



TEMPERATURE-
CONTROLLED
LOGISTICS:
Piloting Investments

Piloting Investments to Create a Market

In addition to evaluating markets to identify barriers to private participation and specific investment opportunities, IFC can help develop new business models using the InfraVentures global infrastructure project development fund. InfraVentures is a US\$ 150 million facility that can be used to test early-stage business models and develop new projects. Through InfraVentures, IFC and select private sponsors co-invest in the implementation of a pilot project to establish “proof of concept” by financing limited capital investments. If the business model is proven viable, this pilot project is scaled up with IFC mainstream financing.

Golden Harvest Bangladesh

Bangladesh's entire cold chain sector is unorganized and underdeveloped, mainly consisting of single-item cold storage facilities. These facilities are little more than pack houses, comprised of a pre-engineered building, grading and sorting area, ripening chamber, and refrigerated space. Essentially transit houses, these facilities are typically used for cooling and storing produce for a few days before sending it to market. In Bangladesh, most cold storage is dedicated to potatoes, with very little temperature-controlled storage of other products.

The absence of Temperature-Controlled Logistics (TCL) infrastructure in Bangladesh results in large post-harvest losses. The Food and Agriculture Organization of the UN found that post-harvest loss in Bangladesh is 26% for fruits, with some specific types of fruit sustaining losses as high as 50%. For fish, the losses typically range between 12% and 30%. Hazardous chemicals are sometimes used to preserve shelf life, even when refrigeration would be a safer choice. These problems are further compounded with huge technology gaps at multiple levels.

Through InfraVentures, IFC has partnered with Golden Harvest Agro Industries Limited, a leading Bangladeshi food processing company, to invest in a US\$ 21 million pilot project. The pilot project consists of early market development and testing of the first integrated, end-to-end third-party TCL network in

Bangladesh. For the implementation of the pilot, IFC's InfraVentures has committed US\$ 6.5 million, with the remaining balance coming from Golden Harvest. Implementation of the pilot is currently underway but completion will be delayed by the pandemic. Following implementation of the pilot scheme, IFC is expecting US\$ 35 million in investments to finance the scale-up of the venture.

Support for this pilot project is consistent with IFC's mandate to create new markets. The project is expected to demonstrate that the third-party TCL sector is viable for scale-up across Bangladesh. The TCL sector in Bangladesh represents an exciting investment opportunity for IFC for several reasons:

- First-mover advantage in a nascent sector of the TCL industry
- Rising demand for processed and ready-to-cook foods
- Mounting consumer attention to food safety
- Increasing preference for horticulture crops which require refrigerated services
- Growing market shares of modern retail
- Increasing popularity of international fast-food restaurants

The Golden Harvest Group is one of Bangladesh's leading businesses, with diverse exposure in several sectors. Golden Harvest is a pioneering force in the frozen-food sector in Bangladesh and was the first company to develop its own in-house cold chain network.

The integrated end-to-end cold chain and third-party TCL service that will be set up through the project will be the first of its kind in Bangladesh. The pilot project will result in the development of two new TCL warehouses at strategic locations around the periphery of the capital city, Dhaka. It will also finance the procurement of 20 new vehicles. These assets will be added to existing Golden Harvest infrastructure and equipment that is being incorporated into the pilot project company, forming the base for the new third-party TCL service provider.

Preparing a Pilot in Pakistan

IFC is exploring using the InfraVentures project development fund to support a third-party TCL investment pilot in Pakistan. The agriculture sector is a vital component of Pakistan's economy, contributing 20% of GDP

and employing more than 40% of the country's labor force. However, the country's food production logistics system is underdeveloped. Despite being a major producer of perishable food, Pakistan lacks proper cold chain infrastructure. The country does not have adequate transportation and cold storage facilities to preserve its post-harvest production. Consequently, about 40% of Pakistan's total food production is subject to spoilage each year. The amount of food waste totals approximately five million tons of fruits and vegetables, valued in the range of US\$ 600-800 million. Without TCL services, high-value perishable harvests such as mangoes cannot reach the export markets where they would command their highest price. Investment in TCL infrastructure will reduce waste and increase profitability for food producers in Pakistan.

A series of notes on new investment opportunities in Temperature-Controlled Logistics

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