



COMMUNITY SOLAR- POWERED WATER WELL

PROJECT COMPLETION REPORT

2025

BUWONGO VILLAGE, BUGWERI DISTRICT,
EASTERN UGANDA



HUMANITY-INCREASED
Quality over Quantity



BACKGROUND

Organization: Humanity-Increased

Project Name: Safe Solar-Powered Community Water Well – Uganda

Project Location: Buwongo Village, Bugweri District

Project Start Date: May 8, 2025

Project End Date: August 6, 2025

Number of Beneficiaries: 3,800 people

For years, the residents of Buwongo Village suffered from a lack of safe and reliable water. Families relied on swamps and rainwater harvesting, with broken boreholes leaving women and children to walk over 1 km daily to fetch unsafe water. This burden contributed to poor health, domestic strain, and lost educational opportunities.

To address this, Humanity-Increased funded the construction of a solar-powered community water well system—a project designed to provide sustainable, safe water for thousands of residents.

PROJECT ACTIVITIES & OUTPUTS



1. HYDROGEOLOGICAL SURVEY & SITE SELECTION

Professional surveys were conducted across Bugweri District to assess groundwater viability. Buwongo Village, identified as highly water-stressed, was selected as the project site.

2. COMMUNITY MOBILIZATION & PREPARATION

Meetings with local leaders, residents, and district officials ensured transparency and community ownership. A Village Water User Committee was formed and trained to manage and safeguard the facility.





3. DRILLING & SOURCE DEVELOPMENT

A 75-meter-deep borehole was drilled and secured with proper casing. The water source was protected and tested to ensure safe consumption.

4. INSTALLATION OF SOLAR SYSTEM & PUMP

A 2.2 kW multi-stage submersible pump (4.2 m³/hour capacity) was installed, powered by six bifacial 620W solar panels. This ensured a reliable, renewable energy source for pumping water.

5. STORAGE & DISTRIBUTION SYSTEM

- A 10,000-liter storage tank was mounted on a 6-meter-high stand.
- Three public tap stands were constructed at:
 - The central mosque
 - Homeland Primary School
 - A key settlement cluster



- TESTING, HANDOVER & TRAINING
- The system was tested over two weeks for reliability and water quality. Results confirmed that the water was safe for drinking. The Village Water User Committee was trained in maintenance and mobilization.

PROJECT IMPACT



**3,800
INDIVIDUALS**

3,800 PEOPLE NOW HAVE RELIABLE ACCESS
TO SAFE WATER

3 TAP STANDS INSTALLED ACROSS
THE VILLAGE

3 TAP STANDS



**75-METER-DEEP
SOLAR-
POWERED**

- Women and girls no longer travel long distances to fetch unsafe water
- Reduced risk of waterborne diseases across the community
- Improved dignity, time for education, and opportunities for livelihoods
- Established community ownership through the Village Water User Committee

"We no longer wake before dawn to fetch water from the swamp. Now clean water is just at the mosque tap." — Beneficiary, Buwongo Village



SUSTAINING HUMANITARIAN EFFORTS

Humanity-Increased remains committed to strengthening communities through sustainable water access. Future efforts will expand solar-powered water systems across Uganda, ensuring that safe, clean water is no longer a privilege but a basic right.



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