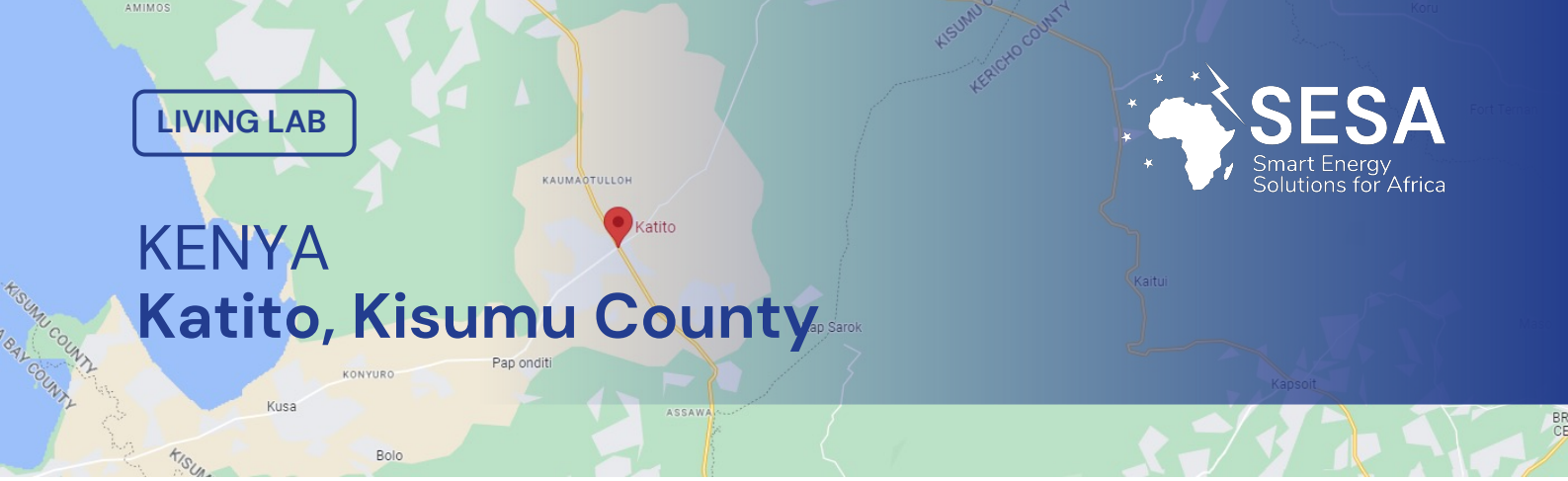
Living lab
Kenya



LIVING LAB

SESA
Smart Energy Solutions for Africa

KENYA
Katito, Kisumu County

Katito – Solar energy hub

The Kenya demonstration site in Katito emplys a solar hubs, with 36 kWp. **The peri-urban demonstration is taking place in Katito, Kisumu County, Kenya** (latitude: -0.2667, 34.9664).

Katito is a satellite peri-urban enclave in Kenya's Lake Victoria region that was awarded township status by the Kisumu County administration in 2019. In the community, there are public primary schools and two public secondary school, as well as a sub-county public hospital.

Ahero, the nearest town, is 15 kilometers away via a tarmacked road. Katito's population is estimated to be around 23.000 people. The main economic activities in Katito are small business trading, rice farming, oil seed cultivation and some fishing.

The Katito Peri-Urban Solar Energy Hub

Significant portions of the peri-urban households are considered poor and have a challenge accessing affordable electricity. Many are not connected at all. Furthermore, local electricity rates are sometimes among the world's most costly.

Technologies tested

The Solar energy hub in Katito aims to generate sustainable off-grid electricity, with sector linkages such as fishing, water pumping, water purification, and e-mobility, and combining energy solutions with local Info Spots for access to information, on energy, climate change and digital skills.

The solar charging hub houses PV modules, central Li-ion battery storage, and balance-of-system (BoS) to increase energy accessibility for a range of electrical needs within the local community.

