villages in partnership

Summary of Visits to potential Irrigation sites and way forward

Introduction

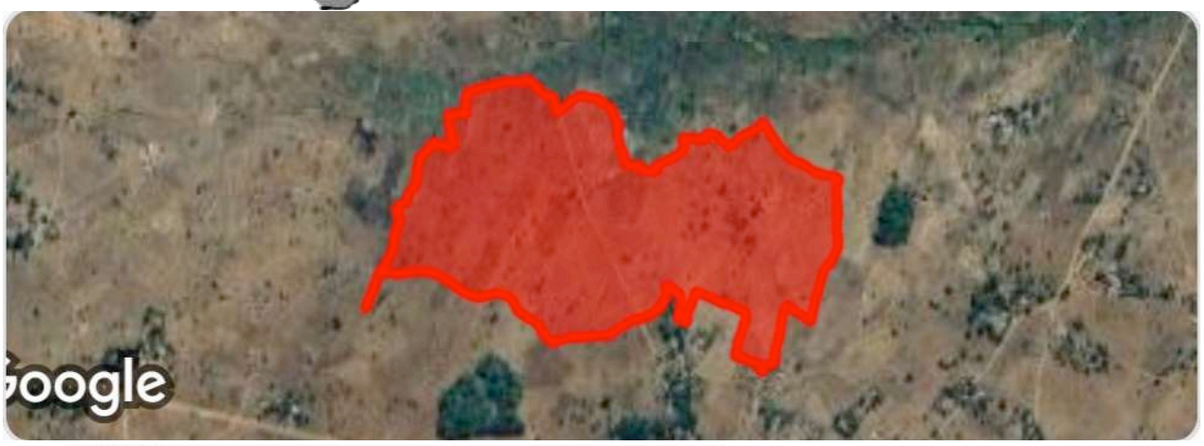
VIP Project has been conducting a feasibility study by visiting different villages in searching for potential Irrigation Sites where the Irrigation Scheme project can be implemented in order to alleviate food Insecurity and poor household income within VIP's Impact area. In this regard, three different places were visited and assessed for suitability.

The following table provides a summary for each site visited, completing the feasibility study.

Feature	**T/A Nkagula, GVH Disi (VIP Impact area)**	**T/A Nkagula, GVH Njala (VIP Impact area)**	**T/A Kumtumanje, GVH Kumbwani (Outside VIP Impact area)**
Estimated land size	-Within the potential range. 16.48ha	Within the potential range i.e. It was 7ha	Within the potential range i.e. It was 8ha
Suitability of Soils	Sandy loam	Sandy to partially Sandy loam	Sandy loam
Willingness of the people to do irrigation farming	Land owners were only willing to do winter cropping. Want to learn more about full time irrigation farming. Assessment of full-time irrigation will require more visits.	Land owners showed interest in full time irrigation farming.	Land owners showed willingness to do winter cropping, as they went to the govt office to ask for the intervention. Assessment of full-time irrigation will require a second visit.
Security of the system	Strong, because some houses were close to the irrigation site.	Weak, because houses were sparsely located.	Strong; houses are close to the irrigation site.
Topography(evenness & slop of land)	Even land	Even land	Even land on the upper and middle part
Coordinates	-15.350747, 35.438597	-15.371494, 35.558439	-15.301676, 35.433170
Decision by VIP project	Selected for 2026 – 2027 Implementation	Not yet selected	Not yet selected

Potential Irrigation land measurement

The potential irrigable land area was measured at the irrigation site which was found to be **16Ha**. The figure below shows the map of the potential Irrigable area.



Map of Disi potential Irrigation site

Wayforward

VIP is ready to take all the necessary steps for implementation of the Irrigation Scheme in coordination with approval and support from Government Irrigation Department.

The plan is to set a steering committee to help implement the project as soon as funding is in place. The project needs to conduct a water assessment survey (geo-physical survey) to determine whether the site has enough underground water for irrigation purposes. Boreholes will be drilled to achieve an Irrigation Scheme that can initially cover at least 6 Hectares of land.

The project is set to drill three boreholes in the first place i.e. deep holes. Should the boreholes fail to provide enough water for 6hectares, additional boreholes may be drilled within the site to arrive at the initial target of 6ha.

For the remaining hectarage, VIP Project will continue promoting the irrigation project to potential donors and will continue engaging Zomba Government Irrigation Section in order to cover the whole proposed area of 16 Ha in due course.

Proposed design specifications

VIP project will engage the District Irrigation Office to design the Disi Solar Irrigation system.

Contractors will therefore be required to adhere to the system design and to do necessary tasks in order to arrive at the following proposed works.

	ITEM	SPECIFICATION
01	Type of Irrigation system	Subsurface solar powered irrigation system
02	Borehole	Boreholes that will each yield of at least 2L per second. The contractor may drill deeper (around 70-100 metres) than indicated on the hydrogeological survey where necessary
03	Submersible pump	Tier 1 pumps to run off grid based on the borehole yields
04	Dry runner sensor	Sensor-level dry run for solar pumps
05	Armoured ground cable	Aluminum cable 6.0mm diameter
06	Solar panels	Preferably from tier 1 list
07	Solar panel rack	Angle iron solar rack to hold the panels high above the ground

08	Solar lamps	LED Lamps with a minimum of 300-500 watts for each lamp, placed in 4 to 6 positions within the irrigation scheme
09	Main pipe	HDPE class 16 to bring water to tanks. This will be installed in the field 50 cm deep below ground level
10	Outlet pipe for Submersible Pump	HDPE class 16
11	Gate valves	Galvanized or PVC ball valves to be installed in strategic point, i.e. where they can provide shutoff capability with minimal pressure loss when completely closed.
12	Float switches	Automatic water-level switch that will turn off the pumps when water is full in the tanks
13	Hydrants	To be made of 25mm or 3/4inch diameter-GI steel pipes, to which hosepipes will be connected during irrigation
14	Fittings and accessories	All other essential/standard accessories, ranging from sockets, reducers, elbows, HDPE saddle clips, end caps, joint bends, HDPE tees, MTA/FTA etc.
15	Lightning control system/surge arrester	Protection of the system from lightning strikes or unwanted power surges




Chief Irrigation Engineer(L) and Livelihoods coordinator(R) delivering speech during meeting with Disi Irrigation farmers and their Leadership (VH & GVH Disi)




Visiting the potential Irrigation site