STUDY ON THE FUNCTIONING OF PORTS IN PRODUCTION AND LOGISTICS FOR EXPORT PROMOTION OF MARINE PRODUCTS

by

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1. **OBJECTIVES**

While Japan is now working on promoting exports of its marine products, the functions of production and logistics for export have yet to be fully studied. Among export commodities, marine products need especially hygienic management (HACCP management, etc.) and freshness-preservation measures in their production and logistics. This is a consideration in determining which ports and means of transport to use when exporting marine products. Therefore, the authors first clarify the current status of the world’s and Japan’s supply and trade of marine products, and of means of transport and its routes from producers to consumers by analyzing related statistical data (FAO FishStat, Japanese trade statistics, Japan’s research on flow of container and air freight), and by conducting site surveys. Based on the results of this analysis, the authors discuss how to improve the functioning of ports in order to promote exports of marine products.

1. **FUNCTIONING OF FISHING PORTS, SEAPORTS AND AIRPORTS VIS-À-VIS EXPORTS OF MARINE PRODUCTS**

**2.1 Analysis Results**

1. Japan’s export value and volume are still at a low level in spite of export promotion efforts to secure new markets overseas and to keep the domestic production price stable. The volume of frozen fish (low-priced) is decreasing, while the volumes of shellfish, cephalopods, mollusks and fillets are increasing.
2. The ports of Tokyo, Kawasaki and Yokohama, and ports of Osaka and Kobe are designated as international strategic ports with regular international shipping routes to all over the world. They provide outstanding export value, followed by the ports of Tomakomai, Shimonoseki and Hakata, designated as international base ports, located in major fish producing regions in Northern and Western Japan. The airports of Narita, Tokyo and Kansai service international air routes, while the airports of Chitose and Fukuoka in major producing regions for marine products are heavily used for export.
3. The principal fishing ports for production of marine products are now being updated to hygiene-managed fishing ports. EU or FDA-certifivted marine product processing factories are centered around the principal fishing ports.
4. Air freight transport is used for live, fresh or chilled marine products that require more careful preservation of freshness, or for high-priced marine products, while containerized freight maritaime transport is used for frozen fish, dried fish or other marine products. Reefer containers account for over 90% of all containers used for marine products. For the export of live, fresh or chilled marine products to neighboring countries (South Korea and China), ferries and RORO ships carrying refrigerated trucks, etc. are used on short international shipping routes, along with live or fersh fish carriers. This means of transport is referred to as “non-containerized” freight maritime transport.

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1. Containerized freight maritime transport: longer transport time (6 hours to one month), lower cost and larger loads (average freight weight: 98 freight tons)

Air freight transport: shorter transport time (3 to 13 hours), higher cost and smaller loads (average freight weight: 380kg)

Non-containerized freight maritime transport: intermediate characteristics between the above two (6 hours to 1.5 days)

1. Live, fresh or chilled fish and fillets are exported globally by air freight transport, and to the port of Busan from the ports of Shimonoseki, Hakata and Uwajima by non-containerized freight maritime transport.

**2.2 Conclusions**

1. Fishing ports and seaports perform significant functions related to the production and logistics of transporting marine products from producers to consumers overseas, serving as a base for unloading fish under hygienic management and for exporting marine products while preserving freshness.
2. It is beneficial to export more live, fresh, or chilled fish or fillets. It is concluded that stepping up freshness-preservation measures would accelerate global exports by air freight transport and exports to neighboring countries by short international shipping routes directly from principal seaports located in the producing regions.
3. **HOW TO IMPROVE THE FUNCTIONING OF FISHING PORTS AND SEAPORTS FOR PROMOTING EXPORTS OF MARINE PRODUCTS** 
   1. **Analysis Results**

a. A large amount of marine products is shipped to neighboring countries after being transported to the ports of Shimonoseki and Hakata by land or domestic ferry from Hokkaido, with a lead time of 3 to 3.5 days from producers to consumers, rather than being exported directly from seaports in Hokkaido.

b. Located on Hakata Bay are Hakata Fishing Port, and Hakata Port. Most fresh fish from Western Japan is collected to Hakata Fishing Port by sea and land, and is distributed to domestic consumers shortly after being auctioned off. In contrast, live or fresh fish shipped from Hakata Port is collected by land from the North and West, not from Hakata Fishing Port.

* 1. **Conclusions**

1. Means of transport and the routes used for export of live or fresh fish are carefully selected based on how well the seaport provides the logistics functions necessary for shipping safely and economically within acceptable lead times for preserving freshness, in consideration of the products’ characteristics, necessary lead time, cost and lot size.

b. In order to promote exports of live, fresh and chilled marine products, it is necessary

i) to develop and introduce transportation technologies for containerized freight and measures for preserving a high level of freshness from the stage of fish catching or harvesting onward as well as ii) to loosen import restrictions and streamline the issuance for export certificates.

These countermeasures would realize more use of ferries, RORO and container ships to improve the current functioning of ports.

c. It is more effective to combine the production functions of the hygiene-managed fishing ports and the logistics functions of the principal seaports. Sharing necessary information among all parties and people concerned can leverage the improvement of ports to ship marine products reliably and efficietly.