CHALLENGES

Many communities in Liberia lack adequate access to energy, water, and food. Electricity is available to less than 10% of the population. Most Liberians are highly dependent on forest resources—that release greenhouse gases and cause harmful indoor pollution when burned—for cooking and heating. Water infrastructure in Liberia is similarly scarce. Low crop yields due to water deficiencies on rainfed agriculture systems contribute to widespread food insecurity and high rates of child malnutrition.

PROJECT OVERVIEW

To this end SWB has partnered with the Christian Revival Church Association (CRCA) to develop an integrated farm system in Jungle Farm, Liberia—a small community of 400 residents that includes a communal farm and a school.

Together, the CRCA and SWB have implemented a drip irrigation system and a bio-digester. The project seeks to increase crop production on the communal farm via the irrigation systems and to use the higher yields to provide lunch to students at the local school. The bio-digester, fed by farm waste, also generates electricity which offsets cooking costs. Once completed, the water irrigation system will be powered by solar panels. As with all SWB projects, all technologies are designed to utilize locally available and affordable materials.

OUR IMPACT

The integrated system produces clean energy, improves water efficiency, and increases crop production while simultaneously reducing pressure on forests, greenhouse gas emissions, and indoor pollution. The drip irrigation system will promote efficient water use, increase crop yields, and boost nutrition. By working closely with the community, SWB ensures community needs are being heard and met, and develops local capacity so that the systems will remain functional after project closure.

Biodigester

Livestock waste is converted to bio-gas—which is burned as a clean fuel—and digestate—which is used as organic fertilizer.

Drip Irrigation

Delivering water directly to plant roots, the system will minimize water losses to wind, runoff, and evaporation.

Solar Energy

Solar panels power the aquaponics pump (and when finished, the drip irrigation system), reducing demand for carbon-based fuels.