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"FISHERIES-CITIES" IN JAPAN

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THE term "Fisheries-Cities" (*Suisan-machi* in the Japanese Language), is commonly used in Japan for referring to their fishing ports. There are more than 3,000 fishing ports, large or small, scattered all along the Japanese coast, serving as the bases for fishing operations. Of these, about fifty are the largest ones in which more than half of the total annual marine fish production of the country is landed, ranging from 1,000 tonnes to 2,000 tonnes a day. The most well known of these ports are, Tsukiji, Choshi and Yaizu in Tokyo region; Nagasaki, Hakata and Shimonoseki in south-west Japan; and Wakkanai, Kushiro and Hachinohe in the north. Because of the higher level of fisheries activities along the Pacific coast than on the Japan-Sea side, most of the important ports have become established on the Pacific Coast. A fishing port in Japan is a modern city, provided with all the facilities required for the fishing industry, such as jetties, piers, berths, slipways, transporting and marketing

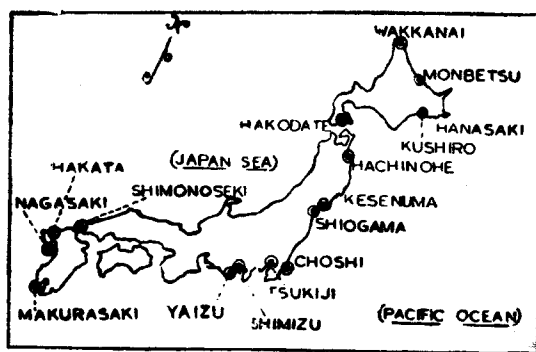


Fig. 1. Map of Japan showing some of the most important fishing ports.

of the catches brought by the fishing vessels from far and near, fish markets, auction halls, processing factories, depots for meeting fishermen's requirements like fishing gear, fuel etc. and fishermen's welfare associations. They also have ice plants, cold storages, repair shops, ship building yards, crew's lodgings and radio-communication systems, thus providing an efficient infrastructure for the industry and making themselves self-contained entities. The present article gives a brief account of the modern facilities available in the fishing ports, without which proper development of the industry can hardly be achieved.

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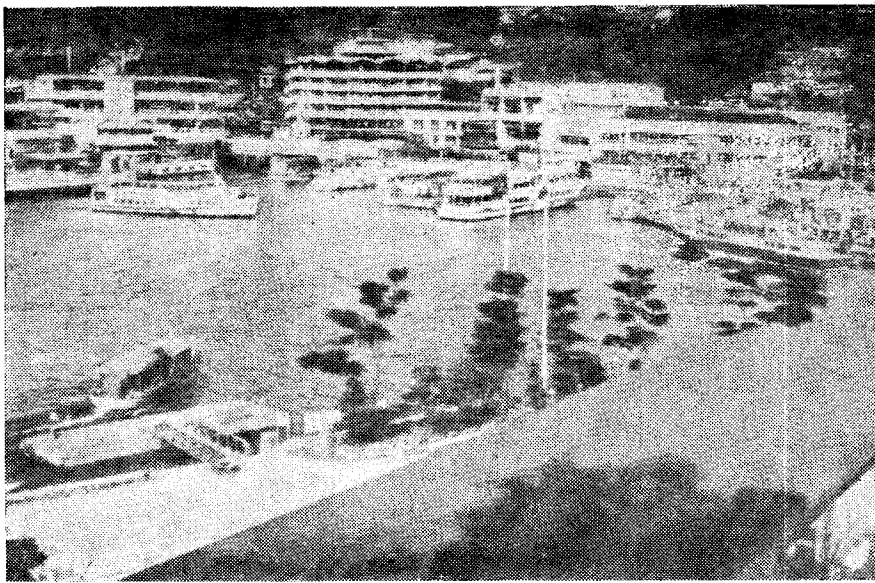


Fig. 2.
View of a small fishing port (Photo-copy of a picture post card issued by Toba Port authorities, 1971).

