Rotary

GLOBAL GRANTS COMMUNITY ASSESSMENT RESULTS

Use this form to report community assessment findings to The Rotary Foundation when you apply for a global grant.

Assessing the strengths, weaknesses, needs, and assets of the community you plan to help is an essential first step in designing an effective and sustainable global grant project. See Community Assessment Tools for full instructions and helpful tips.

This form will help you report the results of your community assessment, and it's required when you apply for any humanitarian or vocational training team grant. Complete a separate form for each beneficiary community (e.g., school, health care system, or village), using information that is both current and specific to each community. Remember, you can't use global grant funds to cover the cost of doing an assessment, but you can use district grant funds.

COMMUNITY OVERVIEW

Describe the characteristics (such as geographic information, main sources of income, population size, and access to education and health services) of the specific community where this project will take place.

Matabeleland is a region located in southwestern Zimbabwe. It is divided into Matabeleland North and Matabeleland South. The region is characterized by its diverse topography, including plateaus, valleys, and low-lying areas. It lies between the Zambezi River to the north and the Limpopo River to the south (Mlambo, A. S. (2014). A History of Zimbabwe. Cambridge University Press). Matabeleland North, this area is characterized by its rugged terrain and includes parts of the Hwange National Park, which is known for its wildlife and significant mineral resources (Beinart, W., & McGregor, J. (2003). Social History and the Changing Environment in Zimbabwe. Journal of Southern African Studies). Matabeleland South, this region features a more arid climate and is home to the semi-desert areas such as the Kalahari Sandveld. It includes the significant urban center of Bulawayo, which is Zimbabwe's second-largest city (Machingura, F. (2016). Urban Dynamics and Development in Zimbabwe. African Journal of Geography). Education in Matabeleland follows the broader framework of Zimbabwe's educational system, which is characterized by both government and private institutions. Primary and Secondary Education in the region has a network of primary and secondary schools, with educational institutions managed by the Ministry of Primary and Secondary Education. However, there are disparities in access and quality between urban and rural areas. For instance, Bulawayo has relatively better educational facilities compared to more remote areas (Dube, N. (2018). Education Inequality in Zimbabwe: Regional Disparities. International Journal of Educational Development). Tertiary Education in Matabeleland is home to several higher education institutions, including the National University of Science and Technology (NUST) and the Zimbabwe Open University.

These institutions offer a range of undergraduate and postgraduate programs, contributing to the region's educational advancement (Nyoni, T. (2019). Higher Education and Regional Development in Zimbabwe. Education and Development Journal). Matabeleland's healthcare system includes a mix of public and private facilities, with a focus on both primary and secondary healthcare services. Matebeleland experiences a subtropical climate with significant variation rainfall patterns across the region. Intuba is proposing the drilling and capacitation of five (5) water well and one upgrade in this province but in different districts ranging from, Lupane, Gwanda South, Nkayi, Bubi and Silobela. These districts are characterized by a predominantly rural setting with dispersed communities and a distinct socio-economic profile. The districts are predominantly inhabited by the Ndebele people, who have a rich cultural heritage. The districts also reflect Zimbabwe's cultural diversity with various languages spoken and cultural practices observed. Matabeleland North is an area generally receiving more rainfall compared to Matabeleland South. The average annual rainfall ranges from 600 to 800 millimeters. The rainfall is typically seasonal, with the wet season occurring from November to March (Lindley, D. (2017). Climate Variability and Agricultural Production in Zimbabwe. Climate Change Research). Matabeleland South on the other hand is a region more arid, receiving between 400 to 600 millimeters of rainfall annually. The rainfall is less predictable and often suffers from drought conditions, impacting agriculture and water availability (Chikodzi, D. (2015). Rainfall Patterns and Water Resource Management in Semi-Arid Zimbabwe. Journal of Arid Environments). Intuba proposes to invest in the province and the respective districts in this water and sanitation program with a major element of food security mainly basing on the inconsistent rainfall patterns in the area and changes in climatic conditions harnessing renewable sources of energy like solar. Silobela on the other hand is situated in the Midlands Province of Zimbabwe. Silobela is a rural area with varying access to essential services, reflecting typical challenges faced in more remote regions of Zimbabwe. Efforts to improve infrastructure and services are ongoing, but challenges in healthcare and education access remain notable. The area is characterized by a mix of highlands and plains, with a generally moderate climate suitable for agriculture. Access to healthcare facilities in Silobela can be limited compared to urban areas. The region has several primary healthcare centers, but more advanced medical services are typically found in larger towns or cities. The availability of health services may vary, with some areas having basic clinics and health posts, while more comprehensive care might require traveling to nearby towns such as Kwekwe or Gweru. The population of Silobela is relatively small compared to major cities. Exact numbers can vary, but the region is considered to have a moderate population density. The population primarily consists of rural communities engaged in agriculture and other local economic activities. Silobela has a number of primary and secondary schools serving the local population. However, access to higher education facilities is more limited, with most residents needing to travel to larger urban centers for tertiary education. Schools are generally present in most communities, but the quality and resources available may vary. Educational infrastructure may not be as developed as in more urban areas. This is the second area where Intuba proposed project will be housed.

