation of activities that may have negative impacts on the environment and provision for incidental matters. Furthermore, the act provides a list of activities that may not be undertaken without an environmental clearance certificate.
Environmental Assessment Policy (1995)	**Ministry of Environment, Forestry and Tourism**	The Environmental Assessment Policy for Sustainable development and Environmental Conservation emphasize the importance of environmental assessments as a key tool towards implementing integrated environmental management. Sets an obligation to Namibians to prioritize the protection of ecosystems and related ecological processes. The policy subjects all developments to environmental assessment and provides guideline for the Environmental Assessment. The policy advocates that Environmental Assessment take due consideration of all potential impacts and

Legislation	Relevant authority	Applicability
		mitigations measures should be incorporated in the project design and planning stages (as early as possible).
Water Resources Management Act (Act No. 11 of 2013)	**Ministry of Agriculture, Water and Land Reform**	This Act provides a framework for managing water resources based on the principles of integrated water resources management. It provides for the management, development, protection, conservation, and use of water resources. Therefore, water abstraction should satisfy the provisions of the water act (water abstraction / borehole permit should be applied from the respective ministry).
Soil Conservation Act No. 76 of 1969	**Ministry of Agriculture, Water and Land Reform**	This act promotes the conservation of soil, prevention of soil erosion. Prevent soil salinification.
National Heritage Act No. 27 of 2004	**Ministry of Urban and Rural Development**	The Act makes provision for the protection and conservation of places and objects of heritage significance and the registration of such places and objects. Part V Section 46 of the Act prohibits removal, damage, alteration or excavation of heritage sites or remains, while Section 48 sets out the procedure for application and granting of permits.
Regional Councils Act, 1992 (Act No. 22 of 1992)	**Ministry of Urban and Rural Development**	The Regional Councils Act legislates the establishment of Regional Councils that are responsible for the planning and coordination of regional policies and development. The main objective of this Act is to initiate, supervise, manage and evaluate regional development.

8 PUBLIC CONSULTATION

Section 21 of the EIA Regulation requires the undertaking of an Environmental Impact Assessment (EIA) to follows a robust and comprehensive public consultation. This is an important process, because it gives members of the public, especially the Interested and Affected Parties to comment or raise concerns that may affect their socio-economic or general environment because of the project. Further, it solicits crucial local knowledge that the Environmental Assessment Practitioner may not have.

The Public Participation Process (PPP) was focused on members of the conservancy. While competent and or regulatory authority such as Ministry of Environment Forestry and Tourism (MEFT), Ministry of Agriculture Water and Land Reform (MAWLR), where consulted during the project development phase for application for the ECC.

8.1 Shighuru Village Consultation

A community meeting for Shighuru PO in the morning of 31 March 2026 at Shighuru village.

Figure 46 Community meeting for Shighuru PO, (Source : Red Dune Consulting, 2026)

- The meeting was attended by a total of 26 participants 12males and 14 females including representatives from DAPP Namibia and Red Dune Consulting CC
- The stakeholder engagement meeting for the proposed 40 demonstration irrigation plots in the Kavango East and Kavango West Regions commenced with welcoming remarks from the Headman, Mr. Muronga Johannes, followed by an opening prayer. Thereafter, Ms. Eufrasia Hamberera from DAPP Namibia presented an overview of the project background. Red Dune Consulting CC then outlined the objectives of the meeting, with particular emphasis on the Environmental and Social Safeguards (ESS) as stipulated in the project's Environmental and Social Management Plan (ESMP).
- Community members confirmed that there are no existing conflicts associated with the proposed project and indicated that the site is not located near any heritage resources, such as grave sites. No questions were raised during the meeting; however, community members strongly emphasized their urgent need for reliable water supply to enable agricultural production at the demonstration plots (Producer Organisations).
- The meeting further clarified that, in accordance with Environmental and Social Safeguards (ESS) requirements, the project would not be supported if it triggers significant risks or "red flags," including the displacement of people, destruction of heritage resources, damage to critical biodiversity habitats, or the potential to create conflict within the community. It was also emphasized that the proposed project site must not be situated on occupied land.
- Participants were informed that environmental protection in Namibia is governed by the Environmental Management Act No. 7 of 2007 and the Environmental Impact Assessment Regulations of 2012. In terms of this legislation, listed activities, including water resource development such as borehole drilling, may not be undertaken without an Environmental Clearance Certificate (ECC). It was explained that, upon submission of all required and complete documentation, a decision on the ECC is typically expected within three months, although in practice this timeframe may vary depending on administrative processes and the completeness of submissions.
- To obtain an ECC, a Social and Environmental Impact Assessment must be conducted, of which stakeholder consultation forms a key component.
- Furthermore, the meeting was informed that a consent letter is a prerequisite for project implementation. This consent, referred to as Free, Prior and Informed Consent (FPIC),

ensures that the community fully understands and agrees to the proposed development. The concept of FPIC was explained as follows:

- Free: Consent is given voluntarily, without coercion, intimidation, or manipulation.
- Prior: Consent is sought sufficiently in advance of any authorization or commencement of activities.
- Informed: The community is provided with all relevant information in an accessible and understandable manner.
- Consent: A collective decision made by the affected community in accordance with customary decision-making processes.
- Free, Prior and Informed Consent was obtained during the meeting through a show of hands. In addition, an FPIC consent letter was read aloud by the Red Dune Consulting team in the presence of the community and subsequently signed by the Village Headman.
- The meeting was adjourned with a closing prayer.

8.2 Shikenge Village Community Consultation

A community meeting for Shikenge 1 and Shikenge 2 PO was held in the afternoon of 31 March 2026 at Shikenge village.

Figure 47 Community meeting for Shikenge 1 & 2, (Source : Red Dune Consulting, 2026)

- The meeting was attended by a total of 28 participants, comprising 16 females and 12 males, including representatives from DAPP Namibia and Red Dune Consulting CC.
- Proceedings commenced with welcoming remarks from the Headman, Mr. Mbambo Kleopus, followed by an opening prayer. Thereafter, Ms. Eufrasia Hamberera from DAPP Namibia provided an overview of the project background. Red Dune Consulting CC then outlined the objectives of the meeting, with particular emphasis on the Environmental and Social Safeguards (ESS) as stipulated in the project's Environmental and Social Management Plan (ESMP).
- Community members indicated that there are no existing conflicts related to the proposed project. They further confirmed that the project site is not located near any heritage resources, such as grave sites.
- A key question raised during the meeting concerned the timeframe required to obtain an Environmental Clearance Certificate (ECC). In response, Red Dune Consulting CC explained that, in accordance with the Environmental Management Act No. 7 of 2007, the competent authority is expected to make a decision within approximately three months following the submission of all required and complete documentation. However, it was

also noted that, in practice, the process may take slightly longer depending on the completeness of submissions and administrative procedures.

- The meeting was informed that, in accordance with Environmental and Social Safeguards (ESS) requirements, the project would not be supported if it triggers any significant risks or "red flags," including but not limited to: the displacement of people, destruction of heritage resources, damage to critical biodiversity habitats, or the potential to cause conflict within the community.
- It was further emphasized that the proposed project site must not be located on occupied land.
- The participants were also informed that environmental protection in Namibia is governed by the Environmental Management Act No. 7 of 2007 and the Environmental Impact Assessment Regulations of 2012. In terms of this legislation, listed activities such as water resource development, including the drilling of boreholes may not be undertaken without obtaining an Environmental Clearance Certificate (ECC).
- To obtain an ECC, a Social and Environmental Impact Assessment must be conducted, of which stakeholder consultation forms a key component.
- Furthermore, the meeting was informed that a consent letter is a prerequisite for project implementation. This consent, referred to as Free, Prior and Informed Consent (FPIC), ensures that the community fully understands and agrees to the proposed water development project. The concept of FPIC was explained as follows:
- Free: Consent is given voluntarily, without coercion, intimidation, or manipulation.
- Prior: Consent is sought sufficiently in advance of any authorization or commencement of activities.
- Informed: The community is provided with all relevant information regarding the project in an accessible and understandable manner.
- Consent: A collective decision made by the affected community, in accordance with customary decision-making processes.
- Free, Prior and Informed Consent was obtained during the meeting through a show of hands. In addition, an FPIC consent letter was read aloud by the Red Dune Consulting team in the presence of the community and subsequently signed by the Village Headman.

8.3 Hoha Village community meeting

A community meeting for Hoha PO was held in the morning of 01 April 2026 at Hoha village.

Figure 48 Community meeting for Hoha Village (Source : Red Dune Consulting, 2026)

The stakeholder engagement meeting for the proposed demonstration irrigation plot at Hoha Village was held on 1 April 2026 and was attended by 31 participants, comprising 24 females and 7 males.

The meeting commenced with welcoming remarks from a community representative, followed by an opening prayer. Thereafter, Ms. Eufrasia Hamberera from DAPP Namibia presented an

overview of the project background. The Red Dune Consulting team then outlined the objectives of the meeting, with particular emphasis on the Environmental and Social Safeguards (ESS) requirements as stipulated in the project's Environmental and Social Management Plan (ESMP).

During the consultation, it was noted that there had been conflict at the previous Producer Organisation (PO) site. As a resolution, the Village Headwoman voluntarily relinquished a portion of her field to the community for the establishment of a new PO site. Community members confirmed that there are no conflicts associated with the new site. It was further indicated that the proposed site does not involve the displacement of people and does not pose any risk to biodiversity or heritage resources.

At the time of the assessment, the new PO site had not yet been fenced, as the community was in the process of retrieving fencing materials from the old PO site.

The only question raised during the meeting was related to the duration required to obtain an Environmental Clearance Certificate (ECC). In response, it was explained that, in accordance with the Environmental Management Act No. 7 of 2007, a decision on the ECC is typically expected within approximately three months following the submission of complete documentation, although this timeframe may vary depending on administrative processes and the completeness of submissions.

Participants were further informed that environmental protection in Namibia is governed by the Environmental Management Act No. 7 of 2007 and the Environmental Impact Assessment Regulations of 2012. In terms of this legislation, listed activities, including water resource development such as the drilling of boreholes, may not be undertaken without obtaining an Environmental Clearance Certificate (ECC). It was also explained that, in order to obtain an ECC, a Social and Environmental Impact Assessment must be conducted, of which stakeholder consultation forms a key component.

Furthermore, the meeting was informed that a consent letter is a prerequisite for project implementation. This consent, referred to as Free, Prior and Informed Consent (FPIC), ensures that the community fully understands and agrees to the proposed water development project. The concept of FPIC was explained as follows:

- Free: Consent is given voluntarily, without coercion, intimidation, or manipulation.

- Prior: Consent is sought sufficiently in advance of any authorization or commencement of activities.
- Informed: The community is provided with all relevant information regarding the project in an accessible and understandable manner.
- Consent: A collective decision made by the affected community in accordance with customary decision-making processes.

Free, Prior and Informed Consent (FPIC) was obtained during the meeting through a show of hands. In addition, an FPIC consent letter was read aloud by the Red Dune Consulting team in the presence of the community and subsequently signed by the Village Headwoman. The meeting was formally adjourned with a closing prayer.

8.4 Community meeting for Katere Village

A community meeting was held in the afternoon of 01 April 2026 at Katere village

Figure 49 Community meeting for Katere Village (Source : Red Dune Consulting, 2026)

The stakeholder engagement meeting for the proposed demonstration irrigation plot was held on 1 April 2026 in the afternoon and was attended by 23 participants, comprising 15 females and 8 males.

The meeting commenced with welcoming remarks from a community representative, followed by an opening prayer. Thereafter, Ms. Eufrasia Hamberera from DAPP Namibia presented an overview of the project background. The Red Dune Consulting team then outlined the objectives of the meeting, with particular emphasis on the Environmental and Social Safeguards (ESS) requirements.

Community members confirmed that there are no conflicts associated with the proposed project. It was further indicated that the development will not result in the displacement of people, nor will it lead to the destruction of biodiversity or heritage resources.

No questions or comments were raised during the meeting, and the community demonstrated a clear understanding of the proposed project and expressed full support for its implementation.

Participants were informed that environmental protection in Namibia is governed by the Environmental Management Act No. 7 of 2007 and the Environmental Impact Assessment Regulations of 2012. In terms of this legislation, listed activities, including water resource development such as the drilling of boreholes, may not be undertaken without obtaining an Environmental Clearance Certificate (ECC).

It was further explained that, in order to obtain an ECC, a Social and Environmental Impact Assessment must be conducted, of which stakeholder consultation forms a key component.

Furthermore, the meeting was informed that a consent letter is a prerequisite for project implementation. This consent, referred to as Free, Prior and Informed Consent (FPIC), ensures that the community fully understands and agrees to the proposed water development project. The concept of FPIC was explained as follows:

- Free: Consent is given voluntarily, without coercion, intimidation, or manipulation.
- Prior: Consent is sought sufficiently in advance of any authorization or commencement of activities.
- Informed: The community is provided with all relevant information regarding the project in an accessible and understandable manner.

- Consent: A collective decision made by the affected community in accordance with customary decision-making processes.

Free, Prior and Informed Consent (FPIC) was obtained during the meeting through a show of hands. In addition, an FPIC consent letter was read aloud by the Red Dune Consulting team in the presence of the community and subsequently signed by the Village Headman.

The meeting was formally adjourned with a closing prayer.

8.5 Community meeting for Makena Village

A community meeting for Makena PO was held in the morning of 02 April 2026 at Makena village.

Figure 50 Community at Makena Village (Source: Red Dune Consulting, 2026)

A stakeholder engagement meeting for the proposed 40 demonstration irrigation plots was held at the Makena PO site on 02 April 2026 in the afternoon. The meeting was attended by 24 community members, including 17 females and 7 males, indicating active participation from the community, particularly women involved in agricultural activities.

The meeting commenced with welcoming remarks from a community representative, followed by an opening prayer. Thereafter, Leonard Diyando presented the project background and also served as a translator to ensure that all participants clearly understood the discussions. The environmental assessment team from Red-Dune Consulting CC then presented the objectives of the meeting, including the proposed river water abstraction and its intended benefits for improving agricultural productivity at the site.

During the engagement, it was confirmed that there are no conflicts associated with the project, and the proposed development will not result in the displacement of people or the destruction of biodiversity and heritage resources. The community demonstrated general understanding and support for the project. However, it was noted that some Producer Organisation (PO) members have withdrawn from participation due to the lack of reliable water for irrigation, which has negatively affected crop production and sustained engagement in agricultural activities.

Participants were informed that environmental protection in Namibia is governed by the Environmental Management Act No. 7 of 2007 and the Environmental Impact Assessment Regulations of 2012. In terms of this legislation, listed activities, including water resource development such as the drilling of boreholes, may not be undertaken without obtaining an Environmental Clearance Certificate (ECC).

It was further explained that, in order to obtain an ECC, a Social and Environmental Impact Assessment must be conducted, of which stakeholder consultation forms a key component.

Furthermore, the meeting was informed that a consent letter is a prerequisite for project implementation. This consent, referred to as Free, Prior and Informed Consent (FPIC), ensures that the community fully understands and agrees to the proposed water development project. The concept of FPIC was explained as follows:

- **Free:** Consent is given voluntarily, without coercion, intimidation, or manipulation.
- **Prior:** Consent is sought sufficiently in advance of any authorization or commencement of activities.
- **Informed:** The community is provided with all relevant information regarding the project in an accessible and understandable manner.
- **Consent:** A collective decision made by the affected community in accordance with customary decision-making processes.

Free, Prior and Informed Consent (FPIC) was obtained during the meeting through a show of hands. In addition, an FPIC consent letter was read aloud by the Red Dune Consulting team in the presence of the community and subsequently signed by the Village Headwoman.

The meeting was formally adjourned with a closing prayer.

8.6 Community meeting for Kashira Village

A community meeting for Kashira PO was held in the morning of 02 April 2026 at Kashira village.

