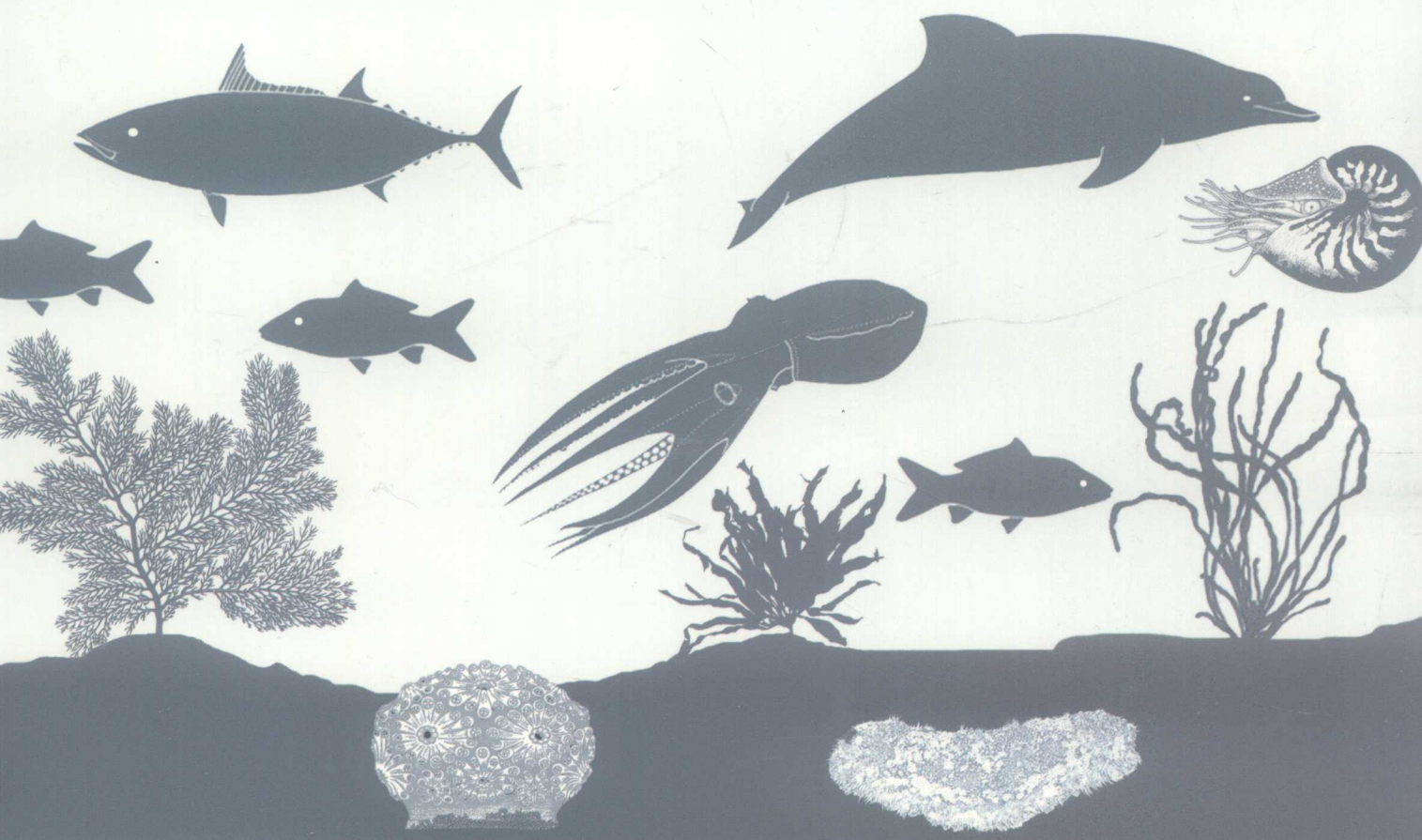


556/2

Marine protected areas

Country case studies on policy, governance and institutional issues

Japan – Mauritania – Philippines – Samoa



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FAO
FISHERIES AND
AQUACULTURE
TECHNICAL
PAPER

556/2

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ISBN 978-92-5-107506-7 (print)
E-ISBN 978-92-5-107507-4 (PDF)

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Preparation of this document

The four case studies from Japan, Mauritania, the Philippines and Samoa were prepared as part of a set of 16 studies gathering national experiences from around the world. The studies are intended to ground the FAO Technical Guidelines on Marine Protected Areas (MPAs) and Fisheries¹ in practical experience and to inform the use of MPAs globally.

The planning and development of the case studies were carried out by a team including Dominique Gréboval, Patrick Christie, Antonia Hjort and Jessica Sanders. The case studies were carefully reviewed by Katrina Ole-Moiyoi, Oliver Schultz and Clotilde Bodiguel. Ariane Acqua was instrumental in project operations and the publication of this document. The maps of each country were prepared by Fabio Carocci. Final editing of the case studies was provided by Lynn Ball and Sacha Lomnitz.

