

Who's Working on Fish Aggregating Devices?

M.J.M. VEGA
Project Information Officer
ICLARM

Fish aggregating devices (FADs), also known as *payaos*, are buoys or rafts anchored in deep water. These structures are used to attract pelagic fishes for enhancing commercial and recreational fishing. Philippine purse seine fishermen first used bamboo and coconut leaf FADs during the 1970s. Modified FADs have since spread throughout the Pacific basin. A related structure, the artificial reef, was considered in a previous Naga article (April 1986).

For this article, the Aquatic Sciences and Fisheries Abstracts (ASFA) covering the period from 1971 to 1988, the ICLARM library and professional staff collections were used to investigate the FAD literature.

The literature on fish aggregating devices is rather recent, although the earliest article found was J. Hornell's "Fishing methods on the Coromandel coast", published in 1924 in the Madras Fishery Bulletin 18(2). Eighty-six per cent of the literature was written after 1969. Two-hundred-and-eleven articles were found (Fig. 1). The annual average number of articles prior to 1970 was less than one; it was nearly 3 in the 1970s, and at present averages about 22 publications/year. Asian literature grew the most during the 1980s (17 times over the previous decade). During the same period, publications from the Pacific island nations increased 11 times, while literature from the USA increased 3 times.

Types of publications

Two-thirds of the literature are published in various journals and a quarter are reports by agencies concerning on-

going projects. The remainder are articles published in various newsletters, personal communications, two bibliographies, a handbook and a thesis. The geographical distribution of FAD literature is presented in Fig. 2. Eighty-seven per cent of the papers are written in English and 11% in French. The remainder are in Japanese (2 items) and one each in Indonesian and Spanish. The majority of the mainland and Hawaii-based US researchers viewed FADs as improvements to recreational fishing while other authors tended to see FADs as a means to enhance commercial and subsistence fisheries.

Areas of research

The publications could be grouped into five broad areas. Of these, FAD design and construction was the largest followed by monitoring of FADs, general discussion of FADs and other studies, i.e., bibliographies, biological studies of fish around FADs. Growth and percentages of these groupings are included in Fig. 1.

Before 1970, articles were scarce and were mostly general descriptions of FADs. By the 1970s, 41% of the publications dealt with design, while 33% were on the monitoring of FADs. The present decade's literature indicates a decline in reporting on these two subjects to 34% and 25%, respectively. Articles on the economics began to appear in 1981.

One author pointed out that most studies and reports on effectiveness of

FADs were qualitative and based on sporadic reports of fishermen or short-term nonstandardized test fisheries. Articles on the economics of FADs began to appear in 1981. There are, however, few good data on this important aspect.

Recent Papers

An in-depth literature analysis, "Fish aggregating devices: what next?" was presented by R.S. Farman at the Workshop on Pacific Inshore Fishery Resources, 14-25 March 1988, Noumea, New Caledonia. (SPC/Inshore Fish. Res./WP.14) (he may be contacted at the SPC, address below). "Contribution à l'étude des dispositifs de concentration des poissons a partir de l'expérience polynésienne" by C. Depoutot of ORSTOM (address below), (ORSTOM Tahiti, Notes et Doc. Oceanogr. 33), and "Experiences with fish aggregating devices in Sri Lanka" by K.T. Weerasooriya of the Bay of Bengal Programme (address below) (FAO/SIDA Bay of Bengal Programme WP. 54) are two useful articles published in 1987.

These are the addresses of the institutions mentioned above: South Pacific Commission, B.P. D5 Noumea, New Caledonia; Centre ORSTOM de Tahiti, B.B. 529 Papeete Polynesie Française; FAO/SIDA Bay of Bengal Programme, Post Bag 1054, Madras 600 018, India.

The Selective Fisheries Information Service based at ICLARM, can provide more information on fish aggregating devices. Write to Selective Fisheries Information Service, ICLARM, MC P.O. Box 1501, Makati, Metro Manila, Philippines, for details and costs involved. ●

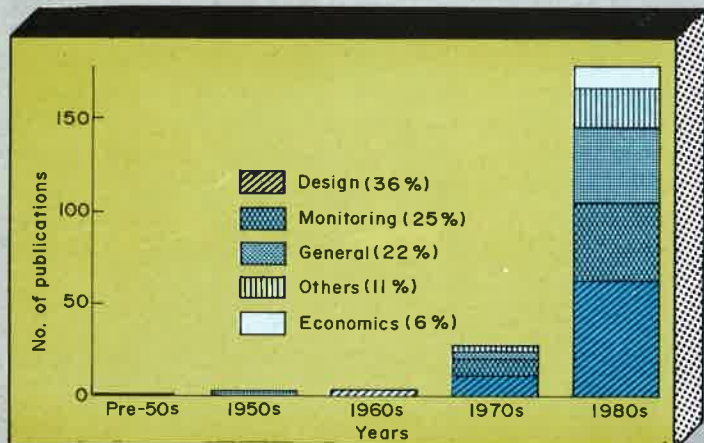


Fig. 1. Growth of FAD literature over time. Numbers in parentheses are overall percentages.

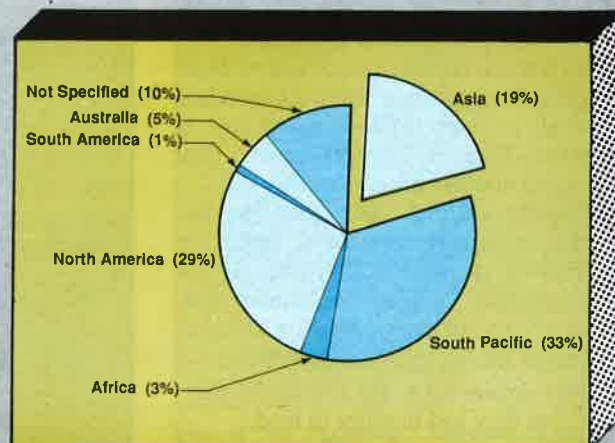


Fig. 2. Geographical distribution of FAD literature. N = 211.