Figure 51 Community meeting for Kashira Village (source: Red Dune Consulting, 2026)

- A stakeholder engagement meeting for the proposed 40 demonstration irrigation plots was held at the Makena PO site on 02 April 2026 in the afternoon. The meeting was attended by 24 community members, including 17 females and 7 males, indicating active participation from the community, particularly women involved in agricultural activities.
- The meeting commenced with welcoming remarks from a community representative, followed by an opening prayer. Thereafter, Leonard Diyando presented the project background and also served as a translator to ensure that all participants clearly understood the discussions. The environmental assessment team from Red-Dune Consulting CC then

presented the objectives of the meeting, including the proposed river water abstraction and its intended benefits for improving agricultural productivity at the site.

- During the engagement, it was confirmed that there are no conflicts associated with the project, and the proposed development will not result in the displacement of people or the destruction of biodiversity and heritage resources. The community demonstrated general understanding and support for the project. However, it was noted that some Producer Organisation (PO) members have withdrawn from participation due to the lack of reliable water for irrigation, which has negatively affected crop production and sustained engagement in agricultural activities.
- Participants were informed that environmental protection in Namibia is governed by the Environmental Management Act No. 7 of 2007 and the Environmental Impact Assessment Regulations of 2012. In terms of this legislation, listed activities, including water resource development such as the drilling of boreholes, may not be undertaken without obtaining an Environmental Clearance Certificate (ECC).
- It was further explained that, in order to obtain an ECC, a Social and Environmental Impact Assessment must be conducted, of which stakeholder consultation forms a key component.
- Furthermore, the meeting was informed that a consent letter is a prerequisite for project implementation. This consent, referred to as Free, Prior and Informed Consent (FPIC), ensures that the community fully understands and agrees to the proposed water development project. The concept of FPIC was explained as follows:

- Free: Consent is given voluntarily, without coercion, intimidation, or manipulation.

- Prior: Consent is sought sufficiently in advance of any authorization or commencement of activities.

- Informed: The community is provided with all relevant information regarding the project in an accessible and understandable manner.

- Consent: A collective decision made by the affected community in accordance with customary decision-making processes.

- Free, Prior and Informed Consent (FPIC) was obtained during the meeting through a show of hands. In addition, an FPIC consent letter was read aloud by the Red Dune Consulting

team in the presence of the community and subsequently signed by the Village Headwoman.

- The meeting was formally adjourned with a closing prayer.

8.7 Community meeting for Mukuvi Village

A community meeting for Mukuvi PO was held in the morning of 07 April 2026 at Mukuvi village.

Figure 52 Community meeting for Mukuvi Village (Source: Red Dune Consulting, 2026)

The stakeholder engagement meeting for the proposed demonstration irrigation plot at Mukuvi Village was held on the 7th of April 2026 in the morning. The meeting was attended by 28 community members, of which 20 were females and 8 were males.

The meeting commenced with welcoming remarks from a community representative, followed by an opening prayer. Mr. Leonard Diyando, the Farming Instructor from DAPP Namibia, provided the background of the project and served as the translator to ensure effective communication with all attendees. Thereafter, the Environmental Assessment team from Red-Dune Consulting CC presented the purpose and objectives of the meeting, outlining the proposed development and its anticipated benefits to the community.

The proposed project involves the establishment of a demonstration irrigation plot aimed at improving household food security, enhancing agricultural productivity, and strengthening climate resilience within the community. The consultation process emphasized inclusive participation, allowing community members to engage with the project team and raise any concerns or inputs regarding the proposed activity.

Participants were informed that environmental protection in Namibia is governed by the Environmental Management Act No. 7 of 2007 and the Environmental Impact Assessment Regulations of 2012. In terms of this legislation, listed activities such as water resource development may not be undertaken without obtaining an Environmental Clearance Certificate (ECC).

It was further explained that, in order to obtain an ECC, a Social and Environmental Impact Assessment must be conducted, of which stakeholder consultation forms a key component.

Furthermore, the meeting was informed that a consent letter is a prerequisite for project implementation. This consent, referred to as Free, Prior and Informed Consent (FPIC), ensures that the community fully understands and agrees to the proposed development. The concept of FPIC was explained as follows:

- Free: Consent is given voluntarily, without coercion, intimidation, or manipulation.
- Prior: Consent is sought sufficiently in advance of any authorization or commencement of activities.
- Informed: The community is provided with all relevant information regarding the project in an accessible and understandable manner.
- Consent: A collective decision made by the affected community in accordance with customary decision-making processes.

  Free, Prior and Informed Consent (FPIC) was obtained during the meeting through a show of hands. In addition, the FPIC consent letter was read aloud by the Red-Dune Consulting CC team in the presence of the community and subsequently signed by the Village Headwoman.

During the consultation, one of the A community member asked whether the consent letter (FPIC) could also allow access to water for use outside the demonstration plot, or if it applies only to the PO site?

Response: Environmental Assessment team clarified that the consent letter applies specifically to the proposed project activities at the demonstration plot (PO site). However, it was further explained that the project design includes provision for a communal water access point (tap), where community members, particularly PO members, will be able to collect water for household use. This access is limited to the project site and does not extend to water use in other areas beyond the scope of the project

The proposed project focuses on improving the functionality of the existing demonstration plot through the provision of a reliable water supply system, including borehole drilling to support irrigation. The intervention aims to improve food production, enhance agricultural productivity, and strengthen climate resilience within the community. The consultation emphasized that the project will be implemented in a manner that avoids adverse environmental and social impacts. No conflicts, no displacement of people and no destruction of biodiversity and heritage sites.

The community expressed understanding of the project and its objectives and agreed with the commencement of the project.

The meeting was formally adjourned with a closing prayer.

8.8 Community meeting of Katenture Village

A community meeting for Katenture PO was held in the afternoon of 07 April 2026 at Katenture village.

Figure 53 Community meeting at Katenture Village (Source Red Dune consulting, 2026)

Village was held on the 7th of April 2026 in the afternoon. The meeting was attended by 26 community members, 19 females and 7 males.

The meeting commenced with welcoming remarks from a community representative, followed by an opening prayer. Mr. Leonard Diyando, the Farming Instructor from DAPP Namibia, provided the background of the project and served as the translator to ensure effective communication with all participants. Thereafter, the Environmental Assessment team from Red-Dune Consulting CC presented the objectives of the meeting, outlining the proposed development and its anticipated benefits to the community.

Participants were informed that environmental protection in Namibia is governed by the Environmental Management Act No. 7 of 2007 and the Environmental Impact Assessment Regulations of 2012. In terms of this legislation, listed activities such as water resource development may not be undertaken without obtaining an Environmental Clearance Certificate (ECC).

It was further explained that, in order to obtain an ECC, a Social and Environmental Impact Assessment must be conducted, of which stakeholder consultation forms a key component.

Furthermore, the meeting was informed that a consent letter is a prerequisite for project implementation. This consent, referred to as Free, Prior and Informed Consent (FPIC), ensures that the community fully understands and agrees to the proposed development. The concept of FPIC was explained as follows:

- Free: Consent is given voluntarily, without coercion, intimidation, or manipulation.
- Prior: Consent is sought sufficiently in advance of any authorization or commencement of activities.
- Informed: The community is provided with all relevant information regarding the project in an accessible and understandable manner.
- Consent: A collective decision made by the affected community in accordance with customary decision-making processes.

Free, Prior and Informed Consent (FPIC) was obtained during the meeting through a show of hands. In addition, the FPIC consent letter was read aloud by the Red-Dune Consulting CC team in the presence of the community and subsequently signed by the Village Headwoman.

During the consultation, community members raised questions regarding the duration required to obtain the Environmental Clearance Certificate and the number of Environmental Impact Assessments being undertaken for the project. The Environmental Assessment team clarified that the timeframe for obtaining an ECC depends on the review process by the competent authority but generally takes a few weeks to a few months, provided all required documentation is in order. It was further explained that the project is being implemented across multiple sites; however, the assessment approach may be consolidated depending on the nature and similarity of the activities.

The proposed project involves the establishment of a demonstration irrigation plot aimed at improving food security, enhancing agricultural productivity, and strengthening climate resilience within the community. The consultation emphasized that the project will be implemented in a manner that avoids adverse environmental and social impacts.

- No conflicts, no displacement of people and no destruction of biodiversity and heritage sites.

The community expressed understanding of the project and its objectives and agreed with the commencement of the project. The meeting was formally adjourned with a closing prayer.

8.9 Community meeting for Tjova Village

A community meeting for Tjova PO was held in the morning of 08 April 2026 at Tjova village

Figure 54 Community meeting for Tjova Village (Source: Red Dune Consulting)

The stakeholder engagement meeting for the proposed river water abstraction to support activities at the demonstration irrigation plot in Tjova Village was held on the 8th of April 2026 in the morning.

The meeting was attended by community members (attendance details recorded separately). The meeting commenced with welcoming remarks from a community representative, followed by an opening prayer. Ms. Eufrasia Hamberera from DAPP Namibia provided the background of the project and served as the translator to ensure effective communication with all attendees. Thereafter, the Environmental Assessment team from Red-Dune Consulting CC presented the

objectives of the meeting, outlining the proposed development and its anticipated benefits to the community.

Participants were informed that environmental protection in Namibia is governed by the Environmental Management Act No. 7 of 2007 and the Environmental Impact Assessment Regulations of 2012. In terms of this legislation, listed activities such as river water abstraction may not be undertaken without obtaining an Environmental Clearance Certificate (ECC).

It was further explained that, in order to obtain an ECC, a Social and Environmental Impact Assessment must be conducted, of which stakeholder consultation forms a key component.

Furthermore, the meeting was informed that a consent letter is a prerequisite for project implementation. This consent, referred to as Free, Prior and Informed Consent (FPIC), ensures that the community fully understands and agrees to the proposed development. The concept of FPIC was explained as follows:

- Free: Consent is given voluntarily, without coercion, intimidation, or manipulation.
- Prior: Consent is sought sufficiently in advance of any authorization or commencement of activities.
- Informed: The community is provided with all relevant information regarding the project in an accessible and understandable manner.
- Consent: A collective decision made by the affected community in accordance with customary decision-making processes.

Free, Prior and Informed Consent (FPIC) was obtained during the meeting through a show of hands. In addition, the FPIC consent letter was read aloud by the Red-Dune Consulting CC team in the presence of the community and subsequently signed by the Village Headperson.

During the consultation, the community indicated that the existing water pumping infrastructure has not been functional since the day of installation. They further stated that the submersible pump was removed from the river for security reasons.

The proposed project aims to support irrigation activities through river water abstraction, thereby improving agricultural productivity, food security, and climate resilience. The implementation of the project will follow Environmental and Social Safeguards to avoid and minimize adverse environmental and social impacts.

- No conflicts, no displacement of people and no destruction of biodiversity and heritage sites.

The community expressed understanding of the project and agreed with its commencement.

The meeting was formally adjourned with a closing prayer.

8.10 Community meeting for Mbapuka Village

A community meeting for Mbapuka PO was held in the morning of 08 April 2026 at Mbapuka village.

Figure 55 Community meeting for Mbapuka Village (source: Red Dune Consulting , 2026)

The stakeholder engagement meeting for the proposed Environmental Scoping and Environmental Management Plan for the abstraction of river water for the 40 demonstration irrigation plots in the Kavango East Region was held at Mbapuka Village on the 8th of April 2026. The meeting was attended by a total of 57 community members, 38 females and 19 males.

The meeting commenced with welcoming remarks from a community representative, followed by an opening prayer. Ms. Eufrasia Hamberera from DAPP Namibia provided the background of the project and served as the translator to ensure effective communication with all attendees. Thereafter, the Environmental Assessment team from Red-Dune Consulting CC presented the objectives of the meeting, outlining the proposed development and its anticipated benefits to the community.

Participants were informed that environmental protection in Namibia is governed by the Environmental Management Act No. 7 of 2007 and the Environmental Impact Assessment Regulations of 2012. In terms of this legislation, listed activities such as water abstraction may not be undertaken without obtaining an Environmental Clearance Certificate (ECC).

It was further explained that, in order to obtain an ECC, a Social and Environmental Impact Assessment must be conducted, of which stakeholder consultation forms a key component.

Furthermore, the meeting was informed that a consent letter is a prerequisite for project implementation. This consent, referred to as Free, Prior and Informed Consent (FPIC), ensures that the community fully understands and agrees to the proposed development. The concept of FPIC was explained as follows:

- Free: Consent is given voluntarily, without coercion, intimidation, or manipulation.
- Prior: Consent is sought sufficiently in advance of any authorization or commencement of activities.
- Informed: The community is provided with all relevant information regarding the project in an accessible and understandable manner.
- Consent: A collective decision made by the affected community in accordance with customary decision-making processes.

Free, Prior and Informed Consent (FPIC) was obtained during the meeting through a show of hands. In addition, the FPIC consent letter was read aloud by the Red-Dune Consulting CC team in the presence of the community and subsequently signed by the Village Headperson.

The proposed project involves the abstraction of river water to support the development of demonstration irrigation plots aimed at improving food security, enhancing agricultural productivity, and strengthening climate resilience within the Kavango East and Kavango West Regions. The implementation of the project will follow Environmental and Social Safeguards to ensure that adverse environmental and social impacts are avoided and minimized.

Community members confirmed that no people will be relocated to new areas and that there are no heritage sites located near the demonstration plot. As such, no factors were identified that would hinder the implementation of the project.

- No conflicts, no displacement of people and no destruction of biodiversity and heritage sites.
- Community has no questions or comments; they understand and agree with project commencement. The meeting was formally adjourned with a closing prayer.

8.11 Community meeting for Kangongo Village

A community meeting for Kangongo PO was held in the morning of 09 April 2026 at Kangongo village.

Figure 56 Community meeting at Kangongo Village (source: Red Dune Consulting, 2026)

The stakeholder consultation meeting for Kangongo PO in Kangongo Village was held on 09 April 2026 in the morning. The meeting was attended by a total of 30 people, including 15 females and 15 males. Attendance was lower than expected due to a funeral taking place in the village at the time. However, the Headman assured the project team that the information shared during the meeting would be communicated to the rest of the community members.

The meeting commenced with welcoming remarks delivered by the Headman, Mr. Disho Erwin, followed by an opening prayer. Thereafter, the project background was presented by Mr. Leonard Diyando from DAPP Namibia, who also assisted with translation where necessary. The objectives of the meeting were then outlined by the project team.

The meeting was informed about the Environmental and Social Safeguards (ESS) requirements, which do not support projects that present significant environmental or social risks. In particular, the following were highlighted as key red flags:

- Displacement of people
- Destruction of heritage sites
- Damage to critical biodiversity habitats

Furthermore, the community was informed that the proposed project site must not be located on occupied land.

The meeting was also informed that environmental protection in Namibia is governed by the Environmental Management Act (Act No. 7 of 2007) and its Environmental Impact Assessment Regulations of 2012. In terms of this legislation, listed activities such as water resource development (including borehole drilling and river water abstraction) may not be undertaken without obtaining an Environmental Clearance Certificate (ECC).

It was further explained that, in order to obtain an ECC, a Social and Environmental Impact Assessment (ESIA) must be conducted, of which stakeholder consultation forms a core component.

Lastly, the meeting was informed that a consent letter is a requirement for the project to be implemented. This consent, referred to as Free, Prior and Informed Consent (FPIC), represents the community's agreement to the proposed development after fully understanding its implications. The concept of FPIC was explained as follows:

- Free – Consent is given voluntarily without coercion, intimidation, or manipulation.
- Prior – Consent is sought well in advance of project authorization or commencement.
- Informed – The community is fully informed about the project and its potential impacts.
- Consent – A collective decision made through the customary decision-making processes of the community.