COLLECTING COMMUNITY ASSESSMENT DATA

When you conducted the assessment, who in the community did you speak to? At least two different community representatives and beneficiaries who are not involved in Rotary (such as teachers, doctors, or community leaders) should be included in the discussions.

The initial steps taken by the Intuba Team was stakeholder mapping, which mainly included identification of key stakeholders including garden members, community leaders, local authorities (like the community authority and local council), and any relevant community organizations that may assist in implementation of the project. This process was followed by clearly defining the objectives of the consultation, such as understanding current challenges, gathering suggestions for improvement, and gauging community support.

1.Focus group discussions - Focus group discussions with garden members and community leaders were done to delve deeper into current issues and challenges the community and garden members were facing regarding,

a) Water access and quantity needs - the reliability of the existing hand pump, the water quality of the water, and accessibility, is the quantity enough to sustain household activity.

b) Impact on Food Security and perceived benefits of the solarization of the borehole – Exploring how current water access affects the community garden and household food security and how the solarization project will help improve the current situation.

c) Maintenance – Discussed challenges related to maintaining the hand pump and any associated costs and the bearer of the costs and its impact on household income and household food security in general.

2. Interviews – Face to face interviews were conducted with key stakeholders, including local council members and community authority (Headman) representatives and Ward Councilors, to understand their perspectives and potential support for the project. Further consultations were done to understand the Council selection criteria in project distribution in the different Wards under the Council authorization.

3. Workshops: A workshop was hosted to collaboratively brainstorm ideas for improving the garden and ensuring sustainable water access and climate smart agriculture practices are done on the garden.

When in the last year did the discussions occur?

The last discussions and requests from the garden members for the upgrade from a hand pump to a solar powered system of their borehole and drilling of water wells was May 2023.

What methods did you use to collect information from community members (such as community meetings, interviews, or focus groups)?

Community Surveys - The surveys included questions about current water access (quality, reliability, quantity), perceptions about the proposed solarized borehole project, and preferences regarding its design and implementation.

Focus Group Discussions – Discussion covered current challenges with the existing hand pump, potential benefits of a solarized borehole, concerns about implementation, and suggestions for ensuring the project's success and sustainability.

Key Informant Interviews - Interviews focused on understanding community needs, assessing feasibility and support for the project, exploring logistical considerations, and identifying potential barriers or risks.

TARGET POPULATION

Who will benefit directly from the project? List the groups that will benefit (such as schools, hospitals, vocational training centers, cooperatives, or villages).

Direct Target Group – Community, in particular, the garden members with a composition of,

25 Women, youth, children distributed as follows:

- Women (15)- (Aged above 35)
- Men (5)- (Aged above 35)
- Youth (5)- 80% female; 20% male- (Aged 15 to 35)
- 300 Children (<1-14)- 50% female; 50% male (direct beneficiaries from the selected 25 households)

Describe the process of how the beneficiaries were identified.

The Intuba model is designed is such a manner that an individual in the garden is a fractional representation of a household. Only one member from a household is allowed to join the garden. The other household members become the direct beneficiaries to the member. The Intuba model and selection criteria is not biased regarding gender, age or race, any individual is open to join the garden. Since the garden is an already existing entity of Intuba already in operation, the selection criteria is based on the current need to upgrade the pumping system.

COMMUNITY STRENGTHS, NEEDS, PRIORITIES, AND PROJECT DESIGN

Describe what members of the community said matters to them during the assessment.

