

The cold chain: Logistics at Chittagong Port: The Future of Cold Chain and Trade

The USD 4.3 trillion global logistics industry prides itself in its ability to efficiently mobilize goods to their destinations while maintaining quality. It is because of this that for the logistics sector and the well-being of a country, terrestrial transport, airports, and maritime ports are crucial means for achieving significant economic growth. For Bangladesh, the Chittagong Port plays a critical role in the country's trade and economic prospects.

The Chittagong Port is one of the most transited ports in the region, the 64th busiest container port in the world,¹ and by far Bangladesh's most important port. It handles about 92% of all export and import trade in the country. Interestingly, 79% of all agricultural exports and imports transit through the port as well. Being perishable, these goods tend to be temperature-sensitive, meaning that unless they are under precise temperature conditions they may get spoiled, deteriorate, or lose shelf life.



Containers Stacked at the Chittagong Port

Despite the massive scale of perishable trade activity in Chattogram, the only cold chain services available inside the port is in the reefer container yard where reefers (a type of temperature-controlled container) are plugged to electricity until containers are cleared by customs.² Integrating a cold storage facility inside the port would complement the operations of the reefer terminal, quicken inspection time, improve customs' procedures, and make port operation more efficient - thus helping to reduce the current annual agricultural losses.

To improve trade prospects for Bangladesh, help the logistics industry flourish, and increase consumers' access to safe, perishable products, a strategic investment in temperature-controlled logistics (TCL) at the port is imperative. An investment in a cold storage facility will enable quicker reefer container turnaround (by providing a space where goods can be stored outside of a reefer container) and allow for better handling of cross-docking operations which currently happen in the open air where temperature and sunlight exposure can be extreme. It is important to note that the implementation of a TCL project at the port compliments its current set up and can have benefits for the management of the port.



¹ The Business Standard (2022). "Chattogram Port now world's 64th busiest port." August 19th, 2022. <https://www.tbsnews.net/economy/chattogram-port-now-worlds-64th-busiest-port-479862>

² This is also known as a reefer terminal.

An assessment by the Bangladesh Trade Facilitation project (BTF) found that a cross-docking TCL solution would be most suitable for the port. A cross-docking facility emphasizes the ability to handle and dispatch products efficiently and quickly, promoting swift and safe turnover. Complimenting the reefer storage yard inside the port with a cross-docking TCL facility would have the following impacts:

- 1 Decrease the costs of doing business for Bangladeshi traders, making exports more competitive. First, by decreasing spoilage of goods as they are cross docked from reefer container to trucks. Second, by reducing overall logistic costs since cross-docking allows quicker release of reefers, allowing quicker turnarounds. While storage using reefer containers could cost up to USD 100 per day per reefer, storage in cold storage warehouse would not exceed USD 50 per month per MT.
- 2 Increase the revenue streams for the port authorities as the cross-docking TCL facility would allow it to integrate value-added services currently unavailable through the reefer terminal; the cross-docking facility could free up space in the reefer terminal, which can be used for alternative business activities.
- 3 Decrease operating costs for the port since running a cold storage facility is less expensive than only a 3 reefer terminal as its operations and spatial use are more efficient
- 4 Increase the volume of perishable products available in the local market by reducing spoilage as checks and tests can be done more conveniently under proper cold chain facilities.
- 5 Improve relative purchasing power of the Bangladeshi consumers for imported products as the prices of these will be more stable due to lower spoilage rates.
- 6 Promote and increase the export of Bangladeshi products, facilitating access to markets that may offer higher return.

Globally, emerging economies have started to emphasize port development to meet the international demand for trade services. For example, Morocco has developed the Tangier Port by building a cold storage facility with a storage capacity of 5,350 MT,³ Mexico built a cold storage facility for 2,200 MT storage capacity at the Veracruz Port,⁴ and Portugal developed a TCL facility with 1,250 MT storage capacity at the Port of Sines.⁵ Out of the 800,000 MT of perishable products imported into Bangladesh through different mediums, about USD 640 million worth of perishable products were imported through Chittagong Port in 2020.⁶ Thus volumes of perishable products being imported and transited through Chittagong port have increased substantially, and a TCL facility is more than necessary for the port of Chattogram to remain relevant, reduce losses, and attract further economic opportunities.

The socioeconomic conditions of Bangladesh are promising for investments in the temperature-controlled logistics (TCL) sector. Bangladesh experienced an annual average GDP growth rate of 9% between 2010 and 2019. The country's economic growth has consistently accelerated since 2013, while annual GDP growth rate for other countries in South Asia plateaued over the same period to about 4% in 2019. Development in the RMG sector for Bangladesh has had a considerable impact in the economy of the nation and provided stability and opportunity for other sectors to bloom. The government's accomplishments facilitating a transshipment agreement with India, and preferential trade agreements with Nepal and Bhutan are some of the several actions that can lay a solid foundation for Bangladesh to engage more in trade. Policy and regulatory measures also need to be conducive for the logistics sector to perform well. For example, in 2022, India launched its National Logistics Policy (NLP), while other countries like Thailand,⁸ Cambodia,⁹ Malaysia¹⁰ also have their own NLPs or task force, which have supported the sector's growth in these countries. A National Logistics Strategy would also help Bangladesh guide its sector focused development.

³ Friopuerto main page. <http://www.friopuerto.com/ma/tangiers>

⁴ Friopuerto main page. <http://www.friopuerto.com/mx/en/coldstore-veracruz>

⁵ Global Cold Chain Alliance (2026). "Friopuerto inaugurates new facility in Sines, Portugal" Member Connection. <https://www.gcca.org/friopuerto-inaugurates-new-facility-sines-portugal>

⁶ LixCap (2020). Feasibility study for Bangladesh.

⁷ Raghav Sand (2022). "India gets a national logistics policy" Cogoport. December 6th, 2022. <https://www.cogoport.com/blogs/india-gets-a-national-logistics-policy>

⁸ Phusadee Arunmas (2022). "Cabinet Okays latest national logistics plan" Bangkok Post, December 14th, 2022. <https://www.bangkokpost.com/business/2459765/cabinet-okays-latest-national-logistics-plan>

⁹ Ministry of Public Works and Transport (2017). "Logistics master plan development in the Kingdom of Cambodia" Kingdom of Cambodia. <https://www.unescap.org/sites/default/files/Cambodia%20-%20Ministry%20of%20Public%20Works%20%26%20Transport.pdf>

¹⁰ Ministry of Transport Malaysia. National Logistics Task Force. <https://www.mot.gov.my/en/logistic/operators/NLTFA>



TCL facilities at the port can positively influence trading of perishable products as they facilitate the flow of goods by allowing faster turnaround of reefer containers, and more control over the flow of trucks as loading and unloading can be scheduled with less constraints given that products are safely stored inside temperature-controlled environment. This leads to less congestion and smoother port operations. Furthermore, TCL facilities can increase the attractiveness of port infrastructure, contributing to attracting more business to the port and thus resulting in more revenues in the long run. Overall, this would have positive macroeconomic impact as it would create long-term employment, develop skilled labor force, incite foreign direct investment, and promote technology transfer, among other benefits.

The Bangladesh Trade Facilitation project aims to expand cross-border trade in agricultural goods and food products. The objective is to address systemic constraints at Bangladeshi ports; simplify and automate import and export processes; improve the capacity of Government regulatory agencies, laboratories, and warehouses; and to foster investment in cold storage facilities and temperature-controlled logistics.

Implementing Organizations



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