During the discussion, it was noted that the existing fence around the Kangongo PO requires improvement. Community members indicated that the fence should be heightened to at least 1.8 metres, as there is evidence of damage caused by wildlife.

No conflicts were reported, and there is no displacement of people, no destruction of biodiversity, and no impact on heritage sites associated with the proposed project.

The community did not raise any questions or concerns; they indicated their understanding of the project and agreed with its implementation.

The meeting was then adjourned with a closing prayer.

8.12 Community meeting for Mayara Village

A community meeting for Mayara PO was held in the morning of 09 April 2026 at Mayara village

Figure 57 Community meeting for Mayara Village (Source: Red Dune Consulting , 2026)

The stakeholder consultation meeting for Mayara PO in Mayara Village was held on 09 April 2026. The meeting was attended by a total of 26 people, including 12 males and 14 females.

The meeting commenced with welcoming remarks from a community representative, followed by an opening prayer. Thereafter, the project background was presented by Ms. Eufrasia Hamberera from DAPP Namibia, who also assisted with translation. The meeting objectives were presented by the Red Dune Consulting team.

The meeting was informed about the Environmental and Social Safeguards (ESS) requirements, which do not support projects that present significant environmental or social risks. The following were highlighted as key red flags:

- Displacement of people
- Destruction of heritage sites
- Damage to critical biodiversity habitats

Furthermore, the community was informed that the proposed project site must not be located on occupied land.

The meeting was also informed that environmental protection in Namibia is governed by the Environmental Management Act (Act No. 7 of 2007) and its Environmental Impact Assessment Regulations of 2012. In terms of this legislation, listed activities such as water resource development (including borehole drilling and river water abstraction) may not be undertaken without obtaining an Environmental Clearance Certificate (ECC).

It was further explained that, in order to obtain an ECC, a Social and Environmental Impact Assessment (ESIA) must be conducted, of which stakeholder consultation forms a core component.

Lastly, the meeting was informed that a consent letter is a requirement for the project to be implemented. This consent, referred to as Free, Prior and Informed Consent (FPIC), represents the community's agreement to the proposed development after fully understanding its implications. The concept of FPIC was explained as follows:

- Free – Consent is given voluntarily without coercion, intimidation, or manipulation.
- Prior – Consent is sought well in advance of project authorization or commencement.
- Informed – The community is fully informed about the project and its potential impacts.
- Consent – A collective decision made through the customary decision-making processes of the community.

During the consultation, it was noted that Mayara Village currently does not have a formally appointed Headman or Headwoman. As a result, the Secretary to the former Headman was given the mandate to sign the consent letter on behalf of the community, with authorization from the former Headman.

No conflicts were reported, and there is no displacement of people, no destruction of biodiversity, and no impact on heritage sites associated with the proposed project.

The community did not raise any questions or concerns and indicated their understanding of the project, as well as their agreement with its implementation. The meeting was adjourned with a closing prayer.

8.13 Community meeting for Thikanduko Village

A community meeting for Thikanduko PO was held in the morning of 10 April 2026 at Thikanduko village

Figure 58 Community meeting for Thikanduko Village (Source: Red Dune consulting, 2026).

The stakeholder consultation meeting for Thikanduko PO in Thikanduko Village was held on 10 April 2026. The meeting was attended by a total of 34 people, including 20 females and 14 males.

The meeting commenced with welcoming remarks from a community representative, followed by an opening prayer. Thereafter, the project background was presented by Ms. Eufrasia Hamberera from DAPP Namibia, who also assisted with translation where necessary. The objectives of the meeting were then outlined by the project team.

The meeting was informed about the Environmental and Social Safeguards (ESS) requirements, which do not support projects that present significant environmental or social risks. The following were highlighted as key red flags:

- Displacement of people
- Destruction of heritage sites

- Damage to critical biodiversity habitats

Furthermore, the community was informed that the proposed project site must not be located on occupied land.

The meeting was also informed that environmental protection in Namibia is governed by the Environmental Management Act (Act No. 7 of 2007) and its Environmental Impact Assessment Regulations of 2012. In terms of this legislation, listed activities such as water resource development (including borehole drilling and river water abstraction) may not be undertaken without obtaining an Environmental Clearance Certificate (ECC).

It was further explained that, in order to obtain an ECC, a Social and Environmental Impact Assessment (ESIA) must be conducted, of which stakeholder consultation forms a core component.

Lastly, the meeting was informed that a consent letter is a requirement for the project to be implemented. This consent, referred to as Free, Prior and Informed Consent (FPIC), represents the community's agreement to the proposed development after fully understanding its implications. The concept of FPIC was explained as follows:

- Free – Consent is given voluntarily without coercion, intimidation, or manipulation.
- Prior – Consent is sought well in advance of project authorization or commencement.
- Informed – The community is fully informed about the project and its potential impacts.
- Consent – A collective decision made through the customary decision-making processes of the community.

During the discussion, the community expressed strong frustration regarding prolonged delays in accessing water. Members indicated that they have been waiting for water supply for an extended period, which has negatively affected participation in the Producer Organization. As a result, many PO members have lost motivation to remain actively involved in the initiative.

It was also raised that most members of the Thikanduko PO are elderly, and there is a need to encourage youth participation in order to sustain the initiative and improve productivity.

In addition, a community member asked whether DAPP Namibia could provide seeds to support their agricultural activities, highlighting the need for complementary inputs alongside water access.

No conflicts were reported, and there is no displacement of people, no destruction of biodiversity, and no impact on heritage sites associated with the proposed project.

The community did not raise further questions or concerns and indicated their understanding of the project, as well as their agreement with its implementation. The consent letter was signed by the Village Headman as confirmation of the community's agreement to the proposed project.

The meeting was adjourned with a closing prayer.

8.14 Community meeting for Bagani Village

Figure 59 Community meeting for Bagani Village (Source: Red Dune Consulting, 2026)

8.15 Bagani Village (Bagani PO)

The stakeholder consultation meeting for Bagani PO in Bagani Village was held on 10 April 2026, the meeting was attended by 37 people that is 20 females and 17 females. The meeting commenced with welcoming remarks from the Headman, followed by an opening prayer. Thereafter, the project background was presented by Ms. Eufrasia Hamberera from DAPP Namibia, while the meeting objectives were presented by the Red Dune Consulting team.

The meeting was informed about the Environmental and Social Safeguards (ESS) requirements, which do not support projects that present significant environmental or social risks. The following were highlighted as key red flags:

- Displacement of people
- Destruction of heritage sites
- Damage to critical biodiversity habitats

Furthermore, the community was informed that the proposed project site must not be located on occupied land.

The meeting was also informed that environmental protection in Namibia is governed by the Environmental Management Act (Act No. 7 of 2007) and its Environmental Impact Assessment Regulations of 2012. In terms of this legislation, listed activities such as water resource development (including borehole drilling and river water abstraction) may not be undertaken without obtaining an Environmental Clearance Certificate (ECC).

It was further explained that, in order to obtain an ECC, a Social and Environmental Impact Assessment (ESIA) must be conducted, of which stakeholder consultation forms a core component.

Lastly, the meeting was informed that a consent letter is a requirement for the project to be implemented. This consent, referred to as Free, Prior and Informed Consent (FPIC), represents the community's agreement to the proposed development after fully understanding its implications. The concept of FPIC was explained as follows:

- Free – Consent is given voluntarily without coercion, intimidation, or manipulation.
- Prior – Consent is sought well in advance of project authorization or commencement.
- Informed – The community is fully informed about the project and its potential impacts.
- Consent – A collective decision made through the customary decision-making processes of the community.

Following the presentations, the Headman invited the community to indicate whether there were any conflicts related to the Bagani demonstration plot (PO site). The Vice Chairperson of the

Bagani PO responded that no conflicts had been encountered, and the community expressed that they do not oppose the proposed development.

However, the community raised a concern regarding the implementation timeline, indicating that the process may take longer than expected. Members emphasized their eagerness for the project to commence, as they are keen to begin working actively at the PO site once water access is secured.

No conflicts were reported, and there is no displacement of people, no destruction of biodiversity, and no impact on heritage sites associated with the proposed project.

The community did not raise further questions and indicated their understanding of the project, as well as their agreement with its implementation.

The meeting was adjourned with a closing prayer.

8.16 Community meeting for Biro Village

A community meeting for Biro PO was held in the morning of 10 April 2026 at Biro Village

Figure 60 Community meeting for Biro Village (Source: Red Dune Consulting, 2026)

The stakeholder consultation meeting for Biro PO in Biro Village was held on 09 April 2026 in the morning. The meeting was attended by a total of 29 people, including 20 females and 9 males.

The meeting commenced with welcoming remarks from a community representative, followed by an opening prayer. Thereafter, the project background was presented by the DAPP Namibia team, while the meeting objectives were presented by the Red Dune Consulting team.

The meeting was informed about the Environmental and Social Safeguards (ESS) requirements, which do not support projects that present significant environmental or social risks. The following were highlighted as key red flags:

- Displacement of people
- Destruction of heritage sites
- Damage to critical biodiversity habitats

Furthermore, the community was informed that the proposed project site must not be located on occupied land.

The meeting was also informed that environmental protection in Namibia is governed by the Environmental Management Act (Act No. 7 of 2007) and its Environmental Impact Assessment Regulations of 2012. In terms of this legislation, listed activities such as water resource development (including borehole drilling and river water abstraction) may not be undertaken without obtaining an Environmental Clearance Certificate (ECC).

It was further explained that, in order to obtain an ECC, a Social and Environmental Impact Assessment (ESIA) must be conducted, of which stakeholder consultation forms a core component.

Lastly, the meeting was informed that a consent letter is a requirement for the project to be implemented. This consent, referred to as Free, Prior and Informed Consent (FPIC), represents the community's agreement to the proposed development after fully understanding its implications. The concept of FPIC was explained as follows:

- Free – Consent is given voluntarily without coercion, intimidation, or manipulation
- Prior – Consent is sought well in advance of project authorization or commencement
- Informed – The community is fully informed about the project and its potential impacts
- Consent – A collective decision made through customary decision-making processes

During the discussion, the following questions were raised by community members:

1. How long will it take before water is made available to the community?
   The project team explained that water provision is dependent on the completion of the Environmental Clearance Certificate (ECC) process, followed by procurement and installation of infrastructure. While exact timelines cannot be guaranteed, efforts will be made to ensure timely implementation once approvals are secured.
2. What is the role of the Ministry of Environment, Forestry and Tourism (MEFT) in the project?
   It was explained that MEFT is the regulatory authority responsible for reviewing the Environmental and Social Impact Assessment and issuing the ECC. The Ministry ensures

that the project complies with environmental legislation and that potential environmental and social impacts are properly assessed and managed before implementation.

These responses provided clarity on both the project timeline and the institutional roles involved.

No conflicts were reported, and there is no displacement of people, no destruction of biodiversity, and no impact on heritage sites associated with the proposed project.

The community indicated their understanding of the project and expressed support for its implementation. The consent letter was signed by the Headman as confirmation of the community's agreement to the proposed project.

The meeting was adjourned with a closing prayer.

8.17 Community meeting for Diyogha Village

A community meeting for Diyogha 1& 2 PO was held in the morning of 10 April 2026 at Diyogha Village.

Figure 61 Community meeting for Diyogha 1 & 2 Source: Red Dune Consulting)

The stakeholder consultation meeting for Diyogha 1 and 2 was held on 09 April 2026 in the afternoon. The meeting was attended by a total of 34 people, including 21 females and 13 males.

The meeting commenced with welcoming remarks from a community representative, followed by an opening prayer. Thereafter, the project background was presented by the DAPP Namibia team, while the meeting objectives were presented by the Red Dune Consulting team.

The meeting was informed about the Environmental and Social Safeguards (ESS) requirements, which do not support projects that present significant environmental or social risks. The following were highlighted as key red flags:

- Displacement of people
- Destruction of heritage sites
- Damage to critical biodiversity habitats

Furthermore, the community was informed that the proposed project site must not be located on occupied land.

The meeting was also informed that environmental protection in Namibia is governed by the Environmental Management Act (Act No. 7 of 2007) and its Environmental Impact Assessment Regulations of 2012. In terms of this legislation, listed activities such as water resource development (including borehole drilling and river water abstraction) may not be undertaken without obtaining an Environmental Clearance Certificate (ECC).

It was further explained that, in order to obtain an ECC, a Social and Environmental Impact Assessment (ESIA) must be conducted, of which stakeholder consultation forms a core component.

Lastly, the meeting was informed that a consent letter is a requirement for the project to be implemented. This consent, referred to as Free, Prior and Informed Consent (FPIC), represents the community's agreement to the proposed development after fully understanding its implications. The concept of FPIC was explained as follows:

- Free – Consent is given voluntarily without coercion, intimidation, or manipulation
- Prior – Consent is sought well in advance of project authorization or commencement

- Informed – The community is fully informed about the project and its potential impacts
- Consent – A collective decision made through customary decision-making processes

During the discussion, community members strongly urged for the acceleration of project implementation, emphasizing that prolonged delays are affecting their livelihoods. It was noted that many community members are on the verge of losing hope due to the continued lack of reliable water access.

In addition, a community member raised concerns regarding the ongoing drought conditions in the area, highlighting the urgent need for a sustainable water supply to support agricultural activities and improve food security.

No conflicts were reported, and there is no displacement of people, no destruction of biodiversity, and no impact on heritage sites associated with the proposed project.

The community indicated their understanding of the project and expressed support for its implementation. The meeting was adjourned with a closing prayer.

8.18 Community meeting for Shamvhura Village

A community meeting for Shamvhura PO was held in the morning of 10 April 2026 at Shamvhura Village.

Figure 62 Community meeting for Shamvhura Village (Source: Red Dune Consulting, 2026)

The stakeholder consultation meeting for Shamvura PO in Shamvura Village was held on 10 April 2026. The meeting was attended by a total of 30 people, including 11 males and 19 females. Participants were drawn from Shamvura Village and Linus Shipapo 11, who were requested to congregate at a central venue in Shamvura Village for the purposes of the consultation.

The meeting commenced with welcoming remarks delivered by community representatives from both villages, followed by an opening prayer. Thereafter, the project background was presented by the DAPP Namibia team, while the meeting objectives were presented by the Red Dune Consulting team.

The meeting was informed about the Environmental and Social Safeguards (ESS) requirements, which do not support projects that present significant environmental or social risks. The following were highlighted as key red flags:

- Displacement of people
- Destruction of heritage sites
- Damage to critical biodiversity habitats

Furthermore, the community was informed that the proposed project site must not be located on occupied land.

The meeting was also informed that environmental protection in Namibia is governed by the Environmental Management Act (Act No. 7 of 2007) and its Environmental Impact Assessment Regulations of 2012. In terms of this legislation, listed activities such as water resource development (including borehole drilling and river water abstraction) may not be undertaken without obtaining an Environmental Clearance Certificate (ECC).

It was further explained that, in order to obtain an ECC, a Social and Environmental Impact Assessment (ESIA) must be conducted, of which stakeholder consultation forms a core component.

Lastly, the meeting was informed that a consent letter is a requirement for the project to be implemented. This consent, referred to as Free, Prior and Informed Consent (FPIC), represents the community's agreement to the proposed development after fully understanding its implications.

During the discussion, the following questions were raised by community members:

1. How long will it take before water is made available to the community?
   The project team explained that water provision depends on completion of the Environmental Clearance Certificate (ECC) process, followed by procurement and installation of infrastructure. While exact timelines cannot be confirmed, efforts will be made to ensure timely implementation once approvals are secured.

2. Was DAPP aware of the Environmental Impact Assessment requirements before establishing the demonstration plots?
   It was clarified that environmental compliance is an ongoing process, and the current Environmental and Social Impact Assessment is being undertaken to ensure alignment with the requirements of the Environmental Management Act (Act No. 7 of 2007).

