

## Fisheries development

**Economics of Fishery Management in the Pacific Islands Region.**

Edited by H. Campbell; K. Menz and G. Waugh. ACIAR Proceedings No. 26. Australian Centre for International Agricultural Research, Canberra, 1989. Pp.169. ISBN 0 949511 95 1.

Not only is the broad-angle approach of this symposium to fishery in the Pacific, from tuna fishing through inshore fisheries to aquaculture, an event in itself, but its focus on the socio-economic and cultural aspects of such development is really most unusual. This is why this 26th issue of the ACIAR Proceedings will undoubtedly attract a great deal of interest among the scientific community involved in fisheries and the public authorities of the small island nations and territories of the Pacific.

The book includes the nineteen discussion papers submitted at the International Conference in Hobart, which was held from 20 to 26 March 1989, in the presence of thirty-five economists, biologists, jurists and anthropologists, most of them from Australia and Pacific island states. Six topics were raised

- The tuna industry in the South Pacific
- Property right issues
- Inshore fisheries
- Marketing aspects
- Management and development
- Research and development strategy.

Nine of the nineteen papers tabled pertained to tuna fishing, thus highlighting the economic significance of this activity for the Pacific region. Seven other papers were devoted to inshore fisheries, which is only right and proper, since this activity is essential to meet the protein needs of the coastal populations and also often acts as a significant import substitution for tinned fish. Only two papers mentioned aquaculture. Again, this reflects the present situation, for aquaculture is, as yet, secondary to fishing in

the Pacific. However, a paper on pearl culture could have been of interest as this activity could well become a major component of island economies, as shown by the example of French Polynesia.

The Pacific and its borders onto the Indian Ocean are the main tuna producing regions in the world. Munro divides it into three zones, each characterized by a different resource content and industrial organization, the Pacific islands, the eastern Pacific and the ASEAN countries (Association of Southeast Asian Nations).

Four commercial species dominate the catch skipjack, yellow fin, albacore, big eye. Kearney specifies the biological features of each one and the relevant fishing methods and outlines the constraints upon resource management, highlighting the interactions among fishing industries. Out of all four species, only the skipjack would seem to present good potential for developing catch quantities.

Until the early eighties, fishing was essentially in the hands of foreign fleets Japan around the Pacific islands and the United States in the eastern Pacific; both also controlled processing and marketing. The Third United Nations Conference on the Law of the Sea has considerably altered the situation with the introduction of exclusive economic zones (EEZ). These are analysed in depth by Tsamenyi and Blay.

The consequences of this conference with regard to the structuring of tuna fishing in the Pacific are set out in detail by Munro. He also deals with the establishment of the Forum Fisheries Agency (FFA) in the Pacific islands, the development of the tuna industry in the ASEAN countries, amongst which Indonesia and the Philippines stand out as producing countries and Thailand as first world exporter of tinned tuna; and also the fragmentation of the Inter-American Tropical Tuna Commission (IATTC) in the eastern Pacific, where the challenge to American leadership by the Latin American states has led to two changes: the emergence of Mexico as a major power in the tuna

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industry and the shift of the US seiners towards the western Pacific.

With the establishment of EEZs and the responsibility vested in them to assume the management of their maritime heritage, the Pacific islands are now on an equal footing with the rest of the world economy of fishery. Riepen and Kenneth provide a clear illustration of this using Vanuatu as an example.

The first priority for the Pacific islands is to monitor and control access to their resources by foreign fleets whilst drawing maximum benefit therefrom. Two legal means are available to them, through licensing or through quota arrangements, whereby agreements can be entered into either on a bilateral basis, according to Tsamenyi and Blay, or on a multilateral basis, generally the most favoured option. The Pacific islands have proved to be the forerunners in this respect by getting together via the FFA to form a sufficiently powerful block of producing nations to negotiate on an equal basis with either the United States or Japan. Scott underlines the importance of 'individual transferable quotas' for fisheries threatened by over-exploitation. This is an attractive argument. Any quota-fishing owner will assuredly pay more attention to resource management. However, the theory has to be put into practice.

Their next priority is to build up a national fleet. Given the lack of human, technical and financial means available to the Pacific islands, joint ventures are generally deemed to be 'the most appropriate means of promoting industrial fishing development'. And yet, as pointed out by Tsamenyi and Blay, the Pacific islands' example has not yet proved particularly successful. Doulman has identified the reasons for the failures and suggested ways of avoiding them, both through the terms of the joint ventures (selecting appropriate objectives and partners, the levels of their contribution and their remuneration) and through their implementation.

