

The Role of the Outboard Motor in Small Craft Mechanization Programs of Developing Nations

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Abstract

Beginning in 1912, O.M.C. began distributing outboard motors to aid fishermen in underdeveloped nations. Outboard Marine International S.A. was organized in Nassau in 1957. OMISA with the cooperation of CARE and FAO have obtained rewarding results in Ceylon, Puerto Rico, Jamaica, the Philippines, Ghana, and Nigeria. Current work is being done in Panama and Greece.

The use of 3 to 5½ hp. motors has allowed native sailing craft to return to port daily, thus improving quantity and quality of the catch. Maneuverability is provided for entering crowded harbors and combating tidal currents.

PARTICIPATION IN COMMERCIAL FISHERIES PROGRAMS of Outboard Marine Corporation, world's leading manufacturer of outboard engines, can in a sense be said to date back to 1912 when the parent company approached several New York concerns soliciting interest in the export of their newly-invented two-cycle outboard motor. At that time, the OMC parent firm was offering a one-cylinder,

two-cycle outboard motor weighing 65 pounds and developing 1½ horsepower, that sold for \$62 and could push a small fishing or recreational boat up to five miles per hour.

In 1912, the company, which only a short time earlier was struggling to survive, received export orders totalling over 1,000 engines. To the surprise of the outboard manufacturers in Milwaukee, a great portion of their early export outboards was used for commercial fishing purposes rather than for the powering of recreational small craft as originally envisaged. These early Evinrudes had gained such a reputation with the Middle East British Expeditionary Forces in World War I, where they were used to power transport dinghies towing barges and for river scouting purposes, that the post-World War I years saw a tremendous expansion in their use.

Meanwhile, another parent firm of OMC embarked upon an energetic export sales drive in 1921, and by 1932 had placed Johnson outboards in service in such diverse areas as Albania, Angola, China, the Caribbean, Burma, Kenya, Latvia, Lithuania, Madagascar, New Zealand, Peru, Persia, and numerous other countries.

In spite of the increasing export sales of outboard motors throughout the world in the 1920's and 1930's, the two-cycle outboard motor continued to be regarded on most continents as a recreational toy rather than a tool of commerce, a concept which was surprisingly not dispelled in many instances until long after World War II.

With the organization of Outboard Marine International S. A. in Nassau in 1957, however, tremendous strides have been made in the mechanization of native fishing industries with the modern two-cycle outboard motor. Acceptance of the outboard motor by the fishing industries of scores of countries in the five years from 1957 to 1962 has been more widespread and general than occurred in the entire 45 years before 1957.

Outboard Marine International S.A. currently works in close collaboration with international organizations such as CARE and the Food and Agriculture Organization of the United Nations (FAO), both of which are endeavoring to improve the living conditions in many countries. Outboard Marine has a profound interest in these far-reaching small craft mechanization programs and has provided both FAO and CARE with outboard engines to help fishermen produce more food for hungry populations. In cooperation with CARE, which maintains missions in approximately 30 countries where Outboard Marine International S. A. has had representation for many years. OMISA distributors provide assistance in helping these joint mechanization ventures get underway.

Especially rewarding results have been noted within the past five years through OMISA participation in the fishery mechanization programs for the native small craft fleets of such nations as Ceylon, Puerto Rico, Jamaica, the Philippines, Ghana, and Nigeria.

Currently, OMISA is cooperating with CARE in mechanization programs for small craft fishing boats in Panama and Greece, as well as in several other nations. One of the most interesting of these programs is underway in the Greek fishing villages of Psarades and Sayades, where fishermen traditionally labor 18 hours daily wresting a living from the sea. So serious has been the plight of the fishermen of Psarades and Sayades that the government has halved their income taxes.