Leading Partners

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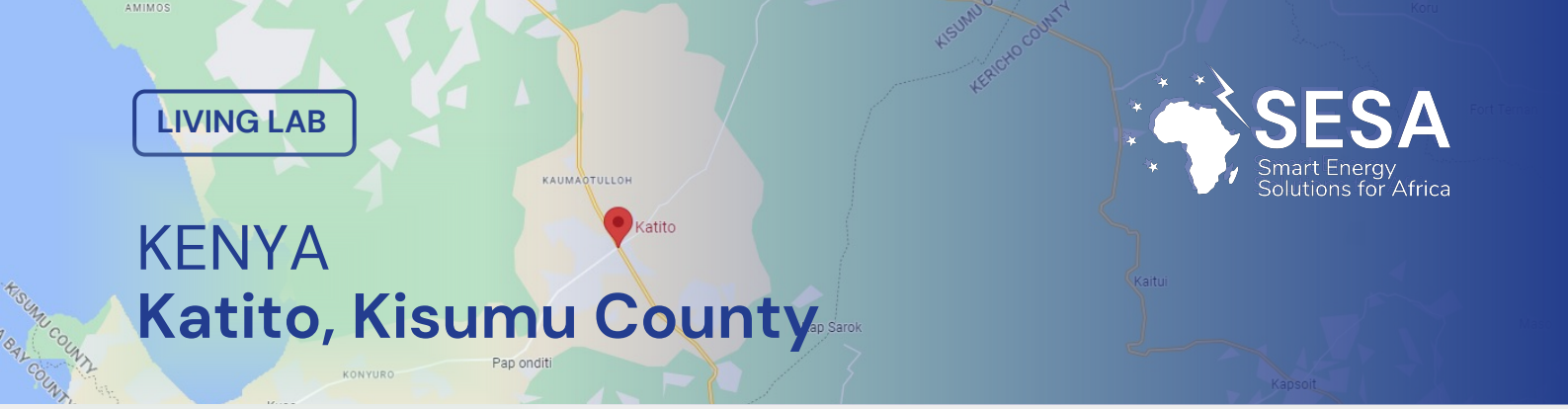

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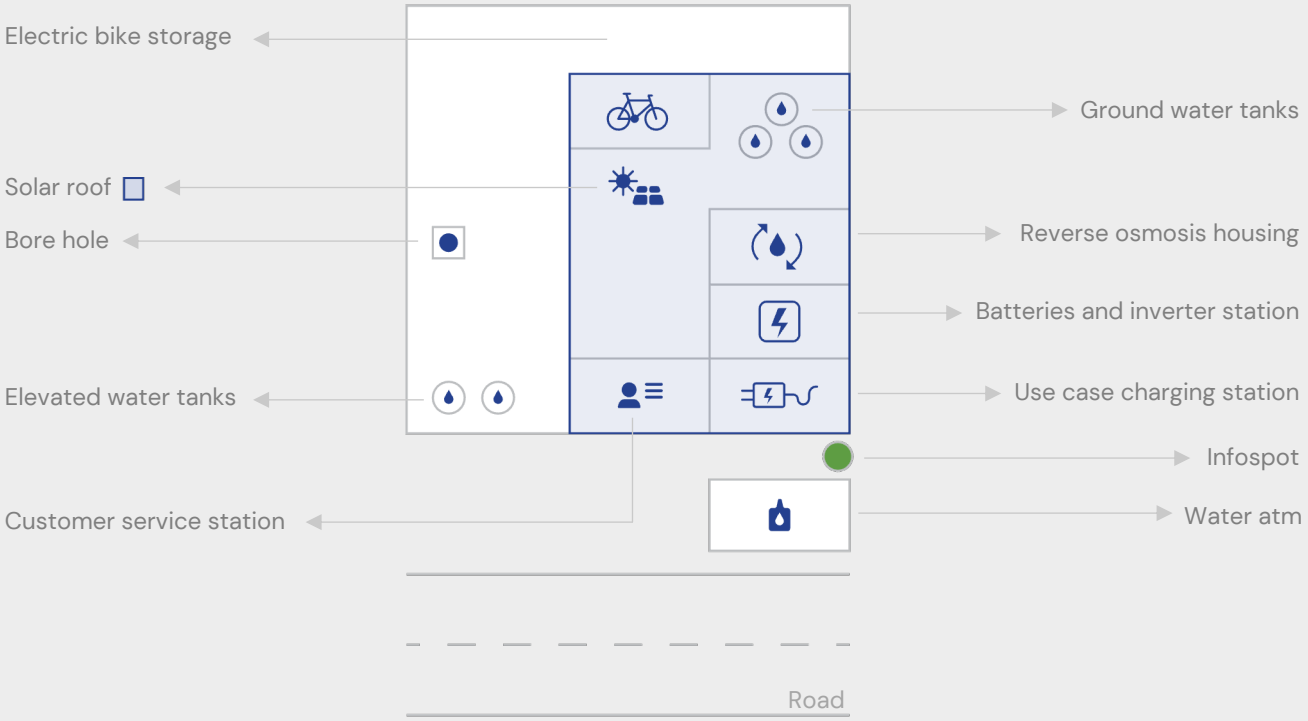

Asset(s)	Total number	Specifications
Solar roof	64	33.992 kWp
Batteries	24	106.8 kWh
Water pump	1	Submersible pump
Water tanks	5	50,000 L
Reverse Osmosis instalation	1	6 cubic meters per hour reverse osmosis drinking water purification system
Water ATM	5	20 liters for 15 kshs
E motorbikes	6	Electric converted rive train powered by 48V DC , 4.6 kWp lithium-ion batteries

Water is pumped from the borehole and purified using the reverse osmosis system using solar energy. The clean purified water is stored in the elevated freshwater tank and further treated using UV treatment before dispensing through the water ATM(s). There is an ATM network connected to the main hub. The network comprises 4ATMs (with further ATMs anticipated)