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Japan's Port Improvement Plans Should Benefit U.S. Bulk Exports

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Report Highlights:
The Ministry of Land, Infrastructure, Transport and Tourism (MLIT) has begun implementation of the International Strategic Bulk Port Project, designed to improve strategically important port facilities in order to reduce ocean transportation costs. As of March 2015, work has begun at only one of the five grain ports targeted for expansion. While the target date for the project's completion remains uncertain, Post predicts that even a partial implementation could reduce freight costs to the benefit of U.S. bulk grain and oilseed exports.

General Information:

Trade Infrastructure Deficit

With neither mineral resources nor an abundance of arable land, Japan imports over 60 percent of its food (on a calorie basis) and over 90 percent of its fuel. Given the high cost of air freight, it is not surprising that over 99 percent of trade with Japan (on a weight basis) moves through the ports. As Japan depends on a steady stream of imported food and fuel, minimizing the cost of those resources is vital to maintaining Japan's national and economic security, as well as Japanese citizens' quality of life.

As global demand for energy and food resources has continued to grow, the volume of sea cargo has more than doubled over the last twenty years, reaching nearly 9.5 billion metric tons (MT) in 2012. Moving these increasing volumes of sea freight has been the job of increasingly large ocean vessels, as global shippers seek to reduce costs and capture greater market share. Panamax vessels carrying 70,000 MT of grain dominate the grain trade, while Capesize vessels have become the standard for transporting more coal, iron ore, and other commodities, often in excess of 150,000 MT. However, the emergence of larger, Post-Panamax vessels for grains (~100,000 MT) and Very Large Ore Carriers for minerals (> 200,000 MT) are driving the need for Japan and other trading nations to expand their port capacity to keep up with the increasing width and draft of these vessels.

Although Japanese demand for grain is strong, end-users are geographically dispersed, and the cost of overland transportation in Japan remains prohibitively expensive. As a result, grain delivery in Japan tends to be characterized by relatively small volumes landing in relatively old ports all around the country, either on partially laden vessels (such as Panamax or Handymax) or on small coastal freighters. Most Japanese ports have neither sufficiently deep channels nor berths to accommodate fully laden vessels, because they were built during the postwar economic boom, and the Government of Japan (GOJ) has not invested in port facilities since the early 1990s. As such, Japanese ports are generally out of sync with the scale of today's cargo fleet, and Japanese consumers have not benefitted from the increasing efficiencies of today's ocean freight market.

Japan's International Strategic Bulk Port Project

In 2011, the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) identified nine strategically important ports for structural improvements that would allow them to accommodate fully laden bulk ship varieties

in common use, as well as those most likely to be built in response to the expansion of the Panama Canal by 2020. This effort, known as the International Strategic Bulk Port Project (hereafter, the Project), was the result of more than 15 months of collaboration with trading companies, major importers, and port administrators. The Project also included plans for a more efficient management structure that would improve the efficiency of bulk port operations, including access to private berths, management of public berths, and operation of key port infrastructure.

However, the March 11, 2011 Great East Japan Earthquake (3/11), which claimed the lives of more than 15,000 people and inflicted tens of billions of dollars of infrastructural damage, occurred less than two weeks before MLIT was scheduled to announce the Project. In May 2011, as the business of government returned to normal functions following 3/11, MLIT announced a revised version of the Project, delaying the final completion date indefinitely and identifying funding for only two of the nine strategic ports.

