storage model and system of commission agents. The "Amritsar model of silos" project has become the role model for the Food Corporation of India (FCI) as well as other state governments in erecting silos across India.⁹²

This project benefitted from the following:

- A transparent and competitive bidding process, which helped lead to the selection of a qualified, experienced private partner on a least-cost basis;
- Clear delineation of the responsibilities and risks allocated between PUNGRAIN and the private partner, with objective and enforceable standards and specifications;
- Strong commitment to the project on the part of the public contracting party; and
- The willingness and ability of the parties to renegotiate the fixed storage fee to ensure the project's viability over the long term.

43. Kalangala Integrated Infrastructure Programme, Bugala Island, Uganda



Photo Credit⁹³

Background

Bugala Island, with a population of 60,000 located in Lake Victoria, Kalangala District, was situated within one of Uganda's poorest districts. Two-thirds of the economically active population on the island were engaged in fisheries and agriculture. However, they lacked adequate infrastructure along the agricultural supply chain, such as safe, regular access to the mainland, and reliable electricity and clean water, which are vital for growing and promoting agriculture and fishing activities.

The complexity of developing multi-sector, smallscale island infrastructure had limited private sector investment in the island. In 2005 the residents sought assistance from InfraCo Africa's to rehabilitate and expand their infrastructure. To this end, InfraCo Africa partnered with the Ugandan government to establish a special purpose vehicle (SPV) called Kalangala Infrastructure Services (KIS) to oversee the provision of four infrastructure services on the island, namely a ferry boat connection, electricity, clean water, and roads.

Project Structure

KIS is a private, mixed-utility company created to design, finance, construct, own, operate and maintain four infrastructure projects, namely:

- Two roll-on/roll-off commercial ferries, each with a capacity of 18 vehicles and 109 seated passengers;
- A 1.6 MW hybrid solar and thermal power plant;
- A series of solar-powered, pump-based water supply systems to replace the existing system; and
- Upgrading the island's main 66 km road from an unpaved dirt road to a Class B gravel road.

The Government of Uganda offered political risk protection in the form of a sovereign guarantee under the SPV agreement. In the event of an adverse political event, the government agreed to purchase all project components with a termination amount sufficient to repay all equity and outstanding debt held by KIS.

The USD 44 million in capital costs would be financed through a combination of equity, debt, and grants. Equity capital would be provided by the Industrial Development Corporation of South Africa, the Uganda Development Corporation, InfraCo Africa, and the Emerging Infrastructure Fund.

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⁹⁹ By WorldIslandInfo. com (https://commons. wikimedia.org/wiki/ File:Egrets_and_ hut,_Bugala_Island. jpg), "Egrets and hut, Bugala Island", https:// creativecommons. org/licenses/by/3.0/ legalcode

⁹⁴ Warner, Michael, David Kahan, and Szilvia Lehel. Market-Orientated Agricultural Infrastructure: Appraisal of Public-Private Partnerships. Rome: FAO, 2009. Accessed June 3, 2019. http:// www.fao.org/3/i0465e/ i0465e00.pdf;

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Eleqtra. 2019. "Kalangala Infrastructure, Uganda." Eleqtra. Accessed June 3, 2019. https://eleqtra. com/projects/kalangalainfrastructure/ Commercial debt would be provided by Nedbank Capital Ltd., which benefited from a credit guarantee issued by the United States Agency for International Development (USAID) and GuarantCo Ltd. Grants would be provided by the Private Infrastructure Development Group (PIDG) and the Netherland's entrepreneurial development bank, FMO.

The operational costs would be recovered through:

- The revenues KIS derives from user fees collected for ferry transportation, electricity, and water services;
- A consumption-based subsidy (for water and electricity) offered by the Global Partnership on Output-Based Aid (GPOBA) – now known as the Global Partnership for Results-Based Approaches (GPRBA), to be disbursed during the first four years of operations; and
- A shadow toll (subsidy) for road usage.

Lessons Learned

KIS was created in 2005 but the project did not begin to show significant progress until 2013, due to limited initial funding and a relatively lengthy bureaucratic processes for obtaining the necessary legal approvals from various government agencies.

Once the four components of the project became fully operational, Bugala Island's economic growth contributed to making Kalangala one of Uganda's wealthiest region. As a result of the improved connectivity, the fishing community now has improved beach management units, speedier access to fish processing facilities and refrigeration, access to more information and markets, and access to clean water for local fish processing.

In addition, Bidco Oil Palm Ltd. acquired 10,000 hectares on Bugala Island, of which 3,500 hectares were provided for 1,700 small-hold local farmers for oil palm plantation and related mill facilities. The KIS also created jobs for Bugala Island residents, facilitating a transfer of knowledge and technology. Currently, negotiations are underway between the KIS and the Government of Uganda to scale-up the solar power generation, refurbish and operate the Kalangala Town Council electrical grid, and further upgrade of the main road.

This project benefited from the following:

- Bundling four the four different infrastructure projects together allowed for multiple revenue streams, diversification, and economies of scale, while increasing the investment size to an amount more attractive to both equity investors and commercial lenders. The multiple revenue streams helped mitigate the demand risk and may ultimately prove sufficient to fund the construction and maintenance of other infrastructure projects.
- Support from the central government and bilateral and multilateral development partners, in the form of guarantees and grant funding, which helped catalyze private investment in a previously underserved region.⁹⁴