The case studies were funded by the Government of Japan through the projects Promotion of sustainable fisheries; support for the Plan of Implementation of the World Summit on Sustainable Development (GCP/INT/942/JPN) and Fisheries management and marine conservation within a changing ecosystem context (GCP/INT/253/JPN).

¹ FAO. 2011. *Fisheries management. 4. Marine protected areas and fisheries*. FAO Technical Guidelines for Responsible Fisheries No. 4, Suppl. 4. Rome. 198 pp.

Abstract

This Fisheries and Aquaculture Technical Paper presents case studies of the policy, governance and institutional issues of marine protected areas (MPAs) in Japan, Mauritania, the Philippines and Samoa. It is the second of four in a global series of case studies on MPAs. An initial volume provides an analysis and synthesis of all the studies.

The set of global MPA case studies was designed to close a deficit in information on the governance of MPAs and spatial management tools, within both fisheries management and biodiversity conservation contexts. The studies examine governance opportunities in and constraints on the use of spatial management measures at the national level.

They were also designed to inform implementation of the FAO Technical Guidelines on Marine protected areas (MPAs) and fisheries, which were developed to provide information and guidance on the use of MPAs in the context of fisheries.

Sanders, J.S., Gréboval, D. & Hjort, A. (comps.)

Marine protected areas: country case studies on policy, governance and institutional issues.

FAO Fisheries and Aquaculture Technical Paper No. 556/2. Rome, FAO. 2013. 114 pp.

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Introduction

Marine protected areas (MPAs) are currently much discussed and often strongly promoted from a biodiversity conservation perspective, particularly in response to international calls to safeguard the marine environment. Many countries have agreed to international targets or goals, such as the Plan of Implementation of the World Summit on Sustainable Development (WSSD-POI), which called on countries to use:

... diverse approaches and tools, including the ecosystem approach, the elimination of destructive fishing practices, the establishment of marine protected areas consistent with international law and based on scientific information, including representative networks by 2012 and time/area closures for the protection of nursery grounds and periods ...

– WSSD-POI, paragraph 32(c)

The Convention on Biological Diversity's (CBD) tenth Conference of the Parties (COP 10) encouraged Parties and other governments to “achieve long-term conservation, management and sustainable use of marine resources and coastal habitats, and to effectively manage marine protected areas...” (Decision X/29, paragraph 15).¹ During the same COP, a CBD decision also recommended that MPAs for conservation and management of biodiversity could, when in accordance with management objectives for protected areas, also be established as fisheries management tools (Decision X/31, paragraph 24).²

In fisheries management, spatial management tools, including MPAs, have been used for centuries and do not constitute a new management tool. Protection of specified areas through bans on gears or fishing activities have long been part of the fisheries management toolbox and have been practised by communities employing traditional management arrangements around the world. The FAO Code of Conduct for Responsible Fisheries mentions the use of spatial management measures, for example in Article 6.8, which emphasizes the importance of protection and rehabilitation for all critical habitats, and particularly protection against human impacts such as pollution and degradation. In an effort to promote its goal – sustainable fisheries – the Code addresses protected area measures:

States should take appropriate measures to minimize waste, discards, catch by lost or abandoned gear, catch of non-target species, both fish and non-fish species, and negative impacts on associated or dependent species, in particular endangered species. Where appropriate, such measures may include technical measures related to fish size, mesh size or gear, discards, closed seasons and areas and zones reserved for selected fisheries, particularly artisanal fisheries.

– Article 7.6.9

A convergence of interests has taken place as fisheries managers emphasize healthy ecosystems, and conservation groups have become increasingly aware of the necessity to include human needs and interests in designing and implementing MPAs. However, despite the long-term, widespread use of spatial management tools in fisheries

¹ COP 10 Decision X/29, Marine and coastal biodiversity.

² COP 10 Decision X/31, Protected areas.

management and conservation, there remains significant confusion regarding the establishment of MPAs with varying objectives, as well as the general role of MPAs meeting multiple objectives within fisheries management. Views on how and when to use MPAs and what they can achieve differ significantly among diverse political, social and professional groups, and also among individuals. A shift towards broader ecosystem considerations in fisheries management and the ecosystem approach to fisheries (EAF) has led to the increased use of tools such as MPAs to pursue multiple objectives. However, multiple-objective MPAs have not been as thoroughly studied in recent literature or case studies.

The FAO Fisheries and Aquaculture Department was asked to further explore the role of MPAs in relation to fisheries at the Twenty-sixth Session of the FAO Committee on Fisheries (COFI) in 2005. This request resulted in the FAO Technical Guidelines on Marine protected areas and fisheries, which discuss MPAs in relation to fisheries management and aspire to enhance understanding of how MPAs can contribute to bridging fisheries management and biodiversity conservation objectives within broader management frameworks (i.e. EAF).

Despite the many studies and guides on MPAs, there is a dearth of information and research on MPAs in a fisheries context, and particularly in relation to governance of MPAs for multiple objectives or the involvement of many institutions. MPAs invariably affect fisheries when designated with biodiversity or other primary objectives, and vice versa. Thus, an understanding of governance regimes for spatial management measures and the coherence or confusion within countries are crucial aspects in understanding the use and improving the effectiveness of MPAs.