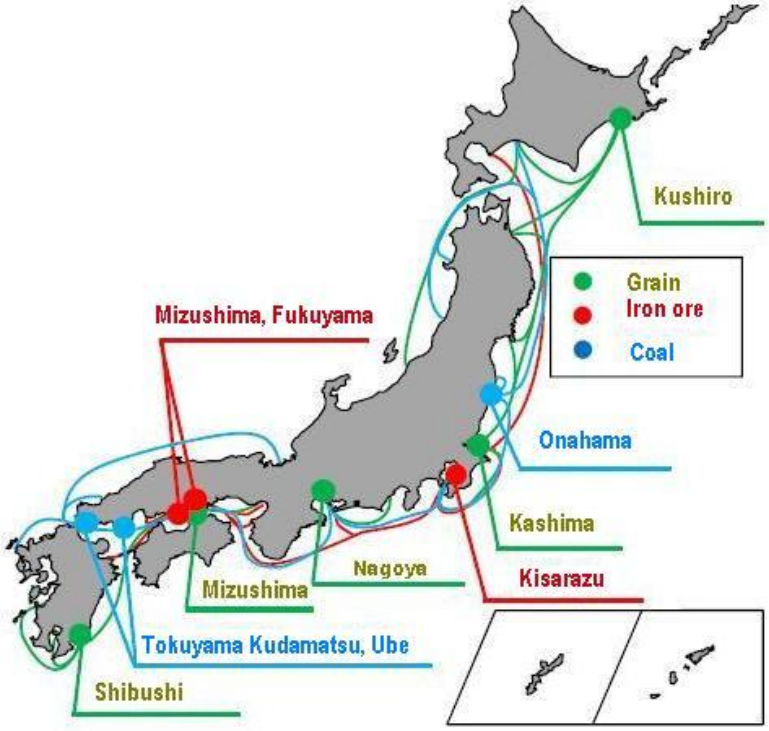
Ports Identified For Improvement Under the International Strategic Bulk Ports Project

Commodity	Port	Prefecture
Grain	Kashima	Ibaraki
Grain	Shibushi	Kagoshima
Grain	Nagoya	Aichi
Grain	Mizushima	Okayama
Grain	Kushiro	Hokkaido
Iron Ore	Mizushima / Fukuyama	Okayama / Hiroshima
Iron Ore	Kisarazu	Chiba
Coal	Tokuyama Kudamatsu / Ube	Yamaguchi
Coal	Onahama	Fukushima

Note: Improvements for ports highlighted in green have been funded by MLIT; others remain unfunded. Where two ports are identified, they will be developed as a single port under the Project.

The locations of Project ports, as well as proposed, improved coastal transportation routes are shown in the map below.

