

FISHERIES RADIO NETWORK IN JAPAN

by
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The fisheries radio network in Japan plays a most important role in the promotion of efficient fishing operations, especially as regards the location of schools. More than 3,000 fishing vessels have radio equipment and communicate between themselves as well as with the fixed stations. There are 77 fisheries radio stations on land throughout the Japanese islands forming together with fishing vessels the radio net-work.

Some of these stations are owned by the National Fisheries Research Laboratories, many by the prefectural fisheries institutions and a few by private companies.

The number of frequencies allocated to the fisheries radio communication is now 56, and the allocation is made according to districts and the type of fisheries.

Though the fisheries radio network is mainly utilized by large fishing boats operated on the pelagic waters, some coastal fishing boats, e.g. seiners and trawlers, also derive great benefit from the network. Above all, the network makes the most significant contributions to skipjack and tuna fishing, trawl fishing on the continental shelf of the East China Sea and Yellow Sea area and to whaling operations. The radio stations for the fishing in the East China Sea and Yellow Sea areas are located at Shimonoseki, Tobata, Fukuoka and Nagasaki, and these stations belong to the Shimonoseki Fisheries Radio Association, Tobata Radio Fishermen's Cooperative Association, Fukuoka Prefectural Research Institution and Nagasaki Prefectural Fisheries Institution, respectively.

Except for the Nagasaki and Fukuoka stations, the above licensees are private companies, and communication is made with their own companies' boats. The communications for the Antarctic whaling fleets are handled by the general coastal radio stations, and the three mother-ships of the Japanese whaling fleets closely communicate with catcher boats of their own fleets.

The main fishing fields (coastal whaling) are the waters adjacent to the Bonin islands and off Sanriku

district, and most of the catcher boats operated in these waters belong to the Taiyo Fisheries Co. Ltd. and the Nippon Fisheries Co. Ltd. Two land stations owned by private companies are utilized for these communications, namely the Ayukawa station of the Taiyo Fisheries Co. Ltd. and Onagawa station of the Nippon Fisheries Co. Ltd. These stations are not, however, equipped with transmitters, so they cannot themselves communicate with catcher boats, although the boats communicate mutually at any time.

The biggest radio network in Japan covers the skipjack and tuna fishing fields. The number of these boats all over the country reaches 1,000, and all prefectures facing the Pacific Ocean have one to three land stations and communication with these fisheries is continuous throughout the day on many frequencies.

Radio communication makes it possible to know the conditions of the fishing grounds and promote efficient production, as well as the location of each boat, and prompt action is taken if any boat is in distress. It also has countless other functions, such as communications regarding preparations for landing and marketing the catch or the preparation of fishing gear and materials for the next voyage.

These communications are carried on between stations and fishing boats, or between these boats from a purely commercial view point, but there is another government network for the guidance of fishing craft, namely the prefectural land stations which receive information from their fisheries guidance boats, and such information is broadcast to the commercial fishing fleets. However, the scale of this network is not large at present.

The only systematic analysis of these functions is carried on by the Tohoku Regional Fisheries Research Laboratory under the Fisheries Agency. The oceanographic environments, circumstances of the fishing grounds and other valuable information along the north-eastern sea area of the Japanese Pacific coast are sent via the Ishinomaki fisheries

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radio station, and in the high season of skipjack and albacore from April to June around the Izu peninsula. Similar information is sent to this sea area via the Yaizu fisheries radio station. One of the major functions of the Tohoku Regional Fisheries Research Laboratory is the research on skipjack fisheries, and the research covers the whole Pacific waters. The above-mentioned system will be expanded in the near future to the waters around Kyushu and Formosa, via the Makurazaki fisheries radio station.

The main work of this fisheries guidance system is to broadcast the synoptic isothermal chart, which is made up from data sent in daily from many skipjack fishing boats or whalers operating in these

waters, together with the oceanographic data sent from the fisheries guidance boats of each prefecture and marine observation boats of the National Fisheries Research Laboratories, Central Meteorological Observatory, Hydrographic Office etc. The results are then broadcast and are interpreted by the fishing vessels which make up their own isothermal charts on board so that they may study and investigate the daily oceanographic environmental conditions, such as the distribution of the water mass, ocean currents, up-wellings, current rips etc.

The Tohoku Regional Fisheries Research Laboratory trains fishermen to plot and interpret the isothermal chart, and fishermen have shown great interest in this study.

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FISHERIES EDUCATIONAL SCHEMES IN JAPAN

by

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The need for increased fish production and the consequent demand for a large number of skilled fishery workers has prompted Japan to organize and maintain fisheries education on a fairly extensive scale. Before the war, averaging the five years 1930 to 1934, the daily protein consumption per person in Japan was 66.7 grs., of which 11.7 grs. were animal protein (aquatic animal protein, 9.5 grs. or 81.2% and terrestrial animal protein, 2.2 grs. or 18.8%). Since it is desirable to take as much as 200 grs. of fish (100 grs. of which is edible, containing on an average 18 grs. of protein) per person per day, the amount of fish to be supplied for the population of 83,000,000 would be 6,059,000 tons a year.

The mechanization and capitalization of Japanese fisheries commenced around the end of the nineteenth century, and soon there grew a demand for trained workers for the industry. In 1898 and 1908 the steam whaler "Orga" (125 G.T.) and the steam trawler "Henne Castle" (169 G.T.) were brought out from Norway and Great Britain, respectively. In 1913 the number of steam trawlers in Japan amounted to 139 vessels. The total number of motor fishing boats was 1,000 in 1912; 8,000 in 1919; 15,000 in 1926; and, increasing rapidly, it amounted to 40,000 in 1932.

As early as 1895, some local fisheries schools were inaugurated, e.g. the Fukui Prefectural Obama Fishery School and the Iwate Prefectural Miyako Fisheries School; and thereafter, the number of such schools increased rapidly. In 1897, the Fisheries Institute of the Ministry of Agriculture and Commerce was inaugurated; this was the origin of the Tokyo University of Fisheries. In 1907, a Department of Fisheries was established in the Sapporo Agricultural School, which has developed into the present Fisheries Faculty of Hokkaido University. In 1908, a Department of Fisheries was instituted in the Agricultural Faculty of Tokyo University.

As of October, 1953, there were altogether fifty-six high schools in which fisheries courses were established. All of those high schools were located at fisheries centres, and the boys passing from local middle-schools entered, as a matter of course, the fisheries high school, which was sometimes the only high school in the area. The total number of such pupils, mostly sixteen to eighteen years of age, was 8,497 in April 30, 1951. All the fisheries high schools were public, mostly being financed by the respective prefectural governments. Fifty of the above fifty-six were full-day schools, the fisheries course of which usually included the three sub-courses, i.e. fishing,

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