McIlgorm puts forward a totally different view, that of the foreign, i.e. Australian, tuna-fishing companies interested in fishing in Pacific island waters. Distance from the fishing sites and resource type dictate the

size and type of fishing vessel used. Financial models are used to stimulate maximum profit and minimum cost situations, based on access rights, product cost and daily catch. As far as Williams is concerned, any study involving future exploitation of a fishery resource should also include a market study. For instance, the rapid changes in lifestyle and consumption patterns in Japan, where consumers are turning away from tuna in favour of salmon, will soon be reflected in the structure of production. With four equations, Owen submits a simple model of the tuna market and the factors influencing supply, demand, prices and family expenditure.

Whilst tuna fishing has been the focus of biological and economic studies, inshore fisheries is still a field reserved for biologists whose activities involve mostly inventories of resources or fishery management, witness the paper by Vonole on prawn fishing in Papua New Guinea. Challenging this supremacy of the biologists, Uwate emphasizes that the success of fisheries or aquaculture development depends on systematic economic studies; he backs this up with four examples of applications, in 'fisheries management', 'fish marketing', 'justification for funding' and 'aquaculture planning'. The papers by Tisdell on the supply and demand of giant clams and by Takendu on the domestic sales of prawns in PNG also give clear evidence of the significance of economics in respect of inshore fisheries.

However, given the complexity of inshore fisheries, and the multiple interactions linked with the resource (fishing effort and marketing) it is important to take a very broad approach to the study of inshore fisheries, combining biology, ecology, economics and anthropology. In this regard, three papers would appear to be of particular interest.

As a preliminary to any fisheries development project, King and McIlgorm propose a 'structured resource survey' to assess project viability given real catch rates, expected catch rates, market value of product and fishing costs. Because of the dispersed nature of landing points and market outlets

such surveys are difficult. The authors also mention the problems with estimating potential yields and appropriate levels of effort by means of current models of dynamics which require data to be collected over several years and are therefore more suited to fisheries which are already firmly established.

Ruddle proposes a broad outline of research which would include the resource, traditional fisheries management and the relationships between traditional and commercial systems. In studying the traditional sea tenure, he emphasizes the cultural aspects of inshore fisheries. On the strength of his many years' experience of small-scale village fishing, Johannes points out that the local culture imposes a serious constraint on the type of fisheries development advocated by western experts. The latter requires a personal accumulative attitude whereas fishermen's strategy is essentially community-oriented.

There is a world of difference between the papers presented by Ruddle and Johannes and that of Linder who endeavours to demonstrate, by means of bio-economic models, that research is a viable investment. Whilst this may be a neat approach, it is founded, like all bio-economic models, on neo-classical economics of dubious relevance in the field of inshore fisheries, where 'economically rational behaviour' is a rare occurrence. Bearing in mind these realities, which cannot be evaded, Brown and Waugh proposed in their conclusion to the conference 'an alternative framework for the development of fisheries in the South Pacific' which would include, in particular, a minimization of the cultural, social and economic vulnerability of fishermen.

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## Regional co-operation

**ASEAN Industrial Co-operation: Future Perspectives and an Alternative Scheme.** Edited by Chee Peng Lim and Jang-Won Suh. Asian and Pacific Development Centre, Kuala Lumpur, 1988. Pp. xxv + 240. ISBN 967 9928 101.

Regionalism in its various facets has acquired a renewed appeal since it has become clear that the smooth functioning of the global international economic order — typically represented by IMF and GATT as institutional pillars — was largely contingent upon the existence of a hegemonic economic power. The times are gone, however, when the USA could play its part as the world's 'économie dominante'. Now that the world has become truly polycentric (North America, EEC, Japan and the Pacific Basin), the question emerges why regional co-operation schemes should not be built around these centres of gravity of the world

economy. No doubt, this would be more beneficial for all countries concerned than falling back into a crude new bilateralism — a threat that has indeed been looming large in recent years. The trans-Atlantic and trans-Pacific reciprocity debates bear witness to this growing danger.

As a result of the renewed emphasis on regional trading blocs, regional integration and regional co-operation world-wide, the debate is also surfacing in the developing countries, which in the past have generally not managed to reap the benefits of regional co-operation and where, therefore, disenchantment has been the prevailing mood. The Association of Southeast Asian Nations (ASEAN) has always been considered, however, as a relatively successful example of regional co-operation in the developing world. While this appears to be more in the political than in the economic sphere, ASEAN is now gaining additional significance as a potential nucleus for a broader