

Fisheries Forefront: What's Happening in the Indo-Pacific

Australia

- Although the common carp *Cyprinus carpio* is a much sought-after foodfish in Asia, it does not enjoy the same popularity in Australia. However, the Government is out to change all that. The Department of Conservation and Agriculture of the Capital Territory is promoting capture and consumption of the species from local waters where it is a pest, and is dispensing carp recipes and promoting techniques to catch the fish. No special bait is needed; table scraps will do, for carp can reportedly be attracted by canned sweet corn, small boiled potatoes, and dough.

To raise status of carp in the eyes of consumers, one fish market in Canberra went so far as to display a gilled and gutted carp labelled "Kharp" selling for A\$3.30/kg, in comparison to mullet at \$2 and prime snapper at \$4.50. (Source: Australian Fisheries, Oct. 1978)

- Fish stocks within Australia's EEZ will be studied by three research teams set up by the CSIRO Division of Fisheries and Oceanography as a prelude to developing a fisheries management regime. Target groups include highly migratory species, tropical species, especially on the northwest shelf, and temperate species, particularly in the Great Australian Bight. Besides acquiring adequate catch and biological data for exploited species, scientists will gather information on interdependent species and relevant ecosystems which will augment the standardized data gathered by fishing fleets themselves, in addition to organizing the data collection by the fishing fleets and interpreting the data collected. (Source: Australian Fisheries, Oct. 1978)

- Two new deepwater fishing grounds discovered off Australia have

triggered rapid conversion of existing vessels and drafting of plans to build new trawlers. The new grounds lie off the west coast of Tasmania and off S. Australia. (Source: Fish Market News, T-86)

India

- The International Development Association (IDA), an affiliate of the

World Bank, will help finance two priority development projects in India, one of which is designed to increase shrimp and fish production and incomes of fishermen in Andhra Pradesh State. A credit of \$17.5 million will defray 48% of the project's total cost and will be applied to improve and expand existing harbor facilities at Vishakapatnam, Kakinada, and Nizampatnam, expand the mecha-



nized fishing vessel fleet, provide village access roads and water supply to help traditional fishermen in three leading fishing districts in Andhra Pradesh, and provide credit for seafood processing facilities at Vishakapatnam and Nizampatnam. Project investments are expected to yield annual incremental landings of about 36,000 tons of fish and shrimp worth \$29.4 million. (Source: IDA News Release 78/81)

- Because of potential benefits to be derived from use of algae as fertilizer, fuel, and food. India has instituted the All-India Coordinated Project on Algae (AIPCA) sponsored by the Department of Science and Technology, Government of India, with financial support of the Tata Energy Foundation and institutional support from the Indian Council of Agricultural Research, Council of Scientific and Industrial Research, and the Indian Council of Medical Research.

Bluegreen algae may be used as a fertilizer, as demonstrated by adaptive research trials conducted by the Indian Agricultural Research Institute. Scientists found that the algae could result in savings of chemical fertilizer of about 30% when applied in rice cultivation. A village-level extension program on use of bluegreen algae as a biological input in rice cultivation was intensified in Tamil Nadu in 1978, and because of its success, the media are now creating an awareness of the new technology.

A second program under the AICPA has been taken up by the Central Salt and Marine Chemicals Research Institute. Bhavnagar (CS-MCRI) and focuses on uses for seaweeds. Processing technology for preparing liquid seaweed fertilizer capable of providing micronutrients for crop plants has been standardized and the product will soon be ready for field testing. Studies on fermentation of algae for producing methane are also in progress at CSMCRI.

A third project, also under the aegis of AICPA, involves work on large-scale culture of *Spirulina*, a protein-rich alga suitable for animal feed. This alga has been successfully grown in raw and settled sewage at the National Environmental Engineering Research Insti-

tute, Nagpur, and now a continuous system is planned for its mass production and sewage reclamation. (From Indonesia Observer 13 December 1978).

