

Indo-Norwegian Project Develops Indian West Coast Fisheries

Kåre Larssen

Born in 1937 on the small fishing island of Espevaer, on the west coast of Norway, Kåre Larssen, author of this article, joined the island's trawling fleet at the age of 15.

He quickly progressed eventually becoming a skipper and was then appointed Projects Manager. In 1961, he joined the Norwegian Agency for International Development and was appointed Assistant Fisheries Leader of the Indo-Norwegian Project.

He is now engaged on fixed term assignment with FAO (1966).

WORLD WAR II brought in its wake a deep realization of the need for peace and friendship among nations.

The war-stricken countries of Europe recovered relatively rapidly, thanks partly to aid from America. By 1952, Norway could again ensure her people full employment, increased production and a high standard of living. There was growing consciousness among Norwegians of the interdependence of the nations of the world and of the widening gap between the industrial countries of the west and the underdeveloped areas of Asia, Africa and Latin America.

By then the United Nations had initiated several technical assistance programmes for the benefit of developing countries, providing technical experts, services and training. Norway had participated in these programmes from the start, but felt that the aid might be expanded to include modern equipment and machinery. Accordingly, in the summer of 1952, the Norwegian Parliament, by a unanimous vote, established the Norwegian Foundation for assistance to Less Developed Countries.

Tremendous Potential

Norway, experienced in fishing, thought it might best be able to give technical assistance in this industry. And India, with its coastline of 4,074 miles and a fishable marine area of more than 100,000 square miles offered a tremendous potential for the development of fisheries.

There was a need for development. India produced about a million tons of fish a year whereas the estimated requirement was for 4.4 million tons. This great gap had to be filled, and ways of increasing production had to be found to meet the growing demand for protein food. This problem brought India and Norway together under the auspices of the United Nations on October 17, 1952, a tripartite agreement was signed by Norway, India and the United Nations for the furtherance of an Indo-Norwegian Project in India.

Up to that time the Project was only on paper. Generally speaking, the aim was to develop the fishing industry and improve living conditions in the communities concerned, or more specifically:

1. Increase production by improving fishing methods.
2. Increase profits by better utilization of the fish.
3. Improve sanitary conditions and health of the population.
4. Improve the living standard of the community in general.

Norway was to conduct certain development projects in co-operation with the Indian Government which in turn would be responsible for part of the expenses involved. According to the agreement, the United Nations could also be invited to take part in the planning and realization of development projects and offer technical assistance as well.

In October 1952 a delegation from the Development Agency travelled to India to discuss possible project

areas. After negotiations in New Delhi the delegation visited the State of Travancore-Cochin in the south west coast of India, where the project was supposed to concentrate on the development of the coastal fisheries. In 1956 this State was reorganized, given new boundaries and the ancient name of Kerala.

In January 1953 an amendment to the agreement was signed in New Delhi, describing the new project area and deciding on administration and budget for the project. The aims of the project were as stated above.

The project selected a limited area, two fishing villages about seven miles north of the city of Quilon in Kerala. Depending on the success of the project, the idea was to expand to other fishing communities along the coast.

Immediate practical problems facing the Indo-Norwegian Project were mechanization of fishing boats, facilities for maintenance, introduction of new fishing gear and methods, ice factories, cooling vans and boats for hauling fresh fish. A sales organization for marketing the fish had to be set up. Improved sanitary conditions depended on a better water supply and modern health station.

Norway agreed to provide the necessary machinery and equipment and the technical and medical experts. Indian fishermen and technicians were also to be given the opportunity of training and studying in Norway. The United Nations was invited to give technical assistance, and the Indian Government was to provide building materials and manpower.

After three years' experience in the Quilon area, second amendment was signed to provide for expansion. A second fishing center was to be established in the city of Cochin, the only natural port in the area. In Quilon, activities were to be expanded.

Establishment of the fishing center in Cochin was a logical step. The Project had imported three large fishing vessels from Norway to conduct oceanographic research and to try out various types of modern fishing gear along the coast, Exact knowledge of fish resources and marine conditions was vital for the further development of the fisheries. And the fishing vessels had to be stationed at Cochin, the only port.