Landing the catches

In the years prior to the Second World War, the fishing vessels bringing the catches used to lie at anchor out at the sea, as the case in some of the developing countries at present. Small boats used to transport the catches from these vessels to the beach, where the transactions take place. But, since the War, the fishing ports are constructed on modern lines, including deepening of the shallow coastal areas and construction of

wharfs, thus facilitating the fishing crafts approach the platforms directly for landing the catches without any difficulty. The wharf or quay walls usually extend from 100 to 600 metres to accommodate vessels of different sizes. There are at present 4,50,000 fishing vessels, large or small with an aggregate tonnage of about 3,50,000, going far and near for operations. The tonnage of a Japanese fishing vessel ranges from a few tonnes for coastal fishing to 3,000 ton-class trawlers and

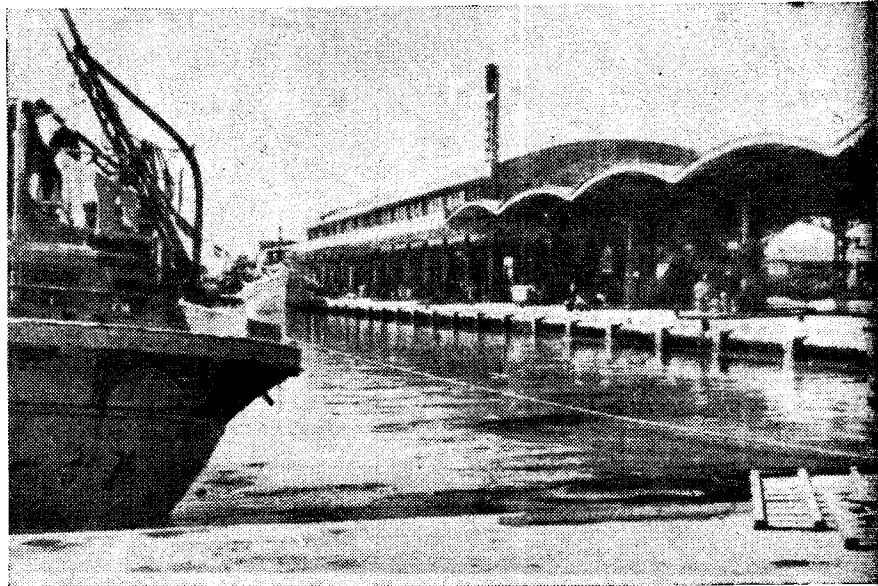


Fig. 3.
View of the wharf in a fishing port (Photo-copy from 'Japanese Fisheries' issued by the Asian Educational Society, Japan, 1967).

0,000 ton-class whaling mother-ships. These are provided with suitable equipments and conveyor facilities for landing the already sorted out catches into trucks which are kept ready for the purpose. Railway sidings and truck terminals in the fishing ports aid in the loading of the trucks with fish directly from the vessels.

Auction halls and selling areas

The auction halls and selling areas in the larger ports range between 10,000 - 20,000 Cu. m. and 25,000 - 50,000 Cu. m. for carrying out the transactions. The fish landed from the vessels are brought to these auction halls and selling areas and are arranged quality-wise for disposal to the bidder or tenderer offering the highest price.

Transportation

The trucks used for transportation of fish to the markets and processing centres are either cold-storage cars or are provided with refrigerated containers, re-icing machines and metal boxes. For the purpose of transportation to distant and interior markets, the dealers pack the fish, ice the goods and ship them by refrigerated railway wagons.

Distribution

Fishing ports are provided with markets which are mostly operated by fishermen's co-operative associations. The first stage in the distribution is the first-grade whole-salers, who buy the fish from the producers. From the

first-grade whole-salers, 'middle-men' buy the fish and sell to the second-grade whole-salers dealing with fresh fish or to the cold-storage companies or to the processors. The second-grade whole salers sell the fresh fish to the retailers through middle men; and the retailers in their turn sell the fish to the consumers. The processing factories and cold-storage companies sell their products to the retailers in the same way. The settlement of accounts relating to fish prices is made from one to three days. Branches of reputed banks are present in the ports for aiding payments and receipts, thus facilitating the crew of the fishing vessels to make preparations for the next fishing voyage.

Consumer markets

There are two kinds of markets for the consumers namely the central markets established by the Ministry of Agriculture of the Central Government and the local markets established by the Prefectural Governments. About 30 central markets and 700 local markets are present now. The central markets are usually located in large cities such as Tokyo, Osaka, Nagoya, Kobe, etc., among which the Tokyo Central Market at Tsukiji is the largest one. For supplying fresh and processed fish to the people of Tokyo numbering more than ten million, there are five companies functioning inside this market. About 70,000 retail stores are present in the country for dealing with fresh fish alone. The retailers of both fresh and processed fish carry out their business independently.

