Cook Islands Port: A Vital Sea Link for Pacific Shipping

A port upgrade in the Cook Islands is securing the country's food, fuel and other needs with modern facilities that allow access by larger ships.

Bim Tou, General Manager of the Cook Islands' Ports Authority, stands on the balcony of his office overlooking the newly upgraded Avatiu port. Behind him, the Picton Castle, a three-masted tall ship, 55 meters long and displacing 300 tonnes, is berthed alongside the port.

"Unlike before, the new port can cater for larger vessels entering the Avatiu Harbor. The wider and deeper harbour entrance and turning circles allows the larger vessels to now berth at the wharf," he said.

Not too long ago, the Avatiu wharf was in dire need of an upgrade due to age and poor design. Constructed in 1989, the wharf also suffered periodic damage from cyclones, which are becoming increasingly frequent and more severe due to warming sea temperatures. There was a real risk that shipping operators might have encountered difficulty obtaining vessel insurance, which would have led them to no longer service the Cook Islands.

High priority

As the principal international port for the Cook Islands, as well as the transhipment port for cargo to the less populated outer islands, Avatiu port plays an important role in the archipelago's economy.

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"The country is heavily reliant on international imports by sea to support its tourism industry - the mainstay of the economy - as well as for general imports and exports. Avatiu alone handles about 90% of the food imports and 100% of its fuel supply," said Vijay Narayan, Asian Development Bank (ADB) project officer. "There were valid concerns about the implications the deteriorating wharf would have on the economy and the livelihoods of the people, so something had to be done," he added.
In 2007, the government adopted a 20-year plan prepared with ADB technical assistance, assessing the condition and management of existing infrastructure, concluding that the lack of investment in maintenance, rehabilitation, and upgrading was resulting in aging systems and poor services. Avatiu port was identified as taking high priority because of the risk of catastrophic failure and national economic and social implications.

**Climate-proof features**

Work on the Avatiu Port Development Project, valued at over $20 million and funded by the people of the Cook Islands through a loan to the government by ADB, was carried out from March 2011 to August 2012. The project focused on rehabilitating and expanding the capacity of Avatiu port, widening the harbor entrance, dredging to increase depth alongside the wharf and enlarging the ship turning area, reconstructing and realigning the quay, and repairing the adjacent wharf deck. This extended the life of the port by 50 years, making it also climate-proof.

"With a sea-level rise of 500mm forecasted over the 50 year life of the wharf, the wharf edge can also be raised by 500mm if necessary without the need to strengthen the wall since the use of additional steel caters for future load increases," said Taniela Faletau, ADB Environment Safeguards Officer.

Environmental safeguards and safety concerns over fuel and gas lines were also addressed in the project design. Petroleum liquid fuels and liquefied petroleum gas arrive in Rarotonga about once every six weeks. Previously, oil and gas companies used floating pipelines stretched to tankers berthed at sea, placing operational constraints on the wharf and increasing environmental, health and safety risks. Three pits adjacent to the berth face with connecting large diameter ducts beneath the slab were installed, two for liquid bulk and one for liquid petroleum gas. With manifolds and pipelines supplied and installed by the local oil and gas companies, gas and fuel can now be pumped from the tankers directly to their sites.

**More business from tourism**

Cargo ships call into Avatiu port approximately every 18 days. "Container and fuel tankers up to 120 metres in length and smaller cruise ships can now berth alongside the quay, making our operations safer, faster and more efficient," said Bim. "Shop owners along the foreshore area and Punanga Nui Market can also expect more business from cruise ship passengers," he added.

Aside from expected additional tourism earnings, the new port is expected to boost the delivery of essential social services and consumer goods, and result in significant savings in cargo and fuel delivery costs.

"In fact we are already seeing changes in trade - larger, more efficient ships are now visiting Rarotonga and new competition in the industry means that there have been changes to the shipping lines calling at the Cook Islands. This should help keep transport prices down," said Henry Puna, Prime Minister of the Cook Islands.

The lessons learned in Avatiu could be of use elsewhere. As a region of 'ocean' states, the Pacific is highly dependent on shipping for the delivery of domestic goods and services, international trade and promotion of tourism.

"Port developments like Avatiu, if replicated around the region, could contribute to strengthening regional shipping services and promoting regional economic development through trade and tourism," says Adrian Ruthenberg, ADB Regional Director of the Pacific Subregional Office.

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