Lack of harbour facilities

The lack of harbours along the Indian coast had prevented development of modern fisheries. Most fishing is done from the sandy beaches in vallams, or canoes which are taken back to shore through the breakers after each trip. The Project, therefore, tried to develop off-shore fishing, first by mounting motors in the old vallams, and then by constructing a suitable motorboat.

Mechanization of off-shore fishing was not successful. The boatyard produced a series of 22 ft motorboats, but the programme was discontinued in 1957. A larger type was then constructed to be operated from small harbours and estuaries. The new type turned out to be much sought after by fishermen who have gone through the project-training course. They are able to buy their own boats on very reasonable terms.

Most of the boats produced by the Project boat-yards to day are from 25 to 36 ft. and are equipped as trawlers. They trawl for fish and shrimps and have had exceptionally good catches. Mechanization is now generally accepted, and more than half of the fishermen in the Project area have abandoned the old methods and have acquired motorboats. (See *Fishing News International* Vol. 3 No. 2 1964: 'Fishing off the West Coast of India').

The project administration realized that the fisheries would not be developed without adequate oceanographic research. In 1961, therefore, the Norwegian Development Agency provided a modern research vessel, the *Varuna* which was given to the project. This was the largest research vessel in India at the time, and it became a decisive factor in research and of great significance for the Indian fisheries as a whole. The *Varuna* is also training ship of Indian oceanographers, skippers and engineers.

The renewed agreement of 1956 included plans for building a reservoir which would give 100,000 Indians a supply of safe drinking water. The water had to be moved to 28 kilometres away to the Project area, and it soon appeared that the cheapest way of piping water was to set up a factory for the production of concrete pipes at the Project. The Pipe factory began production in the autumn of 1956 and completed the necessary pipes in the course of three years. The waterworks was completed by 1962 and the population in the Project area and the city of Quilon are now supplied with fresh, good water.

This pipe factory has been turned over to the Kerala Government and is the first part of the Project to be handed over. The aim of the Projects is to turn everything over to Indian administrators and it is with this aim in mind that there is now a joint Indo-Norwegian administration.

The main administration for the Project lies with the Standing Committee, composed of representatives of the Central Government, the respective States in which the Project operates, the Norwegian Embassy in New Delhi, and the Norwegian Project administration. The Standing Committee meets twice a year under the leadership of a chairman appointed by the Central Government. The Director of Fisheries in Kerala was the nominal head of the Project until 1962. Day-to-day administration is done by the Norwegian Project Director and his Indian counterpart. Most of the other positions in the Project are divided in the same manner, with the aim, as mentioned, of having the Indians take over the entire administration.

In 1961 the Project was enlarged once more by a new amendment to the original agreement, providing for projects in other Indian States. At the same time plans were made for a new station in Cannanore in northern Kerala.

The first concrete result of these plans was evident when a new fisheries station was officially opened in Mandapam, Madras. All the new stations are organized along the same lines as the main project, except for a new factory in Mandapam for the production of

fishmeal. This factory, which can process 60 tons of fish in 24 hours, will provide work for more than 250 fishermen and factory workers.

These expansions have been made at the request of the Indian authorities who have shown great interest in the fisheries project. India's financial contribution to the Project has grown with the Project itself and is today larger than ever. In the course of the first ten years, Norway's contribution was 50 million Crowns, as against India's eight million. In the year 1963–64 however, the Indian project budget exceeded that of Norway.

In April 1963 the Fisheries Division moved from Quilon to Ernakulam. Only one Norwegian expert was left to work with the fishermen's Sales Organization. As from April 1964 this sales organization has been working independently. The project is represented only by two board members.

Providing equipment

Norway provides technical and administrative assistance and special equipment which is not easily available in India, such as boats, engines, fishing gear, machinery for boat building yard and mechanical workshop, ice factories and freezing plants, equipment and gear for training purposes. In 1965 the Fisheries Project had 30 Norwegian employees.

The experts work at the various fishing stations, which are supposed to serve as models for Indian fishermen providing a wide scope of demonstration and training

possibilities, mechanized fishing, processing, marketing, boat building, mechanical workshops and maintenance.