No conflicts were reported, and there is no displacement of people, no destruction of biodiversity, and no impact on heritage sites associated with the proposed project.

The community indicated their understanding of the project and expressed support for its implementation. The consent letter was signed by the Village Headman of Shamvura Village as confirmation of the community's agreement to the proposed project. The meeting was adjourned with a closing prayer.

9 ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

9.1 Introduction

This chapter outlines the potential impacts (negative and positive) associated with the proposed water supply interventions to support the demonstration irrigation plots in the Kavango East Region. The identified impacts are categorized into three components: impacts on the biophysical environment; Impacts on the health and safety; and impacts on socio-economic. It further provides the criteria used for impact assessment. The developed Environmental Social Management Plan (ESMP) for the project is a living document. Hence, impacts that could be identified in future will necessitate an amendment to the ESMP.

9.2 Impact Identification

Potential impacts were identified in accordance with the key Environmental Social Indicators (ESI)[1] and using literature review and site assessment and experience for Red-Dune Consulting (*see Table 3*).

Table 3. Impact identification

Component	Impact	Description	Impact Type
Bio-Physical Environment	Alteration of River Flow Regime	Water abstraction from the Kavango River will support irrigation at demonstration plots used for training community members. While abstraction per plot is small, the combined demand especially if trainees replicate irrigation at household level may increase pressure on the river during the dry season. This makes proper water-use training (efficient irrigation methods) critical to avoid long-term strain on the resource.	Negative

[1] Guidance Note UNDP Social and Environmental Standards Social and Environmental Assessment and Management July 2022

Component	Impact	Description	Impact Type
	Groundwater Depletion (Borehole POs)	For the few POs that will use boreholes, continuous pumping may slowly lower the groundwater level if abstraction is not controlled. This is more likely in dry periods where recharge is limited. Over time, nearby users and shallow-rooted plants may start to feel the impact if water levels drop too much.	Negative
	Waterlogging and Soil Salinisation	If irrigation is not properly managed, some areas may receive more water than needed. This can lead to water sitting in the soil for too long, which affects plant growth. Over time, salts can build up in the soil due to evaporation, especially under hot conditions, reducing productivity of the land.	Negative
	Impacts on Aquatic Ecosystems	Activities at the river abstraction points, such as installing pumps and frequent water collection, may disturb the riverbanks. This can increase sediment in the water and slightly affect water quality in those specific areas, which may impact fish and other small aquatic life.	Negative
	Soil Degradation and Nutrient Leaching	The sandy soils in the project area are prone to nutrient loss under irrigation. If poorly managed, both demonstration plots and replicated household gardens may experience declining soil quality. However, the project creates an opportunity to train communities on correct watering techniques, compost use,	Negative

Component	Impact	Description	Impact Type
		and soil management, which can improve soil health rather than degrade it.	
Health and Safety	Increased Risk of Water-Related Diseases	Irrigation activities may create small areas of standing water, particularly where drainage is poor. If replicated at household level, this risk could increase. However, the project can incorporate basic water management and hygiene awareness to reduce mosquito breeding and associated disease risks.	Negative
	Occupational Health and Safety Risks	During installation and operation, workers will handle equipment such as pumps, pipes, and drilling machinery. Without proper training and safety measures, there is a risk of injuries. These risks are manageable with basic safety practices. Community members participating in training and operating irrigation systems may be exposed to minor risks from equipment handling. These risks are generally low and can be reduced through basic training on safe equipment use, which is already part of the project approach.	Negative
	Groundwater Contamination Risks	If boreholes are not properly constructed or protected, there is a possibility that surface contaminants, including fertilizers or waste, may enter the groundwater. This is especially important where groundwater is also used for domestic purposes.	Negative

Component	Impact	Description	Impact Type
Social Environment	Employment and Skills Development	In addition to short-term employment, the project builds practical agricultural skills and knowledge. This capacity-building aspect is a key strength, as it empowers communities to continue production independently after the project.	Positive
	Improved Food Security and Nutrition.	The core aim of the project is to train communities in horticultural production. This will allow households to produce a wider variety of crops throughout the year, improving food availability and dietary diversity both at demonstration plots and at household level through replication.	Positive
	Income Generation and Livelihood Enhancement	Skills gained from the demonstration plots can be applied at home, enabling households to produce surplus crops for sale. This creates sustainable income opportunities beyond the project sites, making the impact more widespread.	Positive
	Increased Climate Change Resilience	By teaching irrigation and crop production techniques that are less dependent on rainfall, the project directly supports climate-resilient livelihoods. Households will be better able to cope with drought and changing rainfall patterns through replication of learned practices.	Positive

Component	Impact	Description	Impact Type
	Heritage and Archaeological Resource	No known heritage or archaeological sites were identified within the demonstration plot areas during site visits and stakeholder consultations. The sites are largely within existing communal agricultural land. However, activities such as trenching for pipelines and borehole drilling will involve ground disturbance, which carries a low risk of uncovering previously unknown artefacts or burial sites. To address this, a Chance Finds Procedure should be in place, requiring that all work be halted immediately if any archaeological or cultural materials are discovered, and that the National Heritage Council of Namibia be informed for further guidance.	Negative
	Potential Water Use Conflicts	As more households begin to replicate irrigation practices, demand for water may increase. Without proper coordination, this could lead to competition between users, especially during dry periods. However, this can be managed through community-level awareness and water use planning introduced during training.	Negative

9.3 Criterial for impact assessment

The criteria used to assess the impacts and the method for determining their significance are outlined in Table 4 below. This process aligns with international best practices and adheres to the Environmental Impact Assessment (EIA) Regulations under the Environmental Management Act of 2007 (Government Gazette No. 4878).

The core principle of the impact assessment follows a mitigation hierarchy, which aims to first avoid negative impacts through preventative measures, then minimize those impacts to acceptable levels, and, if neither of these options is feasible, to remedy or compensate for the impact.

Table 4. Criteria for Impact Assessment

Risk Event	Rating		Description of the risk that may lead to an Impact
Probability	The probability that an impact may occur under the following analysis		
	1		Improbable (Low likelihood)
	2		Low probability
	3		Probable (Likely to occur)
	4		Highly Probable (Most likely)
	5		Definite (Impact will occur irrespective of the applied mitigation measure)
Confidence level	The confidence level of occurrence in the prediction, based on available knowledge		
	L		Low = limited information
	M		Medium = moderate information
	H		High = sufficient information
Significance	**Severity**	**Rating**	None (Based on the available information, the potential impact is found to not have a significant impact)
	Negligible	1	
	Low	2	Low (The presence of the impact's magnitude is expected to be temporal or localized, that may not require alteration to the operation of the project
	Medium	3	Medium (This impact is probable, limited in scale, expected to be of short term / temporary, can be

Risk Event	Rating		Description of the risk that may lead to an Impact
			avoided, managed and or mitigated with simple mitigation measures.)
	High	4	High (The impact is definite, mostly predictable, temporal, can be local, regional or national and in long term and reversible. These are impacts that may affect human rights, lands, natural resources, traditional livelihood, critical ecosystem services. The severity of these impact are more limited than sever impacts.)
	Severe	5	**Severe** (The impact is definite, it has significant adverse impacts on human population and or / the environment which are of large-scale magnitude and or spatial extend such as large geographic area, large number of people or transboundary nature. The impact duration is long term, permanent and often irreversible. Impacts include displacement of human, destruction of critical ecological systems and or cultural and heritage sites etc. The impact could have a no-go implication unless the project is re-designed or proper mitigation can practically be applied.)
Duration	Time duration of the impacts		
	1		Immediate
	2		Short-term (0-5 years)
	3		Medium-term (5-15 years)
	4		Long-term (more than 15 years
	5		Permanent
Scale	The geographical scale of the impact		

Risk Event	Rating	Description of the risk that may lead to an Impact
	1	Site specific
	2	Local
	3	Regional
	4	National
	5	International

9.4 Risk Assessment

The significance of the impact was determined using a risk matrix, as shown in Table 5. A five-by-five matrix was applied, where the severity of the impact was categorized and assigned scores ranging from 1 to 5: Improbable (1), Low (2), Medium (3), High (4), and Severe (5). Similarly, the likelihood of the impact occurring was assigned scores as follows: Improbable (1), Low Likely (2), Probable (3), High Probability (4), and Definite (5). The overall impact rating was then calculated by multiplying the scores for impact severity and likelihood.

Table 5. Risk assessment matrix[2]

LIKELIHOOD						
	5 Definite	5 Low	10 Medium	15 High	20 Severe	25 Severe
	4 High Probability	4 Low	8 Medium	12 High	16 High	20 Severe
	3 Probable	3 Low	6 Medium	9 Medium	12 High	15 High
	2 Low	2 Low	4 Low	6 Medium	8 Medium	10 Medium
	1 Improbable	1 Negligible	2 Low	3 Low	4 Low	5 Low
		1 Negligible	**2 Minor**	**3 Medium**	**4 High**	**5 Severe**
		IMPACT SEVERITY / CONSEQUENCE				
		Negligible	Low	Medium	High	Severe

[2] Risk Management Guideline for the BC Public Sector (Province of British Columbia Risk Management Branch and Government Security Office 2012)

9.5 Mitigation Hierarchy

Best practises call for mitigation measures to follow a mitigation hierarchy that favours (i) avoidance of potential adverse impacts, and where avoidance is not possible, then (ii) minimization and reduction; where adverse residual impacts remain, then (iii) mitigation measures need to be applied, and, as a last resort, (iv) measures to offset impacts that cannot be appropriately mitigated (*see Figure 6 below*).

According to EIS regulations, the objectives mitigations are to;

- Find environmental ways of doing thing
- Promote environmental benefits of the project
- Avoid, Minimise or remedy negative impacts and
- Ensure that residual negative impacts are within acceptable levels,

Furthermore, during consideration of the mitigation measure, the following mitigation hierarchy was followed.

- Avoid the negative impact through preventative means,
- Minimise the negative impacts to acceptable low levels and,
- If the above two are not possible, remedy or compensate the impact.

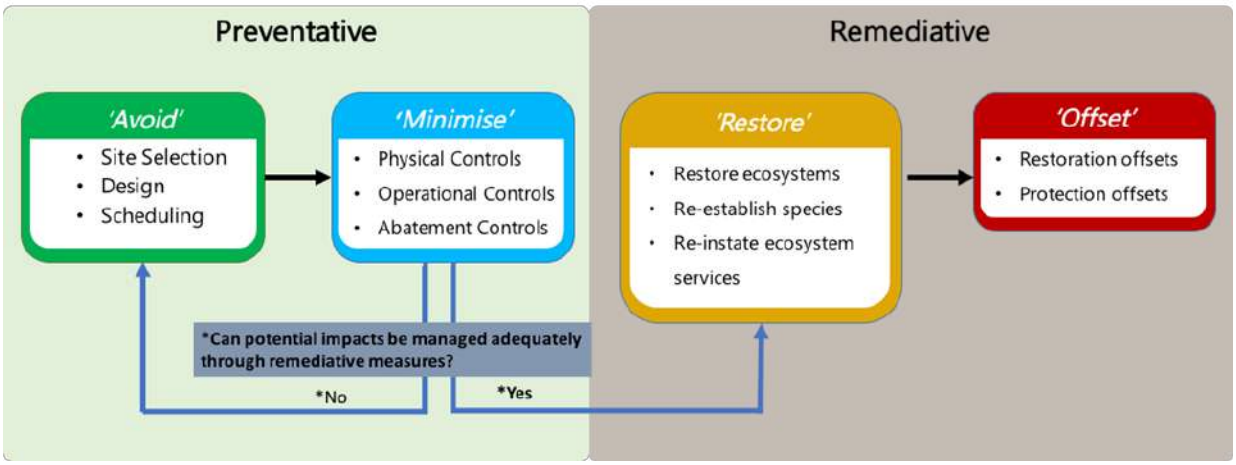

Figure 63. Mitigation Hierarchy Source [3]

[3] Cross-Sector Biodiversity Initiative (CSBI). (2015). A Cross-sector Guide for Implementing the Mitigation Hierarchy (p.9)

9.6 Planning Phase: Impact Assessment

To ensure that the project is accepted by the public and avoid possible conflicts, the Zambezi regional council, traditional authorities and affected communities were consulted.

9.7 Siting Phase: Impact Assessment

Typically, before drilling of a borehole, a site assessment undertaken to determine the optimum location for drilling a process called siting of a borehole. This process involves analysis of geohydrology property of the area using two main conventional methods; (i) electrical resistivity and (ii) ground conductivity. These methods use Frequency Domain Electromagnetic operated by a highly trained geohydrologist.

During this phase, there will be no evasive activities that could cause harm to the physical environment. To ensure social cohesion with the siting team, it will be required for the locals, particularly the traditional authorities to be informed about the presence of the siting team in the area. These activities are usually undertaken by two people, who will carry hand held FDM. The sited location will be pinned for marking purposes.

9.8 Drilling Phase:

Drilling is the major evasive and core environmental threat. This phase involves mobilization and moving of drilling equipment to the drilling site, construction of boreholes protective fence and solar panel platforms. Where necessary, setting up campsite at the drill site with supporting infrastructures such as ablution facilities, household solid waste and other solid waste. During this phase, occupation health and safety risk such as injuries emanating from operating equipment, insect (Mosquito) and snake bites as well as potential oil pollution. Table 6 below outline all potential impacts and proposed mitigation measures during drilling phase.

Table 6. Social Environment: Impact Assessment

Project-Environment Interaction	**Description**	**Mitigation Measures**	**Impact type**	**Likelihood occurrence**	**Severity**	**Impact Rating**	**Geographical Extend**	**Duration**	**Reversibility (R)**	**Significance**	**Confidence Level**
Employment / Socio-Economic advancement of local	Possible exclusion of locals community from job opportunities. Unfair compensation of workers. It is not anticipated that a significant number of employment will be created during drilling	1. Ensure that all general work is reserved for local people unless in circumstances where specialized skills are required. 2. Fair	+ve	2	2	4	Regional	Life of project	n/a	Low	High

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
		compensation and labour practice as per Namibian Labour Laws must be followed 3. Ensure skill transfer to the locals 4. Use local supplier for good and service where possible									
Health and Safety for employees	Job opportunities leads to new social relationship which often spread disease,	1. Provide awareness to the employees on dangers of HIV/AIDS,	- ve	2	2	4	Site Specific and Local	Project	n/a	Low Not Significant	High

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
and general public	particularly pandemic such as HIV and AIDS and substance abuse. Hiring off unlicenced employees to operate vehicles and special machinery pose safety risk to themselves, co-workers and public. Additionally, employees are subject to dust and noise pollution as well as other occupational health and safety issues	alcohol and drug abuse 2. Provide condoms on site 3. Develop a safety plan 4. Ensure that every employee goes through an induction course about safety to train employees on health and safety. 5. All drivers must be in possession of appropriate driver's licenses									

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
		6. Adequate safety signs must be put at designated places. 7. Provide safe wears such as, overalls, safety boots, safety eyeglasses, Hand gloves and hard hat etc to employees 8. Adhere to the Labour act, non-toxic human dust exposure levels may not exceed 5mg/m3 for respiratory dust									

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
		and 15mg/m3 for total dust. 9. Employees must NOT be exposed to noise levels above the required -85dB (A) limit over a period of 8 hours. 10. Abide by the Occupational Health and Safety and Labour Act of Namibia and other statutory requirement such as International									

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
		Labour Practise (ILO) 11. Ensure adequate first aid kit on site taking into consideration, insect and snake bites 12. Supervisors must undergo an occupational health and first aid course, 13. Supply clean drinking water to the site, such as portable water tank;									

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
		14. Used gendered mobile toilets 15. Provide insect repellent, mosquito nets and if necessary immunization to prevent deadly diseases such as malaria.									
Heritage and Archaeology	Potential unearthing of archaeological material or damaging heritage resources	1. Employee must be trained on the possible find of heritage and archaeological material in the area; 2. Implement a	- ve	2	2	4	Site Specific	Life of project	R	Low Not Significant	High

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
		chance find and steps to be taken for heritage and archaeological material finding (Heritage (rock painting and drawings), human remains or artefacts) are unearthed 3. Stopping the activity immediately i. Informing the operational manager or supervisor									

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
		ii. Cordoned of the area with a danger tape and manager to take appropriated pictures. iii. Manager/supervisor must report the finding to the following competent authorities, National Heritage Council of Namibia (061 244 375)									

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
		National Museum (+264 61 276800) or the National Forensic Laboratory (+264 61 240461).									