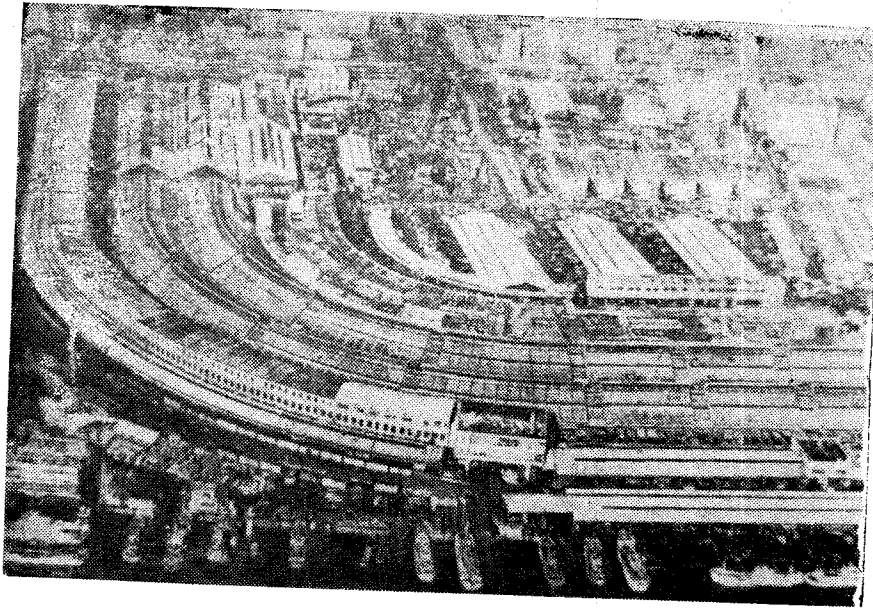


Fig. 4
Aerial view of one of the largest fishing ports in Japan, in Tokyo (Photocopy from 'Japan Today' issued by Ministry of Foreign Affairs, Government of Japan, 1969).

Ice plants and Refrigeration

All the fishing ports in Japan are established with ice plants, large or small, according to the requirements there and conveyor facilities for loading ice on to the vessels leaving for fishing operations as well as for transportation of fish, both fresh and processed. The ice making factories work almost all the year round. The easy and abundant availability of fresh water and electricity and the facilities of pier, sidings, etc. in the ports make the production of ice cheap and the ice producing business is prosperous. The production of ice per factory ranges from 10 tonnes to 250 tonnes a day. The cold storage houses available in the fishing ports range from Super A-class of under -25°C . to C-class houses of about -2°C . About 35% to 40% of the stored items are fresh fish and the rest are salted or dried fish.

Processing facilities

Apart from the above, most of the fishing ports are having processing facilities also. Among the different processing methods, freezing has become important. The fishes that are frozen are mostly mackerel, cuttle-fish, tuna, sardines, soles, whales, etc. Though the quantity of fish frozen in the ports is less when compared with that frozen on board fishing vessels themselves, the catches made from coastal waters by vessels without freezing equipments, are almost entirely frozen in the ports. Usually, the fillet part of the fish, after removal of the head, gut, etc. is frozen. The frozen fish is de-frozen at retail stores and sold to consumers.

Almost all the fishing ports are provided with factories for canning also. The high class canned fish such as crabs, salmon, tuna etc. are usually exported. The low class canned fish are sardines, horse-mackerel, saury, etc. Another industry flourishing in the fishing

ports is the fish-paste industry. The fish meat is washed well and dried in electric driers; then it is finely cut, ground and mixed with about 10% salt. The fish protein dissolves in salt and becomes a viscous paste. Sugar or seasoning is added to the paste and ground again. Flour of wheat or potato may be added to this preparation and the paste thus formed is made into various sizes and shapes by machines and the goods are packed in polythene packets of different sizes and marketed.

Contact facilities

For ensuring safe navigation and efficient fishing operations in areas far and wide, the fishing vessels in Japan are provided with radars, lorans, direction finders and other electronic equipments. The wireless-communication arrangements in the ports are effectively used in mutually contacting one another and in getting in touch with the fishing crafts during operations as well as during journeys and from the fishing grounds. Thus, when an emergency arises, the ships are able to contact the ports and get the necessary help

at once. Helicopters and other suitable aircraft kept ready in the fishing ports are despatched immediately to the spots where an accident takes place for saving the lives of the fishermen and for providing all possible assistance. By their mutual co-operation, the administrations of many a fishing port act as a single unit when an emergency arises. Besides, the fishing ports collect accurate data on climate and weather conditions for the purpose of broadcasting warning signals and weather forecasts from the port stations to the fishing vessels. Based on the information received, the fishing crafts alter or modify their programmes.