In May 1964 the Norwegian Development Agency and FAO signed a contract for the establishment of an advanced institute of fisheries in Bombay. The project is financed by the Indian Government and the UN Special Fund. The cost of administration and purchase of equipment will be covered by the Special Fund. India's share amount to ten million Crowns and the Special Fund will provide 4½ million during this first three-year period.

The Indian Government will build and equip the institute in Bombay as well as provide the necessary buildings for fishing stations, accommodation for students and housing for the institute leaders. India will also appoint the director, the teaching staff and other personnel.

FAO's responsibility, which has been assumed by the Norwegian Development Agency, will be to provide the Project Manager, as a consultant to the institute director, and a professor of fishing technology and economics. FAO will in addition provide scientific equipment for the laboratories, workshops as well as library and a fully equipped 50 ft. fishing boat.

The Institute's goal is to train administrators for the expansion of fisheries in the various coastal states. Qualified candidates from other countries in south East Asia may also apply for admission. Twenty-five candidates a year, all of them with university degrees, will be admitted to the two-year course. The Institute will not educate specialists, but will give a broad

orientation in the problems and practical aspects of the fishing industry.

Deep sea work

In the expanding project in Kerala the emphasis will be on deep-sea fishing. Two stern trawlers have been purchased and a new research vessel for outrigger trawling has been ordered. These boats will soon be sailed to India and put to work doing deep-sea fishing in the Bay of Bengal, the Arabian Sea and the Indian Ocean. In the shopping centre of the city of Alwaye, a growing industrial centre in Kerala, a modern Norwegian fish market is being built; the first fish market of its kind in India. It will be part of the plan for teaching Indians how they can make better use of the increasing catches as a result of the project in Kerala.

The store will also introduce various new fish products. Freezing plants which are now being constructed in India will have air conditioning and modern sanitary conditions which will ensure hygienic handling of the produce. It is hoped that the Indians will be able to compete with shrimp from the Gulf of Mexico on the American market.

There are plans too for cooperating with the internationally known Norwegian firm, FRIONOR, in marketing shrimp in the United States. When Norway began its Project in India 14 years ago, not a single shrimp was exported. This year, shrimp exports are expected to give return of more than 100 million Crowns.

Fishing in India as whole, as well as in our own Project, is in a period of active development. The Indian authorities realize that fisheries are an industry worth developing. Mechanized fishing has come to stay and will be a determining factor in the development. Indian-Norwegian co-operation has been officially praised and commented. Indian authorities often refer to the Project as a model for aid to developing countries, and turn to it for information.

Respected

Norway and the Project are respected for the job they have done, but they cannot rest on their laurels. The responsibility resting on the Project is greater today than ever before. Politics will come into the picture more and more as local politicians try to obtain for their respective districts as much as possible of the 1,140 million Rupees which the Government will be investing in fisheries during the next five years.

Exports of shrimp, which began in 1953, have increased constantly. Politicians are aware of this, and State marketing organizations and other forms of nationalization within the fisheries sector have been suggested. Various committees study the development of fisheries from time to time. Foreign interests are beginning to look upon India with new eyes. The American firm, Van Camp Sea Food Company, is going to build a large fishery and cannery in Cochin for shrimp, lobster and tuna. Indian factory owners also see the possibilities and are building their own modern fishing boats.

Cannanore is also one of Norway's pilot projects in India. It is the third and last in Kerala State, comprising freezing plant and ice factory, boat building yard and training center for fishing skippers.

A new-patented method for producing lightweight cement blocks for breakwaters will be tried in Cannanore. The inventor is one of the project's engineers. Fishermen have had to put ashore on the beach, but now they will be able to anchor up at the breakwater. This breakwater will provide protection from wind and currents, particularly from the south-west monsoon which lasts from May until September. The blocks will be economical to produce since they use 40 per cent less cement than most blocks of this type, and they can be made from sand from the local beach. This will be the first breakwater constructed by this method, but within a short time, others will be built throughout the world.

New harbour

The station in Karwar, in Mysore State is concentrating on a new harbour which will be completed by the end of 1966. The fishing station will be like the stations in Quilon and Ernakulam. Mechanized boats of 28 ft. to 45 ft. do trial fishing along the coast, whereas larger research vessels do deep-sea fishing.