The community members articulated a comprehensive range of needs and aspirations during the assessment of implementing a solarized borehole and drilling of water wells for the support of the garden and community and livestock consumption. Their input underscores the importance of reliable water access, improved agricultural productivity, community empowerment, environmental sustainability, and overall socio-economic development. Addressing these concerns through collaborative planning and transparent communication is essential to ensuring the successful implementation and long-term benefits of the project. The project design involves the upgrade of an already existing water well in Lupane (hand pump) to a solarized pumping system and drilling and capacitation of four new water well in the districts, Bubi, Nkayi, Kezi and Gwanda South. The drilling process will be accompanied by a pre- survey process on each garden to determine drilling site and depth. Upon drilling each garden will receive a water capacity test to test the yield of the water and its ability to sustain human consumption. Each of these gardens will then be fully capacitated by a solarized pumping system to allow easy access to the community using renewable energy of the sun. The community had raised the following needs that resulted in the above

solution and project design being provided:

1. Reliability and Accessibility of Water- Community members emphasize the importance of having reliable access to water throughout the year. They often express frustrations with the current hand pump system, citing issues such as breakdowns, long waiting times, and limited availability during peak periods.

2. Impact on Agriculture and Food Security - Many community members rely on agriculture, including community gardens, for food production and income generation. They emphasize that improved water access through a solarized borehole would enhance irrigation capabilities, leading to increased crop yields, diversified produce, and improved food security for their households.

3. Time and Labor Savings - Community members discuss the labor-intensive nature of fetching water from the current hand pump. They highlight the time and effort required daily to transport water for household use and garden irrigation. A solarized borehole is seen as a solution that would save time and reduce physical strain, allowing more focus on productive activities.

4. Community Empowerment and Ownership - There is a desire among community members to be actively involved in the planning, implementation, and maintenance of the solarized borehole project. They express the importance of community ownership and empowerment, ensuring sustainability and long-term success of the infrastructure.

5. Environmental Considerations - Some community members raise concerns about the environmental impact of the current water extraction methods and express interest in environmentally friendly solutions. They view solar energy as a clean and sustainable alternative that aligns with their values of environmental stewardship.

6. Cost Considerations - Affordability and cost-effectiveness are important factors discussed by community members. They want assurance that the transition to a solarized borehole will be financially sustainable, with considerations for initial investment costs, ongoing maintenance expenses, and potential savings over time

7. Capacity Building and Training - Community members express a desire for capacity building and training opportunities related to the operation and maintenance of the solarized borehole system. They emphasize the need for technical knowledge and skills development to ensure the sustainable management of the infrastructure to be imparted to the project participants to minimize costs associated with hiring expects for any minor maintenance costs.

8. Community Development and Resilience - Lastly, community members see the solarized borehole project as a pathway to enhancing community resilience against climate variability and economic challenges. They believe it will contribute to overall community development and prosperity.

Describe the community's strengths and resources.

The Six project sites, like many rural communities, possesses strengths and resources that can be leveraged to support the upgrade from a hand pump on a well to a solarized borehole pump. Here are some key strengths and resources typically found in communities:

1.Community Cohesion and Participation – Mtshakabhandane community members often demonstrate

strong cohesion and a willingness to collaborate on community projects. This solidarity can facilitate collective decision-making and active participation in the planning, implementation, and maintenance of the solarized borehole project.

2. Local Leadership and Governance Structures - The presence of local leaders, such as village heads, chiefs, and community councils, provides established governance structures. These leaders can play a pivotal role in mobilizing community support, facilitating communication with external stakeholders, and ensuring project accountability and sustainability.

3. Traditional Knowledge and Practices - The community often possess African traditional knowledge (AIKs) and practices related to water management and agriculture. This knowledge can be invaluable in guiding the implementation of the solarized borehole project, including, water conservation practices, and sustainable use of natural resources.

5. Local Materials and Resources – The community typically have access to local materials such as sand, gravel, and stones that can be utilized in the construction and maintenance of the solarized borehole infrastructure. Leveraging local resources can reduce costs and promote sustainability.

6. Social Networks and Community Organizations - Social networks and community organizations in Lupane play crucial roles in mobilizing resources, disseminating information, and fostering community engagement. These networks can be instrumental in raising awareness about the benefits of the solarized borehole project and garnering support from various stakeholders.

By recognizing and mobilizing these strengths and resources, the Lupane community can effectively collaborate with external partners and stakeholders to implement a successful upgrade from a hand pump to a solarized borehole pump. This approach not only enhances water access and food security but also promotes community empowerment, resilience, and sustainable development.