CARE and OMISA decided to cooperate in a program designed to explore the possibilities of modernizing and improving age-old fishing conditions of the two

villages, to illustrate the potential of such programs for all of Greece as well as the two poverty-stricken fishing villages. Once the decision was made, swift and decisive action was taken to concretely illustrate the advantage of the modern two-cycle outboard motor over traditional sail and oar.

OMISA and CARE provided technicians, interpreters, and staff personnel to carry out the outboard mechanization program. Fishermen were told of the activities' scope and goal through their cooperatives and invited to join the project. Those who accepted were assisted in building outboard wells inside their boats to provide for most efficient utilization of the motors. After several hours of preliminary instruction, participating members of the fishery cooperatives were given an opportunity to operate the motors on several pilot craft. Conduct of the fishermen revealed that they had thoroughly grasped the fundamentals involved in operating the engines. From their handling of the engines and their ability in simple maintenance of the motors, they showed that rudiments of operation were understood.

Because of the remote location of the area and the eventual necessity for complicated repairs, the local Greek Government officials agreed with OMISA and CARE representatives to further assist each town cooperative in sending a delegate fisherman to the repair shops of the Athens outboard distributor for advanced instructions.

As a result of the joint CARE-OMISA-Greek Government project, notable results have been reported. Fishermen now move to their fishing grounds in one-fifth the time previously required, virtually eliminating the age-old practice of remaining out overnight in their boats. Greatly-increased peak season catches are reported as a result of the elimination of fatigue which acted as a deterrent to productivity. Greater profits are made possible through the delivery of fresh catches transported rapidly to waiting markets.

The Greek Government has hailed the project as a success. The Minister of Northern Greece, the Fisheries Department of the Ministry of Industry, and the Agriculture Bank of Greece have lauded the program.

One of the most rewarding results accruing from outboard mechanization of the native fishing fleet of Psarades and Sayades cannot be measured in dollars or drachmas. Greek officials note that fishermen no longer must spend 26 to 30 weeks per year away from their wives and children to eke out a bare subsistence from the sea.

Today, the men of Psarades and Sayades travel to and from the fishing grounds in less time, speed the marketing of their catch, and reduce the danger of spoilage. Most important of all, their increased efficiency provides more vitally needed protein food for the people of Greece.

As populations increase and as man depends more and more upon the sea for vitally-needed protein, sea and inland water anchorages have become crowded, forcing commercial fishermen to find docking space away from their marketing areas, often up a river or canal. In countless anchorages, commercial sailing craft experience increasing trouble in moving up long narrow passages to mooring spots, especially when the sailboat's power source, the wind, is blocked.

For a sailboat to maneuver effectively in such circumstances, auxiliary power is a necessity. The sailboatman can quickly and safely wend his way up channels, around boats and piers going to and from his docking space, if he has an outboard motor.

Surprisingly, a small three to 5½ horsepower motor is effective enough to propel even heavily-laden fishing vessels of 30 to 35 feet in length into anchorages without strong currents. The light weight of the modern outboard (33 pounds for a 3 horsepower and approximately 56 pounds for a 5½ horsepower) is another advantage on small fishing boats when stowing time comes. In addition, the corrosion-resistant features combined with low cost, easy maintenance, instant starting, and sound-engineered silencing are winning the approval of sailboatmen in virtually every port in the world.

By outfitting their craft with hand outboard engines for auxiliary power, fishermen of developing nations from the Arctic to the Equator are discovering in ever-increasing numbers that they can reach marketing outlets even in dead calms and against unfavorable tides and currents. Fresher catches in shorter time add up to greater profits and more protein for growing populations. Waiting out unfavorable tide, wind, or current conditions is a thing of the past to the modern commercial sailboatman, who quickly recognizes the value of an outboard power plant.

In the sometimes unpredictable waters of the Bahamas, for example, fishermen no longer philosophically anchor their catch-loaded craft in open water near waiting market ports until tides or winds change favorably to permit passage and anchorage. Today, more and more Bahamian fishermen lower their sails, attach a small outboard to the stern, and rapidly power their way to a waiting market.