International Strategic Bulk Ports and Efficient Transportation Routes

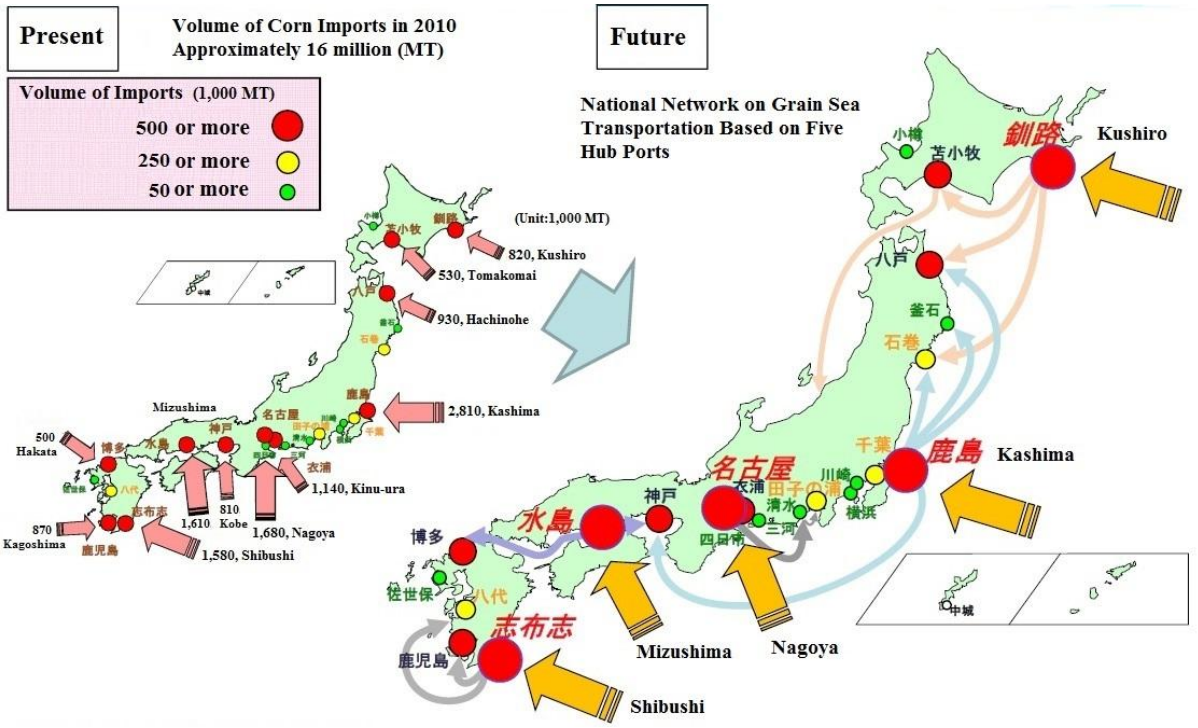


Source: MLIT

Improving Grain Import Efficiency

The chart below illustrates how the Project aims to improve upon the current importation and marine transportation of feed grains and oilseeds. Some of the five 'strategic' grain ports are currently deep enough to receive a fully laden Panamax vessel carrying 70,000 MT at high tide. However, none of those ports is able to receive such a vessel irrespective of tide and/or lunar cycle, significantly restricting shipping schedules and increasing costs. Grain shipments are currently scheduled independently so that either partially laden Panamax or fully laden Handymax vessels call on each Japanese port individually. One of the main improvements of the Project is a coordinated delivery management scheme, where the ports of Kushiro, Kashima, Nagoya, Mizushima and Shibushi will operate as 'hubs' for grain importation. Upon completion of the Project, a fully laden Panamax would call an improved 'hub' port first, before moving on to one or more of the smaller ports, which are capable of receiving a partially laden Panamax vessel. 'Hub' ports could also originate transshipments of grain by smaller coastal freighters capable of landing at even smaller regional ports. This improved coordination scheme would reduce shipping costs and expand the flexibility of delivery scheduling, which could also result in lower FOB prices as delivery schedules can be efficiently timed with global production cycles.

Future marine transportation network through aggregated import cargo to the hub ports



Improvements at Kushiro Port

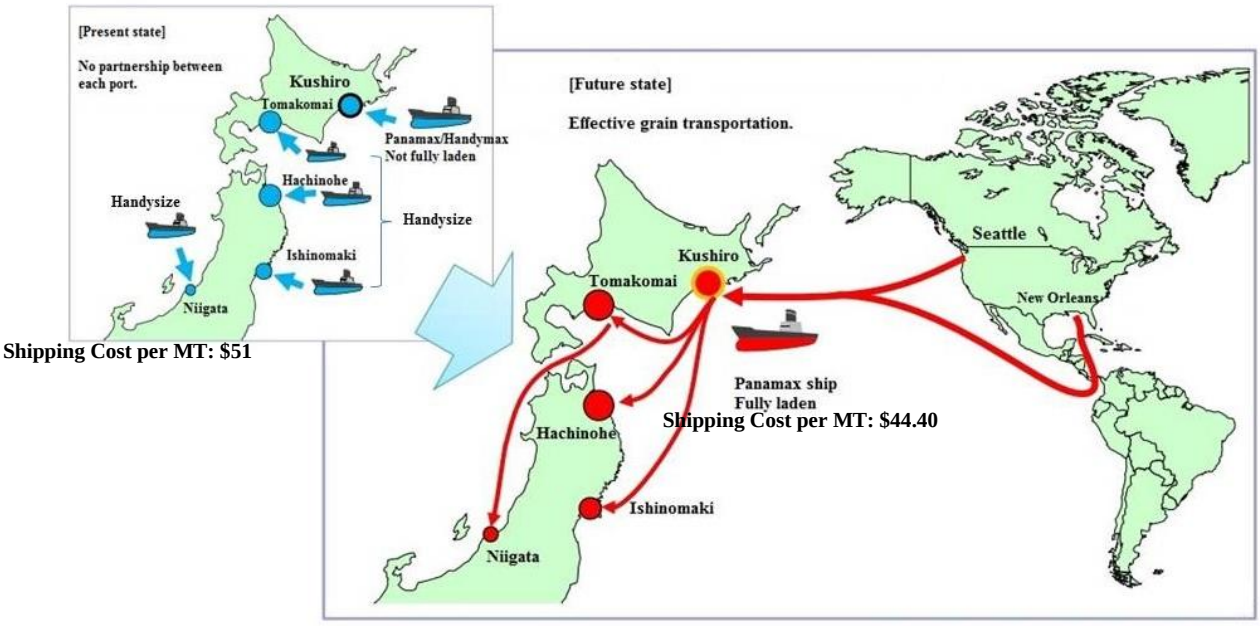
In Japanese Fiscal Year (JFY) 2014,[1] MLIT received ¥18 billion (approximately $178 million) in funds for improvements at Kushiro through JFY 2017, the first grain port to be improved under the Project. Producing more than half of Japan's dairy and beef, Hokkaido is Japan's proverbial breadbasket, making Kushiro a critically important entry point for imported feed grains. In 2012, Kushiro handled 40 percent of Hokkaido's 4.3 million MT of feed grain imports, including nearly 700,000 MT of corn alone. Interestingly, of the total volume of feed grains moving into Kushiro in 2012, almost 30 percent was transshipped from other Japanese ports, underscoring the importance of coastal freight transportation and the potential efficiency gains from the Project (See tables in the appendix). As feed costs can account for upwards of 40 – 50 percent of Japanese livestock management costs, even marginal improvements in port efficiency could have significant impacts on the competitiveness of Japanese livestock producers. In addition to the volume and value of bulk grains handled each year, Kushiro is particularly attractive as a recipient for central government funding, as it is a wholly publicly owned facility.