Describe any challenges and gaps in the community's behaviors, skills, and knowledge.

The major challenges are lack of awareness about healthy lifestyle choices, limited access to healthcare services and information and high prevalence of chronic diseases due to sedentary lifestyles and poor diet. These communities experience disparities in educational attainment and access to quality education leading to insufficient critical thinking and problem-solving skills among community members. They also have limited or no job skills and vocational training that leads to high unemployment rates or underemployment and lack of entrepreneurial skills and knowledge about financial management. These communities also have insufficient knowledge about sustainable practices and environmental conservation and lack of understanding of the impact of climate change on the community.

What issues will the project address, and how does the community currently address those issues?

The project of upgrading from a hand pump well to a solarized borehole and drilling of water wells that are solar powered in a community will assist in start-up of a horticulture garden not only enhances immediate

water access and agricultural productivity but also fosters long-term sustainability, resilience, and community development. It serves as a catalyst for positive change, promoting healthier and more prosperous livelihoods among community members and not limited to these are the following,

1. Improved Water Access - A solarized borehole ensures consistent and reliable water access, which is crucial for irrigation in the horticulture garden. It mitigates the challenges of water scarcity during dry seasons and reduces dependency on erratic rainfall patterns.

2. Enhanced Agricultural Productivity - The solarized borehole + the use of drip irrigation kits will facilitate efficient irrigation, allowing for increased crop yields, extended growing seasons, and the cultivation of a wider variety of vegetables and fruits. This contributes to food security and enhances the nutritional diversity of the community's diet.

3. Sustainability and Resilience - Solar-powered systems are sustainable and environmentally friendly, utilizing renewable energy sources. They reduce operational costs and carbon footprints, promoting long-term resilience against climate change impacts and energy price fluctuations.

4. Community Empowerment and Engagement - Engaging community members in the project fosters ownership, empowerment, and skills development. It encourages active participation in sustainable water management practices and builds collective resilience within the community.

5. Economic Opportunities - Improved agricultural productivity from the solarized borehole can create economic opportunities for community members. Surplus produce can be sold locally, generating income and improving livelihoods. Additionally, the project may create jobs related to maintenance and operation of the borehole system.

6. Education and Capacity Building - The project provides opportunities for training and capacity building in water conservation, solar energy utilization, and sustainable agriculture practices. This empowers community members with valuable skills and knowledge that can be applied beyond the project's scope.

Communities currently address these issues through a combination of local initiatives and partnerships. Some initiatives yield results, and some results are not sustainable.

Provide the specific details of the project design and how it will solve these issues.

Components of the Project Design include,

1.Solarized Borehole Installation: Refurbish the existing well by upgrading and changing from the hand pump to install a pump at an appropriate depth to access groundwater.

2.Solar Panel System - Install solar panels to power the pump. The number and capacity of solar panels will be determined based on water demand, depth of the well and sunlight availability. The installation of the pump will be centered on capability of the pump meeting the water demand of the horticulture garden.

3. Water Storage and Distribution – A 5000l water storage tank will be Installed near the borehole to store pumped water. The tank capacity will be sized to meet peak water demand and allow for irrigation during periods of low solar energy.

4. Distribution Network: Lay out a distribution network of pipes (mainline system) from the storage tank to various sections of the horticulture garden. Include valves and fittings for efficient water distribution and irrigation management.

5. Community Engagement and Capacity Building - Training Workshops will be organized for community members on the operation and maintenance of the solarized borehole system, including basic troubleshooting and safety procedures.

6. Educational Sessions and seminars - Provide educational sessions on sustainable water management practices, efficient irrigation techniques, and the benefits of renewable energy use.

7. Monitoring and Maintenance – A maintenance Plan will be developed and scheduled for regular inspection, cleaning, and servicing of the borehole pump, solar panels, storage tank, and distribution system. Train community members to perform routine maintenance tasks.

8.Environmental Considerations – An Environmental Impact Assessment will be conducted and an assessment to minimize environmental impact during construction and operation phases, adhering to local regulations and best practices.

9. Eco-friendly Practices - Implement eco-friendly practices such as rainwater harvesting and water conservation measures within the garden to complement the solarized borehole system.

10. Implementation Timeline and Budget - The project is expected to be implemented over a period of 6 months.

11. Budget - The total estimated budget of $50,000 for the project includes costs for, solar panel installation, pump system, storage tank, distribution network, training workshops, procurement of mainline equipment maintenance, administration costs and contingency funds.