Table 7. Bio-Physical Environment: Impacts Assessment

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
Biodiversity: Flora	Destruction of trees	1. Avoid cutting down mature and protected plant species. 2. Ensure that access roads are rehabilitated after use to enhance revegetation	-ve	2	2	4	Site Specific	Construction / Drilling	R	Low	High
Biodiversity: Fauna	Destruction of animal habitats such as bird nests, poaching, stealing of livestock	1. Do not kill animal, unless such animals pose eminent danger to humans 2. There must be ZERO tolerance to poaching to ensure this, no weapon and traps are allowed on site;	-ve	2	2	4	Regional	Construction / Drilling	R	Low	High

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
Surface and Ground Water Pollution	Heavy vehicle and machinery may pollute water sources from leakages of oils, hydraulic fluids, lubricants and greases. These pollutants may reach underground water through seepage. Further surface water may be	1. Fuelling of heavy vehicle on site must be well coordinated at designated places, 2. Stationary vehicles must be provided with drip tray to capture oil, lubricants and hydraulic fluids leakages 3. All vehicle and machinery must be well service to avoid leakages 4. Provide and train on oil spill emergency response 5. Servicing of vehicles and machinery must	-ve	2	2	4	Site Specific	Construction / Drilling	R	Low	High

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
	polluted from surface run off soils that is polluted.	take place at designate places									
Waste Generation	General household pollution and littering such as used oil cans drums, metals, and household solid and liquid waste	1. Provide skip bins to collect waste and be disposed of at an approved disposal site 2. Provide labelled household waste drums for household solid waste. 3. Do not burry waste on site 4. Excavate a small biodegradable waste site that would be dump filled at the end	-ve	2	2	4	Site Specific	Life of project	R	Low	High

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
		of the project, alternatively, provide mobile toilets that will be disposed at an approved site and ensure separate ablution facilities for men and women. 5. Used oil, grease and lubricants cans must be collected in appropriate drums and disposed of at an approved site 6. Maintain good housekeeping on site. 7. Do not burry waste on site									

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
Noise Pollution	Noise from the aero plane and heavy vehicles	1. The aircraft must fly at heights which may not cause noise nuisance to human and animals 2. A fixed wind air craft is recommended than a helicopter 3. Heavy vehicles must be well serviced 4. Switch off engine for vehicles when not in use	-ve	2	2	4	Local	Immediate	n/a	Low	High
Dust Pollution	Land clearing, digging, excavation of trenches, drilling, movement of	1. Movement of heavy vehicles must strictly be restricted on site. 2. Adhere to the minimum speed limit	-ve	2	2	4	Local and Site Specific	Immediate	R	Low	High

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
	vehicles and heavy machinery in site, transportation of material to site, will create fugitive dust which could be a nuisance to the surrounding.	of 30 or 40km/hour when on farm roads. 3. On site where soil is loosened by vehicle movement, apply dust a suppression method such as water spraying. 4. During drilling, use water to suppress the dust									
Land degradation and pollution	Uncoordinated movement of heavy vehicles and uncoordinated land clearing	1. Movement of heavy vehicles must be coordinated and restricted to be on access roads	-ve	2	2	4	Site Specific	Life of project	R	Low	High

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
	could lead to soil erosion. Possible spill and leakages of fuel and lubricants from vehicle and machinery could pollute the soil and eventually the ground water resource.	2. Normally, public gravel roads are meant for light vehicles, exploration vehicles have the potential to damage the access roads. Hence proper road maintenance must be implemented to ensure that the roads are left on good state 3. Fuelling of heavy vehicles on site must be well coordinated at designated places 4. Servicing of vehicles and machinery must									

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
		take place at designated sites 5. Stationary vehicles must be provided with drip tray to capture oil, lubricants and hydraulic fluid leakages 6. All vehicles and machinery must be well serviced to avoid leakages 7. Provide and train on oil spill emergency response.									

9.9 Operational Phase:

The main activities during the operational phase of the borehole is water abstraction which, if not well monitored could lead to over abstraction and consequently to deteriorating of water quality and potential impacts on vegetation from deepening of water table. The borehole could also cause social conflict whereby community in the surrounding area could claim ownership of the borehole and may prevent other communities from using the borehole. The table below outlines the potential impacts during the operational phase and proposed mitigation measures.

Table 8. Operational Phase Impact Assessment

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
Reduced Human Wild-Life Conflict	The borehole operation will ensure domestic animals do not drink directly	1. Animal owners / herders should ensure that animals are made to drink from water points to prevent crocodile attack.	-ve	2	2	4	Site Specific	Life of project	R	Low	High

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
	from the river.										
Increase in community water supply	Besides reducing HWC, the borehole will also make water readily available for household use by the community	1. Aid in increasing water point in the village 2. Reduced distance travel by people to water points 3. Sustainable supply of water during drought	-ve	2	2	4	Site Specific	Life of project	R	Low	High
Over abstraction of underground water	High and unsustainable water abstraction which could	1. Do not abstract more than what is recommended by the permit	-ve	2	2	4	Site Specific	Life of project	R	Low	High

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
	affect ground water quality	2. Where possible, install automatic measuring gauge to monitor abstraction 3. Monitor water level periodically 4. Carry out periodic pumping yield to assess aquifer sustainability 5. Undertake systematic water quality assessment									
Risk of water infrastructure destruction buy elephant	Elephant are notorious known for damaging water points	1. Construct an elephant proof fence around the borehole and its supporting infrastructures	-ve	2	2	4	Site Specific	Life of project	R	Low	High

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
	in search for drinking water	2. Build high and thick enough walls that will prevent elephants access to the water tank and solar infrastructures.									
Conflict of water use buy villagers	Claim of ownership of water point / borehole by some community members	1. Raise awareness of the indented purpose of the borehole 2. Ensure no one is made to be entitled to owning or have controlling power on who should use the borehole	-ve	2	2	4	Site Specific	Life of project	R	Low	High
Theft of borehole infrastructure	There are reported cases where	1. Construct theft proof fence to protect solar panels	-ve	2	2	4	Local	Life of project	R	Low	High

Project-Environment Interaction	Description	Mitigation Measures	Impact type	Likelihood occurrence	Severity	Impact Rating	Geographical Extend	Duration	Reversibility (R)	Significance	Confidence Level
	boreholes infrastructure such as solar panel are stolen										

10 GRIEVANCE PROCEDURE

The Grievance Procedure provides a structured and accessible mechanism through which stakeholders can raise concerns or complaints related to the implementation of the proposed water abstraction activities supporting the demonstration irrigation plots. The process is designed to ensure that grievances are submitted and addressed in a manner that is free of charge, confidential where required, without fear of retribution, and through user-friendly and locally accessible channels.

Under the DAPP Namibia implementation framework, grievances may be lodged through multiple entry points, including directly to Producer Organisation (PO) leadership, DAPP Namibia field officers, community leadership structures (e.g. headmen/headwomen), or the appointed Environmental Officer. This decentralised approach ensures that community members are able to raise concerns at the most immediate and appropriate level.

It is important to note that this Grievance Procedure does not address Human-Wildlife Conflict (HWC) incidents, as these are not directly attributable to project activities and are managed through existing government mechanisms. Eligible grievances include concerns arising from project activities such as water abstraction, infrastructure installation, resource use conflicts, or instances where project procedures have not been followed appropriately or fairly. Complainants may include PO members, surrounding community members, or any other interested and affected parties.

The grievance redress process will follow a structured six-stage Grievance Redress Mechanism (GRM), namely: (i) receipt and logging of the grievance, (ii) acknowledgement of receipt, (iii) assessment and investigation, (iv) resolution and implementation of corrective actions, (v) sign-off by the complainant where resolution is accepted, and (vi) monitoring and evaluation of the effectiveness of the response.

DAPP Namibia will be responsible for maintaining a grievance register at project level, ensuring that all complaints are recorded, tracked, and resolved within a reasonable timeframe. Complex or unresolved grievances will be escalated to higher levels within the project management structure, including collaboration with relevant authorities where necessary.

Grievances will be managed through the institutional structure established for the project, ensuring a coordinated, transparent, and consistent approach to stakeholder engagement and conflict resolution throughout the project lifecycle.

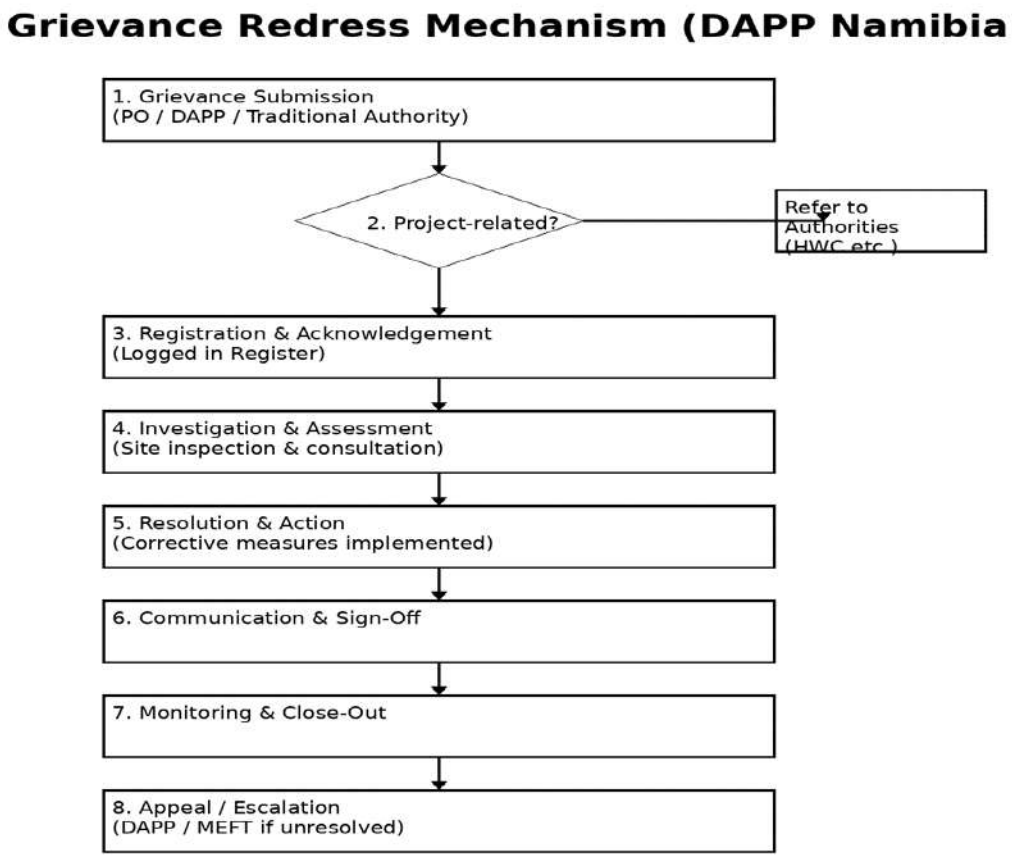

Figure 64 Grievance Redress Mechanism for the Proposed Water Abstraction Project Supporting Demonstration Irrigation Plots in the Kavango East Region.

The eligibility of a grievance will be assessed at the point where it is first received, typically at community level through the Producer Organisation (PO) leadership, DAPP Namibia field officers, or local traditional authorities (Step 1). At this stage, it will be determined whether the grievance is related to the proposed project activities, including river water abstraction, borehole drilling, or associated infrastructure.

Once confirmed as a project-related grievance, the matter will be discussed directly with the complainant to ensure a clear understanding of the concern and to provide the complainant with a fair and transparent hearing (Step 2). The grievance, together with any supporting information and observations, will then be formally recorded and submitted to DAPP Namibia's project team, including the Environmental Officer, for further review.

The Environmental Officer, in collaboration with DAPP Namibia field staff and PO leadership, will investigate the substance of the grievance (Step 3). This may include site inspections, consultation with affected parties, and review of project activities such as water abstraction practices, infrastructure placement, or resource use. Where necessary, input may be sought from relevant authorities or technical specialists.

Following the investigation, DAPP Namibia will compile a written record of the grievance, including findings and recommended corrective actions, and communicate the outcome to the complainant. Any actions required to resolve the grievance will be implemented by the relevant parties under the coordination of DAPP Namibia (Step 4). All grievances and their resolutions will be documented and maintained in the project Grievance Register.

Under normal conditions, grievances will be addressed and corrective actions initiated within 30 days of receipt. If the complainant is not satisfied with the outcome, they may lodge an appeal, which will be escalated to DAPP Namibia project management for further review (Step 5). Where the matter remains unresolved, it may be referred to the relevant regulatory authority, such as the Office of the Environmental Commissioner under MEFT, for consideration and guidance.

11 DECOMMISSIONING AND REHABILITATION PLAN

Decommissioning of the proposed water supply infrastructure for the irrigation demonstration plots will involve the removal of all project-related components and the restoration of disturbed areas to a safe, stable, and environmentally acceptable condition. Although the project is intended as a long-term intervention to support agricultural productivity, decommissioning may be required in cases of infrastructure failure, abandonment, environmental concerns, or a decision by the community or authorities to discontinue use.

All infrastructure, including boreholes, river water abstraction systems, irrigation networks, and solar-powered equipment, will be dismantled and removed in a controlled manner. Abandoned boreholes will be properly sealed using suitable materials such as cement grout or bentonite to prevent groundwater contamination. River abstraction infrastructure, including

intake pipes and pumps, will be removed, and any disturbed riverbank areas stabilised to prevent erosion. Irrigation components such as pipelines, tanks, and drip systems will be dismantled, with functional equipment retained for community use where appropriate.

All waste generated during decommissioning will be collected and disposed of at approved facilities, with no waste left or buried on site. Disturbed areas will be levelled and restored to natural contours, and compacted soils loosened to support vegetation recovery. Natural regeneration will be encouraged, supported where necessary by the reintroduction of indigenous plant species. Disturbed riverbanks will be rehabilitated to restore stability and ecological function.

Post-decommissioning monitoring will be undertaken to confirm soil stability, vegetation recovery, and the absence of environmental or safety risks, with corrective measures implemented where required. The proponent will remain responsible for ensuring that decommissioning and rehabilitation are carried out in accordance with the Environmental Management Plan and regulatory requirements.

Decommissioning will be considered complete once all infrastructure has been removed or rendered safe, the site is free of waste and hazards, land stability has been achieved, and vegetation is re-establishing in line with surrounding conditions.

12 CONCLUSION AND RECOMMENDATIONS

12.1 Conclusion

The assessment of the proposed water supply interventions for the irrigation demonstration plots in the Kavango East Region confirms that the development of river water abstraction systems and, where required, boreholes is appropriate to support irrigation activities at the Producer Organisation (PO) sites. Site visits and stakeholder consultations established that the demonstration plots are already in place but are constrained by limited and unreliable access to water, which is directly affecting productivity and participation. The proximity of many PO sites to the Kavango River, generally within 500 m, supports the feasibility of river-based abstraction, while borehole development remains a viable option for inland locations.