In the Philippine Islands, 20 or 30 fishing boats of a mabarrio (village) often fish as a fleet. Catches no longer spoil and fishermen are not forced to wait for relieving winds to follow calms. One of the boats of the small-craft fleet now simply unships a small outboard motor of from 5½ to 18 horsepower, attaches it to the transom, and tows the entire flotilla tandem-style to safe anchorage at the home harbor.

Experience has proved that outboard motors can be fitted to every type of small and medium-sized fishing vessel. Many boatbuilders today equip their craft with brackets for easy outboard mounting and virtually all boatyards and marine suppliers throughout the world stock motor mounts. They normally require only six bolts, two pieces of wood, and two iron supports. In Ceylon and Borneo local blacksmiths make simple transom installations of strap iron and wood.

Some fishermen mount the motors on sliding transoms which enable the shaft and propeller to be lifted clear of the water when the motor is not in use, while others use a hinged transom with block and tackle arrangement to lift the motor clear when the boat is at anchor or under sail. Outboard motors with shaft lengths of 20 rather than the standard 15 inches are generally favored by commercial fishermen for the sailing vessels.

Jan-Olof Traung, of the Food and Agriculture Organization (FAO) of the United Nations, pointed out some reasons why commercial fishermen are turning more and more to the outboard motor: "They are easy to install on almost any craft. No hole has to be bored for the propeller shaft tube; no rudder has to be arranged in the propeller stream; no casing has to be made for the engine; no fuel tanks, fuel or cooling water pipes have to be installed. Outboard motors have many advantages over inboard motors."

A study recently carried out by FAO shows that by 1970 the peoples of certain Far Eastern countries may not have more than 10 grams per day of

animal protein in their diets, as compared with the present average of 65 grams in North America. To meet this challenge, the major fish producing countries of the world are providing greatly increased quantities of frozen or processed fish caught from large deep sea vessels usually powered by standard diesel engines. In subsistence fishing, however, usually carried out in coastal areas near the home community of the fishermen, the outboard is favored. Subsistence fishermen ordinarily take fish for their own consumption and the magnitude of the fishing operation is usually small. The fish taken is normally consumed in the fresh state.

Many nations of the world have turned to the outboard motor in programs designed to provide fish for local and regional markets. The fish are sold or bartered, often fresh, and in general processing is limited to cold storage or to the preparation of a product for local or regional consumption. Fish are frequently landed at or near established marketing centers or transported to such centers.

One of the most famous of largely unexplored areas of Africa is the fabled Timbuktu area of the Mali Republic. The economy depends in large part on the successful transport of salt. Long considered the white gold of Africa, salt arrives in Timbuktu from mines in the middle of the Sahara, and is then loaded into hundreds of outboard-powered dhows and taken down the Niger River to be traded and valued throughout much of the continent as a common currency as well as a vitally-required mineral. The role of the outboard motor here is considered virtually indispensable to the salt trade, as it is to the fishermen in other areas of Africa.

Developing Tropical Atlantic Fisheries Through International Research

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Abstract

The Intergovernmental Oceanographic Commission of UNESCO, at the meeting of the Second Session in Paris, September, 1962, adopted an international program of physical, chemical, and biological research for the tropical Atlantic. Mr. Vernon E. Brock, Bureau of Commercial Fisheries, was appointed as International Coordinator. Seven nations have committed a total of 15 research vessels to this program. Two synoptic surveys, one each during midwinter and midsummer, are scheduled for 1963. The results of these surveys, to be published both as data reports and atlases, will be used to design a program of research concerned with the character and magnitude of the pelagic fishery resources of the tropical Atlantic.

THE INTERNATIONAL COOPERATIVE INVESTIGATIONS of the Tropical Atlantic will involve a minimum of fifteen oceanographic vessels of seven nations together with research workers from at least three additional nations. Results of these investigations, scheduled for mid-winter and midsummer, 1963, will