Kushiro's current depth is only 12 meters. While this is enough to accommodate a fully laden Handymax (35,000 MT), it precludes Panamax vessels, which typically have a full load draft of more than

[1] Note: Japanese Fiscal Year 2014 spans April 1, 2014 through March 31, 2015.

12 meters, from carrying a full load into Kushiro. Following completion of the Kushiro portion of the Project, the port will boast berth, channel and anchorage depths of 14 meters, as well as updated cargo-handling equipment. As a result, fully laden Panamax vessels will be able to call on Kushiro before calling at regional ports such as Tomakomai, Hachinohe, Ishinomaki and Niigata. MLIT analysis forecasts a fifteen percent reduction in shipping costs from New Orleans to Kushiro, as importers trade up from fully laden Handymax vessels to fully laden Panamax vessels; over the course of a year, this could add up to approximately ¥2 billion in savings (approximately $17 million at the current exchange rate).

Below is a diagram illustrating grain shipments before and after planned improvements at Kushiro.



The International Strategic Bulk Port Project has the potential to modernize and rationalize Japan's bulk commodity imports, significantly reducing the transportation costs of these critically important agricultural products. While Kushiro (JFY 2014) is the only grain port improvement project that has started at this point, the eventual renovation of all five strategic bulk grain ports should facilitate smoother, more predictable importation of bulk agricultural commodities.

APPENDIX

Kushiro Grain and Feed Imports in 2012

	Weight (MT)		Value (10,000 ¥)	
Corn	677,020	63%	18,550	62%
Wheat group	86,159	8%	2,114	7%
Grain sorghum	4,971	0%	142	0%
Molasses	32,117	3%	380	1%
Wheat bran	46,998	4%	888	3%
Others	232,099	22%	7,607	26%
Total	1,079,364		29,681	

http://www.city.kushiro.lg.jp/common/000058982.pdf

http://www.city.kushiro.lg.jp/shisei/toukei/shi_toukei/0001.html

Kushiro Total Grain and Feed Imports and Domestic Ingression in 2012

	Import	Ingression	Total	Share of Total
Corn (including for starch)	732,945	15,479	748,424	43%
Feed Ingredients	429,264	462,025	891,289	51%
Wheat group	46,238	56,217	102,455	6%
Total	1,208,447	533,721	1,742,168	
Share of Total	69%	31%		

http://www.city.kushiro.lg.jp/sangyou/umisora/minato/gaiyou/0002.html