The proposed activities will take place within existing agricultural areas that are already disturbed, thereby limiting additional environmental impact. No displacement of people, disturbance of heritage sites, or impacts on sensitive biodiversity areas were identified during the assessment. The scale of water abstraction is small and intended for demonstration purposes, and with proper management, is not expected to place significant pressure on water resources. Community members expressed strong support for the project, with water availability identified as the primary constraint to agricultural production. Potential risks relate to unsustainable water use if not properly managed, as well as Human-Wildlife Conflict (HWC) in areas located close to the river.

The proposed project is considered acceptable from an environmental and social perspective, provided that mitigation measures outlined in the Environmental Management Plan are implemented.

12.2 Recommendations

- It is recommended that the Environmental Clearance Certificate (ECC) be granted for the proposed water abstraction activities, subject to compliance with the Environmental Management Act (2007) and EIA Regulations (2012).
- Water supply options must follow the established project criteria:
- River abstraction for sites located within 500 m of the Kavango River
- Borehole development for sites located beyond this threshold
- The proponent (DAPP Namibia and implementing partners) must ensure that all infrastructure is:

- Properly installed and secured
- Regularly maintained to prevent system failure
- Protected against theft and vandalism, as observed at some PO sites
- A water use management approach should be implemented at each PO to regulate abstraction and prevent excessive water use, particularly during dry periods.
- Water quality monitoring should be conducted periodically, and relevant approvals obtained where required, to ensure the suitability of water for irrigation.
- Measures should be implemented to address Human-Wildlife Conflict (HWC), particularly for sites located in close proximity to the Kavango River.
- Continuous community training and engagement should be maintained to support proper operation, equitable water distribution, and long-term sustainability of the irrigation systems.
- Periodic environmental monitoring and reporting should be conducted to ensure compliance with the Environmental Management Plan and to address any emerging environmental or social concerns.

13 ANNEX 1. GROUNDWATER MONITORING PLAN

The purpose of the groundwater monitoring plan is to make sure that suitable procedures are in place to monitor and evaluate the response of the aquifer and the surrounding environment to the abstraction process. Furthermore, the plan is aimed to control the impacts of groundwater abstraction and contaminant loads, and monitoring aquifer response and quality. The proposed procedures shall also serve as an early warning system for over-abstraction.

13.1 Groundwater Quality

It is essential that the quality of groundwater abstracted is monitored on a realistically regular basis, to serve as an early warning of quality changes that may occur due to the abstraction; natural causes; or pollution. Undertake intermittent water quality testing.

13.2 Groundwater Level Measurements

The level of groundwater in the aquifer will serve to inform the water quantity vs the rate of abstraction. This will be critical given low to no recharge due to lower rainfall in the area. This provision is provided for in the monitoring sheet for water meter readings provided by the MAWLR to the borehole operator. It is therefore important that hydrological baseline information of water level is recorded to ensure time-variant collection of data. This type of monitoring becomes effective proof of errors when MAWLR also carries out periodic inspections.

14 REFERENCES

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15 APPENDICES

15.1 Appendix A. Attendance Register_ Kavango East Region

OBSERVATOIRE DU SAHARA ET DU SAHEL
SAHARA AND SAHEL OBSERVATORY

ADPP ANGOLA

DAPP Namibia
Development Aid from People to People

ADAPTATION FUND

RDC Red-Dune Consulting

Public Meeting

Environmental Impact Assessment for Water Development Infrastructure and Irrigation plot in Kavango East **Region**

Place: Shighuru **Village**

Date: 31 / 03 / **2026**

Time: 09:00 – 12:00

No	Name	Gender	Organization	Position	Cell:	Signature
1	Shirungu fidelius	M		Chairperson	0813329108	
2	Muronga johannes	M		Community headman	0818213232	
3	Masamba J.	M		Treasure PO		
4	Ngambera E M	M		Vicechair-1 PO	0812904621	
5	Kandonga P N	M		P.O Member	0818708630	
6	Musenge H. M	M		P.O Member		Musenge
7	Nyanda In	M		PO Member		Nyanda
8	Muyenga P.	M		P.	0814723720	

22	Murangi Marcelina	M	DAPP Namibia	Farming Instructor	0813015029	[illegible]
23	Josef Shapaka	M	DAPP	S.P.O	0813052541	[illegible]
24	Tango T Mundjulu	M	Red-Dare Consulting	Consultant	0812552716	[illegible]
25	Josefina Uupindi	F	Red Dare Consulting	EAP	0810441072	J. Uupindi
26	Eufrasia K. Haukongo	F	DAPP	CCAC leader	0812716614	[illegible]
27						
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31						
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Public Meeting

Environmental Impact Assessment for Water Development Infrastructure and Irrigation plot in

Kavango East **Region**

Place: Shikonge 1 & 2 **Village**

Date: 31 / March 2026

Time: 14:00 – 16:30

No	Name	Gender	Organization	Position	Cell:	Signature
1	Josephine Uupindi	F	Red Dune Consulting	EAP	0810441072	J Uupindi
2	Ndembele Bernhard	F		Treasure PO		N. B
3	Shimbumburu Sandrina K	F		P.O	0816796114	Sandrina
4	Hamukenga Elisabeth	F		PO Member		H. E
5	Stephanus Susan	F		PO Member		S. S
6	Haingura EMarlata	F		PO member		H. E
7	Mushongo Marceline	F		PO member		M. M
8	Haushiku Theophile	F		PO member	0812542378	[illegible]

22	~~Shikuoh~~ Shikusho Kajime	M		no-possession C-person	N/A	Bendiglues
23	Ntamba Joseph	M		no-possession C-perso	N/A	STemo
24	Ngongo Benhard	M		no-possession C-possession	0818712280	[illegible]
25	Murungo Marcellius	M	Dapp. Namibia	FI	0813015029	[illegible]
26	Mzambo Kleopus	M		Headman	0817017573	M.K
27	Tango Mundjulu	M	Red Dune Consulting	EAP	0812552716	
28	Eufrasia Hamberera Katiku	F	DAPP Namibia	CCAC leader	0812716614	
29						
30						
31						
32						

22	Nakare Lukas.N	M	chairperson	0818445504		
23	Mukure MARIA	f		081		M. M
24	Mukerenge AURELIA	f		08126658869		M. A
25	Mumonga Marcellius	M	DAPP Namibia	F1	0813015027	
26	Josephine Ukpindi	F	Red Dune consulting	EAP	0810441072	J. Ukpindi
27	Tango Mundjulu	M	Red Dune Consulting	EAP	0812552716	
28	Steven Morongo	M	DAPP NAMIBIA		0815495815	
29	Josef Shapaka	M	DAPP-Nam	S.P.O	0813052541	
30	NGUKU Renatte Namukonga	f	Head/Woman	0813483959	0813483959	
31	Euphrasia Hamberera	F	DAPP Namibia	CCAC leader	0812716614	
32						

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Environmental Impact Assessment for Water Development Infrastructure and Irrigation plot in
Kavango East **Region**

Place: Katere **Village**

Date: 01 / April 2026

Time: 14:00 – 16:30

No	Name	Gender	Organization	Position	Cell:	Signature
1	Kativa Veronica	F	Katere PO	PO member	0819681962 50	
2	Ngundura Eugenia	F	Katere PO	PO member		
3	Kafiva Fransiskus	M	Katere PO	PO member	081627 1597	
4	Mangundu Benhard	M	Katere PO	PO member	0818555245	
5	Kaliya Fabianus	M	Katere PO	PO member	0818719435	
6	Ndembele Cesilia	F	Katere PO	PO member	0813944314	C.M.K
7	Muyenga Christine	F	Katere PO	PO Membe		Muyenga
8	Mukoro Letisia	F				M.L.K.

22	Eufrasia Hamberera	F	DAPP - Nam	CCAC leader		
23	Tungo Mundjulu	M	Red Dune Consulting	ENP	0812552716	
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32						

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Environmental Impact Assessment for Water Development Infrastructure and Irrigation plot in Kavango East **Region**

Place: Kashira **Village**

Date: 07 / 04 / 2026

Time: 13:00 – 15:30

No	Name	Gender	Organization	Position	Cell:	Signature
1	Iango I Mundjulu	M	Red Dune Consulting cc	EAP	+27648172552716	
2	Josephine Uyindi	F	RDC	EAP	0810441072	J. Uyindi
3	Steven Muroger	M	DAPP	PO	0815495815	
4	Eufrasia Hamberera	F	DAPP	CCAC Leader	0812716614	
5	Susana Shambi Kafiku	F	Kashira	Headman	0813396593	S.S.
6	Mangundu Christina	F	Kashira	P.O member	0817910839	mk
7	Muyambu Maria	F	Sharughando	P.O member	0817576234	m.m
8	Shilongo Ndapewa	F	Kashira	P.O member	0814681107	Ndapewa

22	Remhilde Kamenge	F	DAPP NAM	GSP Agent	0816646448	
23	Dingando Leonard	M	DAPP NAM	Farming Instructor	0816658849	
24	Josef Chegatu	M	DAPP	S.P.O	0813052541	
25	Martin K. Kushokosha	M	DAPP NAM	CCAC Admin	0813035832	
26	Mayo Regina	F	Kashira	PO member		
27	Hainguna Bonita	F	Kashira	PO member	0813361318	H.B.
28	Malyo Elmelinde	F	Kashira	PO. member	0814100467	Malyo
29	Namuhara Annafulgencia	F	Kashira	PO member	0814128069	N A
30	Mbambi Sebia	F	Kashira	PO member	0817885058	Sebia
31	Mbambi Maria	F	Kashira	PO member		Maria
32	Meronga Makena	F	Kashira	PO member		Makena

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Red-Dune Consulting

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East Region

Place: Makena **Village**

Date: 02 / April **2026**

Time: 09:00 - 12:00

No	Name	Gender	Organization	Position	Cell:	Signature
1	Josephine Ulyindi	F	Red Dune consulting	EAP	0810444072	J. Ulyindi
2	Tango T Munjulu	M	Red Dune Consulting	EAP	0812552716	[illegible]
3	Steven Muronga	M	DAPP NAM	PO	0815495815	[illegible]
4	Euphrosina Hamberwa	F	DAPP NAM	CCAC leader	0812716616	[illegible]
5	Nhyamba Annastacia	F	PO member		0813764660	N.A
6	Nehjamba Tjarura	F	PO member		0814563700	N.T
7	Nyumba Edward	M	committee member		0812410690	[illegible]
8	Hamupafi Joseph	M	Committee member		0817613360	[illegible]

22	Josef Shepuka	M	DAPP	S.P.O	0813052541	
23	Dingando Leonard	M	DAPP - NAM	Farming Instructor	0816654849	
24	Martin K. Kushokosha	M	DAPP Namibia	CCAC Admin	0813035832	
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Environmental Impact Assessment for Water Development Infrastructure and Irrigation plot in

Kavango East **Region**

Place: Mukuvi Village

Date: 07 / 04 / 2026

Time:

No	Name	Gender	Organization	Position	Cell:	Signature
1	Iango I Mundjulu	M	Red - Dune Consulting	EAP	+264812552716	
2	Josephine Uyindi	F	Red - Dune Consulting	EAP	+264810441072	J. Uyindi
3	Josef Shapale	M	DAPP Nam	S. P. O	0813052541	
4	Steven Morangu	M	DAPP NAM	P.O	0815495815	
5	Mirongo Ndara	M	Dapp Nam	P.O	0814631321	
6	Nolumba Mukungu	M	Papp NAM	P.O		
7	Mbambo Petrus	M	Headman	P.O		Petrus
8	Mushongo John	M	Dapp Nam	P.O		

22	Kashamba Kunyima	F	Dapp member	P.O	0817975549	Kunyima
23	Mungamba Anna	F	Dapp member	P.O	0817877009	M.A.
24	Katuwambwa Annamary	F	Dapp member	P.O	0814440823	[illegible]
25	Kalihonda Martiadi	F	Dapp member	P.O	0817632597	Kalihonda
26	Ndumba Alna	F	Dapp member	P.O	0813287976	A.M
27	Mukosho Mate	F	Dapp member	P.O	0813251002	Mater
28	Shingemba martha	F	P.O member	P.O	0818565930	martha
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Environmental Impact Assessment for Water Development Infrastructure and Irrigation plot in

Kavango East **Region**

Place: Katenburc **Village**

Date: 07 / 04 / 2026

Time: 14 00 - 16 : 30

No	Name	Gender	Organization	Position	Cell:	Signature
1	Josephine Uupindi	F	Red Dune Consulting cc	EAP	0810441072	J. Uupindi
2	Tango Mundjulu	M	Red Dune Consulting CC	EAP	+264812552716	[illegible]
3	Euforia Haumbersa	F	DAPP Namibia	CCAC leader	0817166 11	[illegible]
4	Steven Muronga	M	DAPP Namibia	P.O	0815495815	[illegible]
5	Josef Shapaka	M	DAPP-Namibia	S. P. O	0813052541	[illegible]
6	Bernadine Mashika	F	PO member	P.O	0814940082	[illegible]
7	Kambungo Clementine	F	P.O. member	P.O	081 3268427	Kambungo
8	Kuhuritha Muengere	f	P. O member	P.O	081 4153002	KM

22	Mangunda Patricia	F	P.O member	P.O	0613912219	Patricia
23	Silva Helena	F	P.O member	P.O	0817819032	Helena
24	Anna Mpande	F	P.O member	P.O	081	
25	Koroyi martha	f	P.O member	Vice Chairperson	0812301559	Koroxi
26	Thikoko Anna	F	P.O member	P.O	0817995144	Thikoko
27	Karunga Chricentia	f	P.O member	P.O	0818293991	[illegible]
28	Kambandi	F	P.O member	P.O	—	MK
29	Marungu Felistas	f	P.O member	P.O	0813643820	Felistas
30	Pauline Mugenga	F	P.O member	P.O	—	Pau
31	Klaudia	F	P.O member	P.O	0813887173	CIA
32	Kalipa Alfonsiak	F	P.O Member	P.O	0814945458	Hlpa

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Environmental Impact Assessment for Water Development Infrastructure and Irrigation plot in
Kavango East **Region**

Place: Jova Village

Date: 08 / April 2026

Time: 09 : 00

No	Name	Gender	Organization	Position	Cell:	Signature
1	Josephine Uupindi	F	Red Dune Consulting CC	EAP	+264810441072	J. Uupindi
2	Tanga I Mundjulu	M	Red Dune Consulting CC	EAP	+264812552716	
3	Josef Shapaka	M	DAPP-Nam	S.P.O	0813052541	
4	LYNNETY SINALUMBU	F	DAPP-ABSWAC	NPC	0812778964	
5	CHIPALANGA DAVID	M	DAPP-NAM	FARM INSTRUCTOR	0812751341	
6	Steven Muronga	M	DAPP - NAM	P.O	0813495815	
7	Thikushi Loide	F	Community m	Community member	0816266406	Loide
8	Petrina Shihakom	F	P.O member	P.O	0813161266	

22	Mushova Angeline	f	community member	community member		Mushova
23	Dindungo Augustha	F	P.O.Member	P.O.Member	0812244470	[illegible]
24	Kutumo Astrid	F	Community member	Community member		K.A
25	Rheinhilde Mapaka	F	P.O member	P.O member	0817[illegible]1556	[illegible]
26	Thikuntu Ghurungi	F	P.O member	P.O member		T. G
27	Thihuntu Uwunter	F	P.			
28	Thihuro Christian	M	WUA member	P.O member	0817537564	[illegible]
29	Ndara Fellistas	F	Community M	CommunityM	0814487534	Mushonga
30	Clementine Thimonene	F	P.O member	P.O		[illegible]
31	Malyeta Justine	F	P.O member	P.O	0817230471	
32	Thikonge Elizabeth	F	P.O member	P.O		

44	Ngindu	F	P.O member	P.O	—	—
45	Mashika Kathongo	F	Community mem.	Community	0812206837	Franskska
46	Kana Innocentia	F	P.O member	P.O member	0815720967	Kana
47	Dirumba Amsitoli	F	P-O member	P-O member		Dirumba
48	Nangaria Remfiled	F	Committm		0817814075	AR
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Environmental Impact Assessment for Water Development Infrastructure and Irrigation plot in Kavango East **Region**