Japan

- The first attempt in the world to raise newly hatched yellowjack is being made by the Marine Palace (Oita Ecological Aquarium) of Japan. In summer 1978 they expected to produce 100,000 newly hatched yellowjack.

The Aquarium developed a system in which a doughnut-shaped, tidal-flow type tank with circumference of 61 m is used. Spawning is artificially controlled through regulation of water temperature.

Experiments in 1977 showed that 0.25% of the newly hatched yellowjacks reach 5 cm but the Aquarium expected the survival rate to rise to 5% in the near future. (Source: Tech Times, 7/78, p. 7)

- Japan's total fish catch for 1977 was 10.7 million tons, an all-time annual high and the fifth consecutive year since 1972 that annual catch has exceeded 10 million tons. (Source: Fish Market News, T-86)

Philippines

- Five new regional fishing ports and marketing complexes carrying a ₱245 million pricetag are to be added to the Philippines' existing landing facilities within the next 3 years. The ports, sited in Dalahican, Quezon; Sual, Pangasinan; Camaligan, Camarines Sur; Pala-pala, Iloilo; and Sangali, Zamboanga City, are being built by the Philippines Fish Marketing Authority (PFMA) with a loan from the Japanese government. According to the general manager of the PFMA, Attorney Benito Q. Bengzon, these port and market complexes are included in the Philippines' five-year development plan to improve and coordinate marketing and distribution of fish in the country. (Source: Bulletin Today, 16 November 1978)

- Self sufficiency in fish and fish production in the Philippines is no longer just a distant goal of development planners. Instead, it may be just around the corner if the Bureau of Fisheries and Aquatic Resources has its way. BFAR Director Feliz Gonza-

les reported that fish production could reach 1.57 million metric tons 1978, only about 9800 tons short of the estimated 1.58 million mt effective demand for fish.

About 1.5 million Filipinos are directly employed in the fishing industry, and the ranks swell further if one counts those employed in fish-related jobs like fish canning and drying. Thus, increased production could have impact on many peoples' livelihood, aside from increasing the food supply. (Source: Bulletin Today, 2 September 1978)

- Frozen tuna continues to top the list as the Philippines' most lucrative fish export product, having earned the country \$115 million between 1972 and 1977. The earning trend persisted through the first half of 1978. Preserved or frozen tuna worth \$12.1 million has been exported, primarily to the United States, Japan, and Western Europe, and accounts for 73% of the Philippines' fish exports.

If the Philippines declares a 200-mi EEZ, then additional tuna fishing grounds will fall under the country's jurisdiction, opening the door for further economic gains. (Source: Bulletin Today, November 1978)

South Pacific

- The Asian Development Bank plans an agricultural survey of the Cook Islands, Gilbert Islands, Papua New Guinea, Solomon Islands, Tonga, and Western Samoa, aimed at identifying the most promising areas for investment in the countries' rural economies in the next 5-10 years. The survey will cover agriculture (both nonmarket and commercial), forestry, and fishing (marine and inland). (Source: ADB Quarterly Report, Oct. 1978)

- The Asian Development Bank has approved a \$3.6 million loan to the Solomon Islands to help finance a \$5.9 million fisheries development project to expand production and increase local employment, management, and ownership of the important skipjack fishery in the Solomons. For further information, request IFR 78/99 from Statistics and Market News Office, 2016 Customhouse, P.O. Box 3266, Terminal Island, CA 90731 U.S.A. and enclose self-addressed mailing label. (Source: Fish Market News, T-73)

- The resumed session of the South Pacific Regional Fisheries Organization meeting was held at the South Pacific Bureau for Economic Cooperation (SPEC) headquarters in Suva, 5—10 June 1978. In addition to considering the draft articles provisionally agreed to in November 1977 and also proposals for the uncompleted articles, the delegates completed a final text for the Draft Convention and agreed to recommend it to their Government for consideration. The delegates further recommended that if the Draft Convention is acceptable to both the Governments and the South Pacific Forum (which met in Niue in September 1978), then it be adopted and signed at a Plenipotentiary Conference to be scheduled by the Forum, (Source: South Pacific Commission Newsletter, July 1978)