Spare parts and Electronic equipments

The spare parts required for the ship engines, for the mechanisms operating the gear, for the electronic make-up of the vessel, etc. are available in the depots and service centres located in the fishing ports. The service men of the companies dealing with the spare parts and electronic gadgets stationed in the ports immediately undertake the repairs and replace the defective components. In addition to

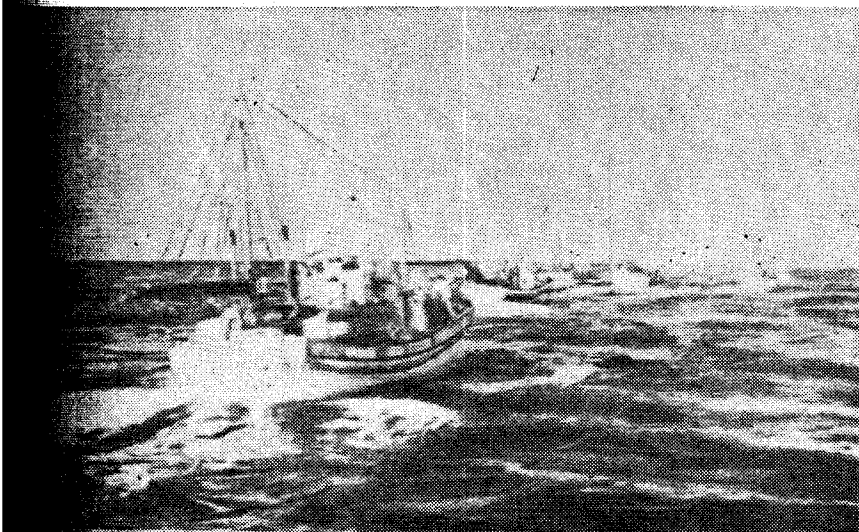


Fig. 5
A fleet of vessels nearing a fishing port with catches (Photo-copy from pamphlet on 'Japan', 1970).

these, fishing nets, floats, radio-communication equipments, echo-sounders, etc. are readily available for purchase in the stores run in the fishing ports on payment or on credit basis.

Ship-yards

All the major fishing ports in Japan have ship-building yards for the construction of large or small fishing vessels including factory-type ships in which processing work can also be carried out in the course of fishing operations. Besides, major work such as installation of the mechanical as well as electrical components and routine servicing are also undertaken in almost all the ports, both large and small.

Fishermen's Co-operatives

Fishermen's Co-operative Associations are organised in all the ports. These associations constitute the socio-economic foundation of the Japanese fishing industry and they play a vital role in the acceleration of its development and prosperity. The Co-operatives began functioning about fifty years ago; and, until that time there was a struggle between producers and merchants to take the leadership. After the Second World War, the producers have come to occupy a dominant position in the marketing business, a significant development achieved by fishermen's co-operatives. This has raised the socio-economic status of the fishermen to a considerable extent. At present, the co-operatives undertake the financial dealings, such as auction, tender, settlement of accounts, offer of credit etc. They also deal with fishery regulations, management, purchase of craft, gear, engines, fuel and the daily necessities of the members. Besides, they are also engaged in the technical

guidance of fishing activities, holding training courses, undertaking study-tours, supply funds for the education and welfare of children and mutual aid programmes. More than 90% of the Japanese fishermen belong to these co-operatives.

Administration of fishing ports :

Realising the fact that the facilities available in the fishing ports directly regulate the growth and prosperity of the fishing industry, the people and the Government of Japan play vital roles in the planning, construction, equipment and maintenance of the fishing ports. Since these ventures are expensive, time-consuming and impossible for a few fishermen to undertake, the central government treats them as public work and furnishes large subsidies. The sum of the national subsidies varies from 100% to 40%; in the latter case the balance amount is borne by prefectural government, city authorities or town administrations, as the case may be. The fishermen's co-operatives also obtain loan from the central government and finance the construction and equipment of ports. The fishing crafts make use of the ports regulated by the Fishing Port Law and the Harbour Law.

It may be seen from the foregoing outline that the fishing ports in Japan are self-contained modern entities. The Japanese people, by their mutual co-operation, effort and enterprise, have transformed their once archaic fishing landing centres into modern cities provided with all the latest facilities the mankind has invented for the material well being and growing prosperity of their fishing industry. Thus there is no wonder that they proudly refer to their fishing ports as "Fisheries-Cities".