Place: Mbapuka Village

Date: 08 / APRIL 2026

Time: 14:01

No	Name	Gender	Organization	Position	Cell:	Signature
1	LYNNETY SINALUMBU	F	DAPP-ADSWAC	NPC	0812778964	[illegible]
2	Josef Shapaka	M	DAPP. Nam	S.P.O	0813052541	[illegible]
3	Tango T Mundjulu	M	Red Dune Consulting CC	EAP	+2648125527 16	[illegible]
4	Josephine Uyindi	F	Red Dune Consulting CC	EAP	0810440 72	J. Uyindi
5	CHIPALANGA DAVID	M	DAPP-NAM	Farm Instructor	0812751341	[illegible]
6	Martin K Kushokosha	M	DAPP-Namibia	CCAC Admin	0813035832	[illegible]
7	Steven Muranger	M	DAPP-NAM	P.O	0815495815	[illegible]
8	THIGAVERE PETE	M	MBAPUKA	V.d.C	0813836033	[illegible]

9	Matheus. D	M	Community Member	Community Member	0814766328	Matheus
10	Muyambo Lucas	M	P.O Member	P. O	0812470456	MLM.
11	Mukosho Marthin	M	Member	Community M	0818094306	[illegible]
12	Kupembona Petrus	M	Community Member	Community M	0818173048	Petrus
13	Katembo Erwin	M	Community Member	Community	0817025243	[illegible]
14	Mudwa Nicodemus	M	P. O member	P. O	0812660211	[illegible]
15	Komare Nemucuki	F	Community Member	Community Member		KCN
16	Luise Musinga	F	Community M	Community Member	0812529488	L M
17	Muuvi Angelene	F	Community Member	Community Member	081	M
18	Annastacia Nyambe	F	Community Member	Community Member		A.
19	Ndube Rebecca	F	P.O Member	PO	0817559563	Ndube
20	Mbambo cecilia	F	P.O Member	P. O	081	CC Mb
21	Mariana kavinja	F	P. O Member	PO		Mariano

55.	Muhoko	Edward	M	Vice NVA	0517808274
56.	Mahana	Eusebius	M	Vice NVA ~~IKUTA~~	0814614042
57.	Muhoko	T	M		

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Kavango East **Region**

Place: Kangongo Village

Date: 09 / 04 / 2026

Time: 09:00

No	Name	Gender	Organization	Position	Cell:	Signature
1	Tango T Mundjulu	M	Red Dune Consulting CC	EAP	+2648126527716	
2	Josephine Uupindi	F	Red Dune Consulting CC	EAP	+2648104441072	
3	Steven Mwenga	M	DAPP-NAM	P.O	0815495215	
4	David Chipanga	M	DAPP-Nam	P.O	0812751341	
5	Josef Shapaka	M	DAPP-Nam	S.P.O	0813052591	
6	LYNNETY SINALUMBU	F	DAPP-MASWAC	NPC	0812778964	
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KAVANGO EAST **Region**

Place: DIYOGHA 1 and 2 Village

Date: 09 / APRIL 2026

Time: 14:00 —

No	Name	Gender	Organization	Position	Cell:	Signature
1	Cecilia Manjima	F	Diyogha 1&2	Farming Instructor	0812611214	
2	Namasiku Simasiku	F	Diyogha 1&2	WUA Agent	0813398940	
3	Mukwathi Mathew	M	Diyogha 1&2	PD member	0816621227	
4	Kuyawa Festus	M	Diyogha 1&2	vice chairch	0813130908	
5	George Linyandu	M	Diyogha 1&2	community member	0814170386	
6	Mbundu Gerald	M	Diyogha 1 & 2	Community member	0812692563	
7	Tuhethe Skainslas	M	Diyogha 1 & 2	Community M	0817365149	STANI
8	Muyevu Edith	F	Diyogha	Treasurer	0815785482	

22	LEONARD DINYANDO	M	DAPP-NAU	Farming Institute	0816654849	[illegible]
23	Katojima Claudia Mongjimo	F	PO Diyogha	PO member	0818582744	claudia
24	Dinyande Venantius	M	Diyogha	PO member	0813422351	[illegible] do
25	Karambuka Milhaud	F	Diyogha	PO Member	0815516704	Karambuka
26	Kashaku Y M	M	DIYOGHA	Ch. MAN.	0812527883	[illegible]
27	Shamuve Thomas	M	Diyogha	PO Member	N/A	Dunyoka
28	Olgui Mundjulu	M	RED-DUNE	Consultant	0814295995	[illegible]
29	Thitaka Prisca	F	Diyogha ~~PO member~~	PO member	0814351855	Prisca
30	Yapwi'Re Felistas	F	Diyogha	PO member	0816314249	Yapwi'Re
31	Maefoma L K	F	Diyogha	Village m	0818128353	N L K
32	Meghoma M.	F	Diyogha	PO member	0817464543	M. M.

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Environmental Impact Assessment for Water Development Infrastructure and Irrigation plot in Kavango East **Region**

Place: Mayara **Village**

Date: 09 / April **2026**

Time: 14h00

No	Name	Gender	Organization	Position	Cell:	Signature
1	Josephine Uypindi	F	Red Dune Consulting	EAP	0810441072	J. Uypindi
2	Tango T Mundjulu	M	Red Dune Consulting	EAP	0812552716	[illegible]
3	Martin K Kusholosha	M	DAPP Namibia	CCAC Admin	0813035832	[illegible]
4	Muronga Marcellius	M	Dapp Namibia	Farming Instructor	0813025029	[illegible]
5	MANGUNDU Benhard	M	~~DAPP~~	Pomember	0818555545	[illegible]
6	Kativa Veronika	N	DAPP Namibia	Pomember	0818196250	K. veronika
7	Ngundura Auleria		Dappnamibia	Pomember	0817000662	N Auleria
8	Ngundura Auleria		DAPPM			

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Environmental Impact Assessment for Water Development Infrastructure and Irrigation plot in

Kavango East **Region**

Place: Biro **Village**

Date: 09 / April **2026**

Time:

No	Name	Gender	Organization	Position	Cell:	Signature
1	Manyima Cecilia	f	Biro	farming instructor	0812611214	[illegible]
2	Namasiku Simasiku	F	Biro	WUA Agent	0813398940	[illegible]
3	Kamere Kathiku	f	Biro	PO member	0814688223	Kathiku
4	Makanga applonia	f	Biro	PO member	0817306286	Applonia
5	Kathumbi Angelika	f	Biro	Treasure	0812877616	K. A.N.
6	Nejukira Anna	f	Biro	PO member	0812450001	N.A
7	Kapinga Annastancia	f	Biro	P.O member	N/A	K.A
8	Mushongo Auterici	f	Biro	P.O member	0813487100	AM

22	Kangura alfred	F	Biro	Secretary	0813017907	Alfred
23	MBambo Digeve	M	Biro	village member	N/A	MbaMbo
24	Biramba Melchior	M	BIRO	SECRETARY	0812366743 0814695799	Mbamba
25	Muronga Anna	F	BIRO	VC Chair Person	0816854236	Anna
26	Denmark moyo	M	Biro	PO member	0817263433	[illegible]
27	Mirjam N. Kauhama	F	DAPP Namibia	Program officer	0818658258	[illegible]
28	LEONARD DINYANDO	M	DAPP NAM	Farming Instructor	0816654849	[illegible]
29	Ofui Mundjulu	M	RED-DUNE	Consultant	0814295993	[illegible]
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Environmental Impact Assessment for Water Development Infrastructure and Irrigation plot in
KAVANGO EAST **Region**

Place: LINUS SIMASHIPAPO **Village**

Date: 10 / APRIL **2026**
Time: 12:00 – 14:00

No	Name	Gender	Organization	Position	Cell:	Signature
1	Shindimba Hilarius H	Male	Shinyungwe	Chairperson	0817407400	Hilarius
2	Murura Scholastika K	female	Iiviiyu	Vice-chairperson	0816836973	Kaliku
3	Ntoma Filumina	female	Shinyungwe	Member	0814503805	Aba
4	Tumone Pauline	female	Shinyungwe	member	0817291696	[illegible]
5	Mahupe pontiana	female	Shinyungwe	member	0816805120	Kamene
6	Nyangana Fransina	Female	Mbwata	member		Kaneke
7	Shimbarunda frankilde	female	Shinyungwe	member	0814103369	Hfanda
8	Digere christophine kapinda	Female	Mbwata	Member	0815475503	Kapinda

22	Kesmas Shimanu	M	MEYSAC Linus S.Y.O	Youth Officer	0812388197	
23	Nangula Amutenya	F	Red Dunes	Consultant.	0812876768	NA
24	Mirjam N. Kauhonwa	f	DAPP-Namibia	Program Officer	+264818858258	
25	Olavi Mundjulu	M	RED-DUNE	Consultant	0814295993	
26	LEONARD Dingando	M	DAPP-NAM	Farming Instructor	0816654847	
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Environmental Impact Assessment for Water Development Infrastructure and Irrigation plot in Kavango East **Region**

Place: Bagani **Village**

Date: 10 / April 2026

Time: 09:00

No	Name	Gender	Organization	Position	Cell:	Signature
1	Josephine Uypindi	F	Red Dune Consulting	EAP	+264810441072	J. Uypindi
2	Tango Hundjulu	M	Red Dune Consulting	EAP	+264812552716	
3	Josef Shapaka	M	DAPP-nam	S.P.O	0813052541	
4	Steven Muronga	M	DAPP-NAM	P.O	0815495815	
5	Eutrasia Hamukeren	F	DAPP. NAM	CCA Leader	0812716614	
6	Mamyinci cecilia	F	DAPP. Nam	farming instructor	0812611214	
7	Namasiku Simasiku	F	DAPP. Nam	WUA Agent	0813398940	
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22	Kandungu	M	Bagani	Community	0818472992	Kandungu
23	Thitoyaya Elisabeth	F	JAPP Bagani	Community	0818739994	E. Thitoyaya
24	Kufuna fransina	F	bagani	community	0816239991	Kufuna
25	Kadhimo Rosvitha	F	Bagani	Community	081	KR
26	Kangura Moses	M	Bagani	Community	0818159973	Kangura
27	Muyenga Andreas	M	Bagani	Community	0813619404	[illegible]
28	Dinyaund Alex	M	VDC BAGANI	Vice-Secretary ~~Community~~	0813740209	Alex
29	Mayengere Eveline	F	JAPP Bagani	Teacher	0812942424	[illegible]
30	Ndala precious	M	Bagani	Community	0814879802	Ndala
31	Kangondo J.	M.	Bagani	Community.	0812642108	[illegible]
32	Mukoy Angeline. N	F	Bagani	Community	081	mukoya

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Environmental Impact Assessment for Water Development Infrastructure and Irrigation plot in

Kavango East **Region**

Place: Thikanduko **Village**

Date: 10 / April 2026

Time: 14:00

No	Name	Gender	Organization	Position	Cell:	Signature
1	Josephine Uyindi	F	Red Dune consulting cc	EAP	0810444072	J. Uyindi
2	Tango T Mundjulu	M	Red Dune Consulting cc	EAP	0812552716	
3	Josef Shapaka	M	DAPP-Nam	S. P. O	0813052541	
4	David CHIPALANGA	M	DAPP-ABSWAE	Farm Instructor	0812751341	
5	Martin K Kushokosha	M	DAPP Namibia	CCAC Admin	0813035832	
6	Hakangaphillips	M	Thikanduko ~~DAPP Namibia~~	P O	0812752767	
7	Bishe Kosmas	M	Thikanduko	P O	0816920783	
8	KATEMB GERASIUS	M	Thikanduko	P. O	0817572	

22	Mwanakwa Romeo	M	Thikanduko	P.O	0812989724	[illegible]
23	Mwambu Lukas	M	Thikanduko	CHIRMAN	0814035056	M.L.M.
24	MATIJAYI MASAKU	M	THIKANDUKO	VDC CHAIRPERON	0812680005	[illegible]
25	Steven Muronga	M	DAPP-ADSNAC	P.O	0815995865	[illegible]
26	Euphrosia Hambera	F	DAPP-NAMU	CCAC leader	0817716614	[illegible]
27	Habakkuk Moyo	M	Thikanduko	chairperson	0812143496	[illegible]
28	Sabina Tuwadimene	f	Thikanduko	PO		Sabina
29	Thogho Christine	F	Thikanduko	PO		Thogho
30	Tuwadimine Martha	F	Thikanduko	PO		NT
31	Kauhura Victoria	f	Thikanduko	PO	0813615799	[illegible]
32	Haushiku Veronica	f	Thikanduko	PO	0813779022	[illegible]

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KAYANGO EAST **Region**

Place: SHAMVHURA **Village**

Date: 10 / APRIL 2026

Time:

No	Name	Gender	Organization	Position	Cell:	Signature
1	Muraulí Ntjamba	M	Sha. Shamvhura	Charperson WCPP	0818507632	
2	Ndonger Frans	M	Shamvhura	head man	0816934602	
3	Kosmas Shimanu S	M	MEYSAC	YOUTH OFFICER	0812388197	
4	Shindumba B Shashipapo	M	Shamvhura	P.O	0814204065	
5	Muyeghu Thomas	M	Shamvhura	VDC Chairperson	0818383671	
6	Mhampapó Joseph	M	Shamvhura	Secretary-PO	0817613366	
7	Ndumba Sebastian	M	Shamvhura	P.O		
8	Shikusno frans	M	Shamvhura	member of the community	0813159058	

22	Shihungu Alexandr	m	Shamvhura	member of the community member	0813159 0292	[illegible]
23	Kakuru Mushinga	f	Shamhvura	P.O. member		KM
24	Mucarambinda Annastasia	f	Shamhuhura	P.O. member		Annastasia
25	Nyangana Pegenaldo	f	Shamhvura	Vice Charperso P.O. member	0818558883	NK
26	Shikukutu Penide	f	Shamhvura	member of the community	0817727800	Kahuru
27	Ndonga. C. Mavandje	f	Shamhvura	P.O. TRASSA	0816934605	Mavandje
28	KARUKANGO. M.	f	Shamhvura	P.O member		Karukango
29	Kapara. A	f	Shamhvura	P.O. member	0814354630	Maliro
30	Ngoma C	f	Shamuhura	P.O. member	0817432328	Nic
31	Mushonga A	f	Shamuhura	Secretary	0819374657	Hhga.
32	Shukwaga A	f	Shinyungwe	P.O member	081	Kansdambo

44	LEONARD DINVANDO	M	DAPP - NAM	Farming Instructor	0816654849	
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15.2 Appendix B. Consent Letters FPIC

Date 10 . 04 . 2026

To Whom It May Concern:

Dear Sir / Madam

Subject: Free, Prior and Informed Consent for the Proposed Water Development Infrastructure and Irrigation Plots at SHAMHVURA Village, Kavango West Region

Further to the public consultation meeting held at our village on 10 . 04 . 2026 , I, SUSANA SHAMBI KATIKU the village Headman, on behalf of my community, fully support the above-mentioned project as it is beneficial to us.

The project does not interfere with our traditional norms and culture. We welcome the support provided by Development Aid from People to People (DAPP-Namibia) and all development partners involved.

This letter serves as Free, Prior and Informed Consent for the project, and we urge prompt implementation.

Yours Sincerely

SUSANA SHAMBI KATIKU

Name of Headman

GCIRIKU Traditional Authority

0818554608

Cellphone Number

Signature

HEADWOMAN
KATIKUS SHAMBI

Stamp

10 APR 2026

BAHARUWANDA / KASHIRA
REPUBLIC OF NAMIBIA

Date 10 · 04 · 26

To Whom It May Concern:

Dear Sir / Madam

Subject: Free, Prior and Informed Consent for the Proposed Water Development Infrastructure and Irrigation Plots at BAGANI Village, Kavango East Region

Further to the public consultation meeting held at our village on 10 · 04 · 26, I, Haimbili MAX the village Headman, on behalf of my community, fully support the above-mentioned project as it is beneficial to us.