For ages Karwar has been a centre for mackerel and sardine fishing, but with old-fashioned gear, which has now been replaced by trawlers and purse seines. Previously the catches had to be taken all the way to

Bombay; today they are delivered to the Project, which takes care of inland marketing, bringing fish to places where there was previously no delivery.

An era of prosperity is in view for the fishermen of the Ramnad Mandapam coast. This area has been selected for deep-sea fishing by the Indo-Norwegian Project. The Madras government in collaboration with the Norwegian Foundation, decided to reorganize the fishing industry on a stable footing on the East Coast, and made Mandapam the centre for such development. This project, the first of its kind in the State, will offer technical know-how and supply modern equipment to fisherman for deep-sea fishing operations.

The Project envisages construction of a modern boat-building yard on the Norwegian pattern, with a workshop, installation of two cold storage plants with a capacity of 200 tons each, and establishment of a school for training young fishermen in the operation of mechanized gear.

Subsidization plan

The plan is to supply fishing implements and boats to these trained men at subsidized rates. The main consideration which influenced the decision in favour of Mandapam was its particular location, the strip of Land projecting into the Bay of Bengal with Park Bay on the north and Gulf of Mannar on the south, which affords scope for fishing throughout the year. Also, concentration of fishermen communities was mainly in this area, and there was enough vacant land to build

a boatyard, workshop, fishmeal plant and a school. At the school young fishermen will be trained in all phases of mechanized fishing under the guidance of Norwegian experts. The school received 60 fishermen to begin with but hopes to raise the number to 120.

Boats will have all modern equipment and will be able to communicate with headquarters on shore by radio. Three Norwegian trawlers were assigned to Mandapam several years ago, and they have succeeded in locating promising fishing grounds. The oceanographic survey conducted by the Central Marine Fisheries Research Station at Mandapam will be of great significance for the whole coast.

There is demand for fish in all the interior districts, but it has been difficult to transport fresh to the far away markets. This problem will be solved when each district gets its ice factory and refrigerated delivery vans.

In 1963 and in 1965 the research vessel *Varuna* operated in the coastal waters off the west coast of India and in the adjacent waters of the Laccadive and Maladive archipelagoes. Research cruises have also been undertaken in the equatorial region of the Indian Ocean, in the Gulf of Mannar, Palk Bay and off the Indian east coast from Pal Bay to Vizag.

Most of the material collected is still being studied, but will in due course be made ready for publication. We will then get all scientific data from the research trips and a report on the technical operation of the *Varuna* as well.

Highly Satisfactory

During her four years of operation, the *Varuna* has proved to be highly satisfactory as a research vessel. No major defects have been reported. The Vessel has covered a total of nearly 135,000 nautical miles and has taken some 3,000 oceanographical stations during her 300 days at sea every year.

The operation of the vessel has been conducted in cooperation with the Central Marine Fisheries Research Institute. About 60 of the Institute's scientists have taken part in the cruises and are working on the material collected.

It seems that the fisheries outside the 50-fathom limit most probably are of small commercial value. Fisheries off the west coast will accordingly for a long time still be concentrated in coastal waters, and research should therefore be emphasized in this area. Effort should be put in correlation of meteorological and oceanographical data, and plankton samples should be examined quantitatively and correlated with hydrographical data.

Another agreement

In June 1963 still another agreement was signed by India and Norway with regard to the health work in the entire project. Originally, the Fisheries Division and the Health Centre were one project, but the Health Centre is now an independent project, under the Department of Health in Kerala, whereas the fisheries projects are supervised by the Central Government.

The Project has pioneered in India in developing motorized fishing, and in developing new methods of fishing, processing and distribution. Progress was slow the first year, but as the Project gained momentum, it spread, first along the coast of Kerala, and then to other Indian states. Today there are 1200 motorized boats in Kerala, and new boatyards and freezing plants are appearing in increasing numbers.

One can in justice say that the Indo-Norwegian project has met the challenge of our age. Its progress has made for higher living standard of the Indian fisherman and shown that more developed nations can make a vital contribution to fishing progress where it is most needed.



Reproduced from
Fishing News International
Vol.5 No 3, March 1966.