Expected Outcomes

a) Improved Water Access - Enhanced access to reliable and sustainable water supply for irrigation purposes in the community horticulture garden.

b) Increased Agricultural Productivity - Improved crop yields, diversified produce, and enhanced food security for community members.

c) Community Empowerment: Increased community involvement, skills development, and capacity building in sustainable water management and renewable energy use.

Describe the long-term plan for the project (such as oversight, financial responsibilities, and expected behavior change) after Rotary's involvement ends.

Implementing this comprehensive long-term plan, the project aims to transform the community horticulture garden into a sustainable hub for agricultural production, economic empowerment, environmental stewardship, and community resilience. It leverages donor intervention to build capacity, expand market access, and create lasting benefits for community members, including children and youth,

while promoting inclusive and sustainable development practices.

Post Rotary intervention and with a focus on commercialization and community development, the long-term plan for the project upgrading a hand pump well to a solarized borehole in a community horticulture garden would involve several strategic components to expand operations, introduce livelihood projects, promote active engagement of schools and children in the garden activities, broaden market reach, and increase revenue generation.

1.Expansion of the Horticulture Garden – Objective is to increase the cultivated area to 1 hectare to enhance agricultural productivity and diversify crop production. This will be accompanied by expanding the irrigation infrastructure to cover the new area, including drip irrigation systems for efficient water use.

2.Livelihood Projects – The objective is to create extra income-generating opportunities for community members through diversified livelihood projects (livestock rearing, beekeeping, value added processing)

3. Engagement of Children and Schools – This is aimed at fostering a culture of agricultural and environmental awareness among children and involve schools in project activities through establishing school gardens in collaboration with local schools, using the community horticulture garden as a model for sustainable agriculture practices. Educational Programs that involve conducting educational workshops, field trips, and hands-on learning experiences for students on topics such as water conservation, renewable energy, and nutrition will be done. The youth will also be engaged in practical activities within the garden to develop skills in gardening, entrepreneurship, and leadership.

4. Market Expansion and Penetration – Mainly aiming at broadening market reach to include Bulawayo markets and increase revenue from agricultural products through conducting market assessments to understand consumer preferences, demand trends, and competition in Bulawayo and surrounding markets. Partnerships will be established with local vendors, restaurants, and supermarkets to supply fresh produce directly from the community horticulture garden.

5. Revenue Generation Strategies - Increase sustainable revenue streams to support project maintenance, expansion, and community development initiatives. Diversify sales channels through direct sales at markets, community-supported agriculture (CSA) subscriptions, online platforms, and farm-to-table initiatives.

6. Monitoring and Evaluation - Continuously assessing project impact, effectiveness, and sustainability to inform decision-making and adaptation. Establish key performance indicators (KPIs) related to agricultural productivity, income generation, community engagement, and environmental sustainability. The Intuba team will conduct periodic evaluations and stakeholder consultations to gather feedback on project outcomes and identify areas for improvement

ENVIRONMENTAL ASSESSMENT (FOR ALL ENVIRONMENT AND WATER, SANITATION, AND HYGIENE PROJECTS)

What are currently the greatest environmental threats to local land, air, water resources, and the ecosystem?

Deforestation: The loss of forests, particularly due to logging leads to habitat destruction, biodiversity loss.

Soil Degradation: Overuse of agricultural land, pollution, and erosion degrade soil quality, reducing its

fertility and ability to support life.

Water Scarcity: caused by overuse and mismanagement of water resources, along with climate change impacts like altered precipitation patterns and droughts, lead to water shortages in many parts of the country.

Climate Change /Global warming leads to extreme weather events and altered ecosystems, threatening biodiversity and human communities.

Chemical Pollution: The use of pesticides, herbicides, and other chemicals in agriculture can lead to bioaccumulation in ecosystems, posing risks to wildlife and humans.

List any cultural practices that are relevant to the project (such as agricultural techniques or traditions).

The use of using manure as a form of fertilizer has been used for decades.

What positive and negative environmental changes do you expect to result from the project?

The farming practices employed by Intuba come as an intervention to water conservation thus promoting all year-round farming and promoting greater yields through using traditional methods that do not involve fertilizers but promote use of available resources from the previous farming season such as using manure (stalks, leaves) in creating a compost thus reducing input costs in the likes of fertilizers. The Intuba raised bed also uses a zero till method of farming which does not disturb or degrade the natural state of the land or soil.