The project does not interfere with our traditional norms and culture. We welcome the support provided by Development Aid from People to People (DAPP-Namibia) and all development partners involved.

This letter serves as Free, Prior and Informed Consent for the project, and we urge prompt implementation.

Yours Sincerely

Haimbili MAX

Name of Headman

Hambukushu Traditional Authority

Signature

0818774442

Cellphone Number

Stamp

HAMBUKUSHU
TRADITIONAL AUTHORITY
The Tribal Secretary
10 APR 2026
P.O. Box 2230, Rundu
Tel: (066) 258 441
Kavango East Region
Republic of Namibia

Date 09/04/2026

To Whom It May Concern:

Dear Sir / Madam

Subject: Free, Prior and Informed Consent for the Proposed Water Development Infrastructure and Irrigation Plots at Diyogha I Village, Kavango East Region

Further to the public consultation meeting held at our village on 09/04/2026, I, Konrad Mbote Ruhowa the village Headman, on behalf of my community, fully support the above-mentioned project as it is beneficial to us.

The project does not interfere with our traditional norms and culture. We welcome the support provided by Development Aid from People to People (DAPP-Namibia) and all development partners involved.

This letter serves as Free, Prior and Informed Consent for the project, and we urge prompt implementation.

Yours Sincerely

Konrad Mbote Ruhowa

Name of Headman

Hambukushu Traditional Authority

K. M. R.

Signature

0818551574

Cellphone Number

Stamp

HAMBUKUSHU TRADITIONAL AUTHORITY
The Tribal Secretary
10 APR 2026
P.O. Box 2230, Rundu
Tel: (066) 258 441
Kavango East Region
Republic of Namibia

Date 09/04/2026

To Whom It May Concern:

Dear Sir / Madam

Subject: Free, Prior and Informed Consent for the Proposed Water Development Infrastructure and Irrigation Plots at Ramogha 2 Village, Kavango East Region

Further to the public consultation meeting held at our village on 09/04/2026.

I, Konrad Mbate Ruhowa the village Headman, on behalf of my community, fully support the above-mentioned project as it is beneficial to us.

The project does not interfere with our traditional norms and culture. We welcome the support provided by Development Aid from People to People (DAPP-Namibia) and all development partners involved.

This letter serves as Free, Prior and Informed Consent for the project, and we urge prompt implementation.

Yours Sincerely

Konrad Mbate Ruhowa

Name of Headman

Hambukushu Traditional Authority

K.M.R

Signature

08185157 44

Cellphone Number

Stamp

HAMBUKUSHU
TRADITIONAL AUTHORITY
The Tribal Secretary
10 APR 2026
P.O. Box 2230, Rundu
Tel: (066) 258 441
Kavango East Region
Republic of Namibia

Date 09·04·26

To Whom It May Concern:

Dear Sir / Madam

Subject: Free, Prior and Informed Consent for the Proposed Water Development Infrastructure and Irrigation Plots at MAHARA Village, Kavango East Region

Further to the public consultation meeting held at our village on 09 APRIL 2026, I, KUDUMO PETER SHASHIPAPO the village Headman, on behalf of my community, fully support the above-mentioned project as it is beneficial to us.

The project does not interfere with our traditional norms and culture. We welcome the support provided by Development Aid from People to People (DAPP-Namibia) and all development partners involved.

This letter serves as Free, Prior and Informed Consent for the project, and we urge prompt implementation.

Yours Sincerely

Kudumo Peter

Name of Headman

Hambukushu Traditional Authority

K.P.

Signature

0814277120

Cellphone Number

Stamp

HAMBUKUSHU
TRADITIONAL AUTHORITY
The Tribal Secretary
10 APR 2026
P.O. Box 2230, Rundu
Tel: (066) 256 441
Kavango East Region
Republic of Namibia

Date 09. 04. 2026

To Whom It May Concern:

Dear Sir / Madam

Subject: Free, Prior and Informed Consent for the Proposed Water Development Infrastructure and Irrigation Plots at BIRO Village, Kavango West Region

Further to the public consultation meeting held at our village on 09. 04. 2026, I, HOSEA KADHIMO the village Headman, on behalf of my community, fully support the above-mentioned project as it is beneficial to us.

The project does not interfere with our traditional norms and culture. We welcome the support provided by Development Aid from People to People (DAPP-Namibia) and all development partners involved.

This letter serves as Free, Prior and Informed Consent for the project, and we urge prompt implementation.

Yours Sincerely

HOSEA KADHIMO

Name of Headman

HAMBUKUSHU Traditional Authority

Aurelia

Signature

0813487120

Cellphone Number

Stamp

HAMBUKUSHU
TRADITIONAL AUTHORITY
The Tribal Secretary
10 APR 2026
P.O. Box 2230, Rundu
Tel: (066) 258 441
Kavango East Region
Republic of Namibia

Date 09/04/2026

To Whom It May Concern:

Dear Sir / Madam

Subject: Free, Prior and Informed Consent for the Proposed Water Development Infrastructure and Irrigation Plots at Rangongo Village, Kavango East Region

Further to the public consultation meeting held at our village on 09/04/2026, I, Disho Erwin the village Headman, on behalf of my community, fully support the above-mentioned project as it is beneficial to us.

The project does not interfere with our traditional norms and culture. We welcome the support provided by Development Aid from People to People (DAPP-Namibia) and all development partners involved.

This letter serves as Free, Prior and Informed Consent for the project, and we urge prompt implementation.

Yours Sincerely

Disho Erwin

Name of Headman

Hambukushu T/A Traditional Authority

Signature

081321 8991

Cellphone Number

Stamp

HAMBUKUSHU TRADITIONAL AUTHORITY
The Tribal Secretary
10 APR 2026
P.O. Box 2230, Rundu
Tel: (066) 258 441
Kavango East Region
Republic of Namibia

Date 08 April 2026

To Whom It May Concern:

Dear Sir / Madam

Subject: Free, Prior and Informed Consent for the Proposed Water Development Infrastructure and Irrigation Plots at Tjova Village, Kavango East Region

Further to the public consultation meeting held at our village on 08 April 2026, I, Petrus Kambathi Dirukungo the village Headman, on behalf of my community, fully support the above-mentioned project as it is beneficial to us.

The project does not interfere with our traditional norms and culture. We welcome the support provided by Development Aid from People to People (DAPP-Namibia) and all development partners involved.

This letter serves as Free, Prior and Informed Consent for the project, and we urge prompt implementation.

Yours Sincerely

Dirukungo P.K

Name of Headman

Hambukushu Traditional Authority

Signature

0817585066

Cellphone Number

Stamp

HAMBUKUSHU
TRADITIONAL AUTHORITY
The Tribal Secretary
10 APR 2026
P.O. Box 2230, Rundu
Tel: (066) 258 441
Kavango East Region
Republic of Namibia

Date 08. 04. 2026

To Whom It May Concern:

Dear Sir / Madam

Subject: Free, Prior and Informed Consent for the Proposed Water Development Infrastructure and Irrigation Plots at Mbapuica **Village, Kavango East Region**

Further to the public consultation meeting held at our village on 08-04-2026.

I, Kangere Elisabeth N the village Headman, on behalf of my community, fully support the above-mentioned project as it is beneficial to us.

The project does not interfere with our traditional norms and culture. We welcome the support provided by Development Aid from People to People (DAPP-Namibia) and all development partners involved.

This letter serves as Free, Prior and Informed Consent for the project, and we urge prompt implementation.

Yours Sincerely

Kangere Elisabeth N

Name of Headman

Hambukushu Traditional Authority

Elisabeth Nimuuri

Signature

0812660211

Cellphone Number

Stamp

HAMBUKUSHU
TRADITIONAL AUTHORITY
The Tribal Secretary
10 APR 2026
P.O. Box 2230, Rundu
Tel: (066) 258 441
Kavango East Region
Republic of Namibia

Date 07.04.2026

To Whom It May Concern:

Dear Sir / Madam

Subject: Free, Prior and Informed Consent for the Proposed Water Development Infrastructure and Irrigation Plots at MUKUVI Village, Kavango East Region

Further to the public consultation meeting held at our village on 07.04.2026, I, PETRUS MBAMBO the village Headman, on behalf of my community, fully support the above-mentioned project as it is beneficial to us.

The project does not interfere with our traditional norms and culture. We welcome the support provided by Development Aid from People to People (DAPP-Namibia) and all development partners involved.

This letter serves as Free, Prior and Informed Consent for the project, and we urge prompt implementation.

Yours Sincerely

PETRUS MBAMBO

Name of Headman

GCIRIKU Traditional Authority

MBAMBO

Signature

0817232622

Cellphone Number

Stamp

Date 07 . 04. 2026

To Whom It May Concern:

Dear Sir / Madam

Subject: Free, Prior and Informed Consent for the Proposed Water Development Infrastructure and Irrigation Plots at KATENTURE Village, Kavango East Region

Further to the public consultation meeting held at our village on 07 . 04 . 2026 , I, EDMUND MASHIKA MUKOSHO the village Headman, on behalf of my community, fully support the above-mentioned project as it is beneficial to us.

The project does not interfere with our traditional norms and culture. We welcome the support provided by Development Aid from People to People (DAPP-Namibia) and all development partners involved.

This letter serves as Free, Prior and Informed Consent for the project, and we urge prompt implementation.

Yours Sincerely

EDMUND MASHIKA MUKOSHO

Name of Headman

Gciriku Traditional Authority

Signature

0817017506

Cellphone Number

Stamp

TIMBI: KAMBERUKA R.
MUFENDA
MUKUNDA: SHAMAI-GORWA
RUDI: GCIRIKU
NTJAKOPOS : 1994 KUNDU
REPUBLIC OF NAMIBIA

Date 02/04/2026

To Whom It May Concern:

Dear Sir / Madam

Subject: Free, Prior and Informed Consent for the Proposed Water Development Infrastructure and Irrigation Plots at KASITIRA Village, Kavango East Region

Further to the public consultation meeting held at our village on 02/04/2026, I, SUSANA SHAMBI KATIKU the village Headman, on behalf of my community, fully support the above-mentioned project as it is beneficial to us.

The project does not interfere with our traditional norms and culture. We welcome the support provided by Development Aid from People to People (DAPP-Namibia) and all development partners involved.

This letter serves as Free, Prior and Informed Consent for the project, and we urge prompt implementation.

Yours Sincerely

Susana Shambi Katiku

Name of Headman

Gciriku Traditional Authority

Signature

0818554608

Cellphone Number

Stamp

HEADWOMAN
KATIKUS SHAMBI

02 APR 2026

BAHARUWANDA / KASHIRA
REPUBLIC OF NAMIBIA

Date 02/04/2026

To Whom It May Concern:

Dear Sir / Madam

Subject: Free, Prior and Informed Consent for the Proposed Water Development Infrastructure and Irrigation Plots at MAKENA Village, Kavango East Region

Further to the public consultation meeting held at our village on 02/04/2026, I, SUSANA SHAMBI KATIKU the village Headman, on behalf of my community, fully support the above-mentioned project as it is beneficial to us.

The project does not interfere with our traditional norms and culture. We welcome the support provided by Development Aid from People to People (DAPP-Namibia) and all development partners involved.

This letter serves as Free, Prior and Informed Consent for the project, and we urge prompt implementation.

Yours Sincerely

Susana Shambi Katiku

Name of Headman

Ckiriku Traditional Authority

Signature

0818554608

Cellphone Number

Stamp

HEADKOMAN
KATIKUD SHAMBI

02 APR 2026

BAHARUWANDA / KASHIRA
REPUBLIC OF NAMIBIA

Date 1 April 2026

To Whom It May Concern:

Dear Sir / Madam

Subject: Free, Prior and Informed Consent for the Proposed Water Development Infrastructure and Irrigation Plots at Katere Village, Kavango East Region

Further to the public consultation meeting held at our village on 1st April 2026, I, Nguuru Renathe Namutenya the village ~~Headman~~ Headwoman, on behalf of my community, fully support the above-mentioned project as it is beneficial to us.

The project does not interfere with our traditional norms and culture. We welcome the support provided by Development Aid from People to People (DAPP-Namibia) and all development partners involved.

This letter serves as Free, Prior and Informed Consent for the project, and we urge prompt implementation.

Yours Sincerely

Nguuru Renathe Namutenya

Name of Headman

Gciriku Traditional Authority

0813483959

Cellphone Number

Renathe

Signature

HEAD WOMAN
NGUURU RENATHE N

01 APR 2026

Stamp

HOHA VILLAGE
KAVANGO EAST

Date 01 April 2026

To Whom It May Concern:

Dear Sir / Madam

Subject: Free, Prior and Informed Consent for the Proposed Water Development Infrastructure and Irrigation Plots at HOHA Village, Kavango East Region

Further to the public consultation meeting held at our village on 01/04/2026.

I, NGUURU Renathe Nomutenya the village ~~Headman,~~ Head Woman on behalf of my community, fully support the above-mentioned project as it is beneficial to us.

The project does not interfere with our traditional norms and culture. We welcome the support provided by Development Aid from People to People (DAPP-Namibia) and all development partners involved.

This letter serves as Free, Prior and Informed Consent for the project, and we urge prompt implementation.

Yours Sincerely

NGUURU Renathe Nomutenya
Name of Headman

Gciriku Traditional Authority

0813483959
Cellphone Number

Renath
Signature

HEAD WOMAN
NGUURU RENATHE N
01 APR 2026
HOHA VILLAGE
KAVANGO EAST

Stamp

Date 31 March 2026

To Whom It May Concern:

Dear Sir / Madam

Subject: Free, Prior and Informed Consent for the Proposed Water Development Infrastructure and Irrigation Plots at Shikenge 1 & 2 Village, Kavango East Region

Further to the public consultation meeting held at our village on 31 March 2026 I, Kleofas Shinkanda Mbambo the village Headman, on behalf of my community, fully support the above-mentioned project as it is beneficial to us.

The project does not interfere with our traditional norms and culture. We welcome the support provided by Development Aid from People to People (DAPP-Namibia) and all development partners involved.

This letter serves as Free, Prior and Informed Consent for the project, and we urge prompt implementation.

Yours Sincerely

Kleofas shinkanda Mbambo

Name of Headman

Gciriku Traditional Authority

Signature

0817017573

Cellphone Number

HEADMAN OF
NDONGA - LINENA VILLAGE
Stamp O.K. SHINKANDA
2026-03-31
PRIVATE BAG 2119
Rundu, Namibia
CELL: +264 81 701 7573

Date 31/03/2026

To Whom It May Concern:

Dear Sir / Madam

Subject: Free, Prior and Informed Consent for the Proposed Water Development Infrastructure and Irrigation Plots at Shighuru Village, Kavango East Region

Further to the public consultation meeting held at our village on 31 March 2026.

I, Muronga Johannes the village Headman, on behalf of my community, fully support the above-mentioned project as it is beneficial to us.

The project does not interfere with our traditional norms and culture. We welcome the support provided by Development Aid from People to People (DAPP-Namibia) and all development partners involved.

This letter serves as Free, Prior and Informed Consent for the project, and we urge prompt implementation.

Yours Sincerely

Muronga Johannes
Name of Headman

Signature

Sikuriku Traditional Authority

0812213584
Cellphone Number

Stamp

SIKURIKU TRADITIONAL AUTHORITY
HEADMAN: KORNELIUS N. SHIKURO
MABUSHE VILLAGE
2026 -03- 31
KAVANGO EAST REGION
REPUBLIC OF NAMIBIA