LETTER FROM BOMBAY

India eyes the ocean's resources

Oceanography institute, five-year plan, stimulate resource development

by S. K. Ghaswala

With a 3,500-mile-long coastline and more than 28 million square miles of oceans rich in food and mineral resources, India considers oceanography to be of crucial importance. When the activities of the International Indian Ocean Expedition came to an end in December 1965, the Indian Government did not let the impetus slide. It accepted the plan prepared by the Indian National Committee on Oceanic Research to set up the country's first National Institute of Oceanography. The institute started functioning in 1966 with Dr. N. K. Panikkar, a noted fisheries biologist, as its director. According to him the Indian Ocean, which now yields just 2.5 million tons of fish catch, can by proper exploration be made to yield eight times that amount. Furthermore the Arabian Sea harbors a rich variety of fish, and the Bay of Bengal contains silicates and other products rich in nutritive value. Considering that more than a quarter of the world's population lives on the rim of the Indian Ocean—undernourished and underdeveloped—the value of fish food for the country's teeming millions becomes an immensely significant goal for the Institute of Oceanography.

The main unit of NIO is at Goa, on India's west coast; another is at Bombay. In addition NIO has a biological center at Ernakulam, in south India; a physical oceanography division and a biological oceanography division also at Ernakulam, and a Planning and Data Division at New Delhi. During its first four years the NIO has undertaken or laid plans to undertake a variety of work, and seems likely to come up as one of the country's most useful research institutes.

One of the major targets of Prime Minister Indira Gandhi's fourth Five-Year Plan covering 1969-74, already delayed a year and offered to Parliament only last month, is food production. This is predicted to reach 129 million tons by 1973-74. Its blueprint for deep sea fishing as a supplementary food producing item is impressive. The targets are a trawler fleet of 300, an armada of 5,500 mechanized boats in addition to some 8,000 already in operation, and a string of fishing harbors with refrigeration and processing facilities along the coastline.

These facilities, when made available, coupled with the fact that off the coast of Kerala on the western shores there exists one of the world's richest fishing grounds, clearly indicates that India can become a major world center of fish food production. The 300-mile coastline, 200 square miles of backwaters, 3,000 miles of rivers and canals and more than 10,000 acres of paddy-field prawn-filtration grounds worked by 83,000 fisherfolk off Kerala, all help make the area the source of more than a fourth of India's total annual marine catch of 300,000 tons.

According to V. V. Dev, chairman of the Marine Products Export Promotion Council, exports of fish and fish products from India during 1969-70 have already reached $44 million, representing a tonnage of 31,695 compared with exports of $33 million in 1968-69. The United States is one of the leading markets. These exports consist mainly of frozen shrimps, prawns, frog-legs and lobsters. Frozen shrimps constitute the largest single item, amounting to two-thirds of the tonnage.

In this task the United Nations is assisting India in its deep sea exploration, especially for prawn and lobster beds. The Deep Sea Fishing Station at Bombay's Sassoon Dock has helped significantly in this work. Soon a few imported vessels and a number of new trawlers made in India and equipped with latest electronic navigation instruments will be added to the station's fleet. A fishing harbor is also being planned at Panaji, Goa, next to the 300-acre site of NIO, and a $1.4 million research vessel to be built abroad but based on Indian designs is also projected.

In spite of Kerala's progress in fisheries one of its serious problems is the lack of sufficient trawlers of large size. Also, if exploration is not moved further into deeper seas, the indiscriminate catching of shrimp in shallow coastal areas before they have time to move out and grow may soon exhaust the entire shrimp ground. Since the currently used trawlers can go only 10 to 15 miles offshore, larger trawlers are essential for both conservation and deep sea exploration.

Yet another activity in oceanography recently undertaken is the offshore exploratory drilling for oil. The first drill was sent down just three months ago in the Gulf of Cambay about 30 miles off Bhavnagar on India's west coast. These efforts are undertaken by the Government's Oil and Natural Gas Commission which has set itself the task of increasing the country's annual output of crude oil from 3.5 million tons at present to 14.5 million tons by 1978-79. More than 4 million tons of that is to be obtained from offshore drilling. Proposals are also afoot for drilling for oil next year from a rising bank about 15 feet below the sea surface close to the present site, and in 1972 drilling operations will commence off the coast at Bombay.