Thailand

- A SEAFDEC-sponsored Workshop on Fishery Statistics was held 16—20 October 1978 in Bangkok with objectives of reviewing the first issue of the region's fisheries statistical bulletin for the South China Sea area, and exchanging views and experiences on national fishery statistics, especially collection of statistics on small-scale fisheries. Country reports by representatives of Hong Kong, Indonesia, Malaysia, Philippines, and Thailand outlined types of censuses taken in their respective countries and problems encountered in data collection, leading the group to conclude that statistics on the following are needed if effective fishery development programs are to be planned in the future: (1) statistics showing basic economic structure of fisheries with particular reference to the socioeconomic nature of small-scale fisheries; (2) data for stock assessment of coastal fishery resources; (3) data showing income and standard of living of small-scale fishermen; and (4) fish marketing data. For further information: SEAFDEC Secretariat, P.O. Box 4, Phrapradaeng, Samutprakarn, Thailand.

- How does a country manage to increase its fisheries landings from seas that are becoming increasingly carved up into Exclusive Economic Zones, hence closed to foreign fishermen? The Thais have an answer: through joint venture com-

panies. Following a course being pursued by many countries which rely on fish for part of their income, the Thai Fisheries Association plans to set up a new joint venture fishing company to carry out deep-sea fishing in the South Pacific, Indian Ocean, and Arabian Sea.

The proposed project calls for a minimum investment of 100 million baht (\$5 million) which is needed for purchase of a factory ship to process the catch. Availability of such a ship with cold storage, canning, and fish-meal processing facilities would increase the Thai catch by allowing

fishermen to remain at sea for 3-4 months at a time rather than having to return to port frequently to unload the catch.

President of the Thai Fisheries Association M. Pairoj Chaiyaporn reported that once joint fishing agreements have been concluded with neighboring countries, the project can begin.

Because the investment in the project is large, a joint fishing company may have to be formed by a number of fleet owners who can pool their resources. (From Bangkok Post, 9 October 1978).

Aquaculture Development Project in Thailand Supported by ADB Loan

The Asian Development Bank recently approved a \$14 million concessional loan and a technical assistance grant of \$110,000 to Thailand for an Aquaculture Development Project in the country.

The project is designed to increase fish and shrimp production in order to meet growing local demand for fish products, improve income and employment opportunities of small fish-farmers, and increase the country's foreign exchange earnings through exports.

The project consists of six-sub-projects:

(1) Upgrading or rehabilitating about 9,000 ha of brackishwater shrimp ponds in several coastal provinces, including the installation of water pumps.

(2) Developing about 2,000 ha of swampland into small shrimp/fish pond holdings in estate settlements in the provinces of Nakhon Sri Thammarat and Surat Thani, including construction of shrimp/fish ponds and installation of water pumps, a feed processing plant, ice storage facilities, and transport equipment.

(3) Setting up two pilot marine shrimp hatcheries utilizing the Galveston system, together with maturation pens and field spawning laboratories at two sites, one along the coast of central Thailand and the other along the coast of southern Thailand.

(4) Constructing a freshwater prawn hatchery and broodstock pond near Songkhla Lake.

(5) Setting up 3,000 *Pangasius* fish cages in rivers in central Thailand and constructing a supporting hatchery.

(6) Developing about 1,000 ha of land into small integrated farms at selected sites in the provinces of central Thailand, including the construction of fish ponds and provision of a feed processing plant, ice plant, ice storage facilities, and transport equipment.

The project is expected to increase fish/shrimp production by at least 11,700 metric tons annually, valued at about \$25 million, of which about 3,400 metric tons would be for export. At full development the project is expected to benefit about 9,000 people.