The set of global MPA governance case studies was designed to address a deficit of information on the governance of MPAs and spatial management tools, within both fisheries management and biodiversity conservation at the national level.

The studies were conducted using a consistent research framework to facilitate their eventual analysis, which is presented as the initial volume of the series.³ All authors were provided with a background and outline for their case study, including the goals, objectives, working definitions, framework for the study and list of relevant literature.

The goals were to:

- describe the means and outcomes of MPAs for fisheries management planning and implementation in various contexts, in particular emphasizing developing countries;
- identify the ability of MPAs, as implemented, to meet both biodiversity conservation and fisheries management objectives (and others);
- identify key governance opportunities in and constraints on MPA implementation;
- ground the MPA Guidelines in current practice.

To create a common understanding among the authors, a working definition of “governance” was provided:

... the concept of governance conceived of as “the formal and informal arrangements, institutions, and mores which determine how resources or an environment are utilized; how problems and opportunities are evaluated and analyzed, what behavior is deemed acceptable or forbidden, and what rules and sanctions are applied to affect the pattern of resource and environmental use.

– Juda 1999⁴

³ FAO. 2011. FAO Fisheries and Aquaculture Technical Paper No. 556. Rome.

⁴ Juda, L. 1999. Considerations in the development of a functional approach to the governance of large marine ecosystems. *Ocean Development and International Law*, 30: 89–125.

A definition and a characterization of MPAs were developed. The definition was taken from the CBD, and the characterization of MPAs for fisheries was adapted from a 2006 FAO workshop:

‘Marine and coastal protected area’ means any defined area within or adjacent to the marine environment, together with its overlying waters and associated flora, fauna and historical and cultural features, which has been reserved by legislation or other effective means, including custom, with the effect that its marine and/or coastal biodiversity enjoys a higher level of protection than its surroundings.

– CBD, COP 7, Decision VII/5, paragraph 10, note 1(a)

An MPA used as a fisheries management tool:

- is intended to contribute to achieving conservation and sustainability objectives of fisheries management, while contributing to biodiversity and habitat conservation (with intended or unintended social and economic consequences);
- is temporally and geographically specified in three dimensions for a portion of the geographic range of the fishery management unit;
- would afford fishery resources a higher degree of protection within the geographic boundaries of the MPA than the resource is afforded elsewhere within the geographic range of the fishery management unit;
- is established through legally binding mechanisms and/or other effective means;
- is usually expected to have resource conservation and sustainability benefits, other ecological benefits, and/or social benefits, beyond the boundaries of the MPA.⁵

In addition to the definition and characterization provided, however, authors were asked to formulate a context-specific definition for MPAs for the country reviewed and to focus on the characterization of an MPA within the country.

This document provides the five case studies; Japan, the Philippines, Samoa and Mauritania. Two additional volumes of case studies will follow. The first volume in the series presents an overall global analysis.

⁵ FAO. 2007. *Report and documentation of the Expert Workshop on Marine Protected Areas and Fisheries Management: Review of Issues and Considerations*, Rome, 12–14 June 2006. FAO Fisheries Report No. 825. Rome. 332 pp.

Map 1
Japan and the four cases of autonomous MPAs



Japan

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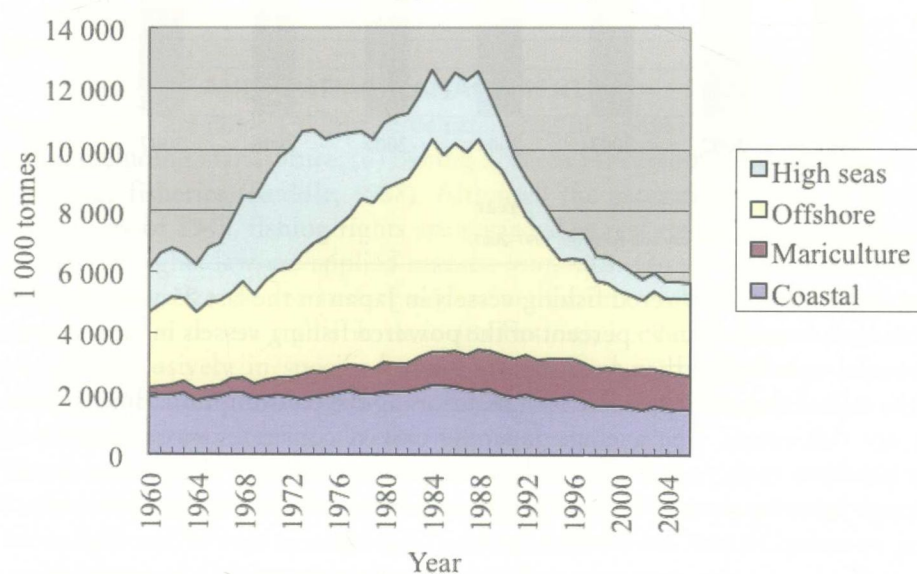
Yokohama, Kanagawa, Japan

1. INTRODUCTION

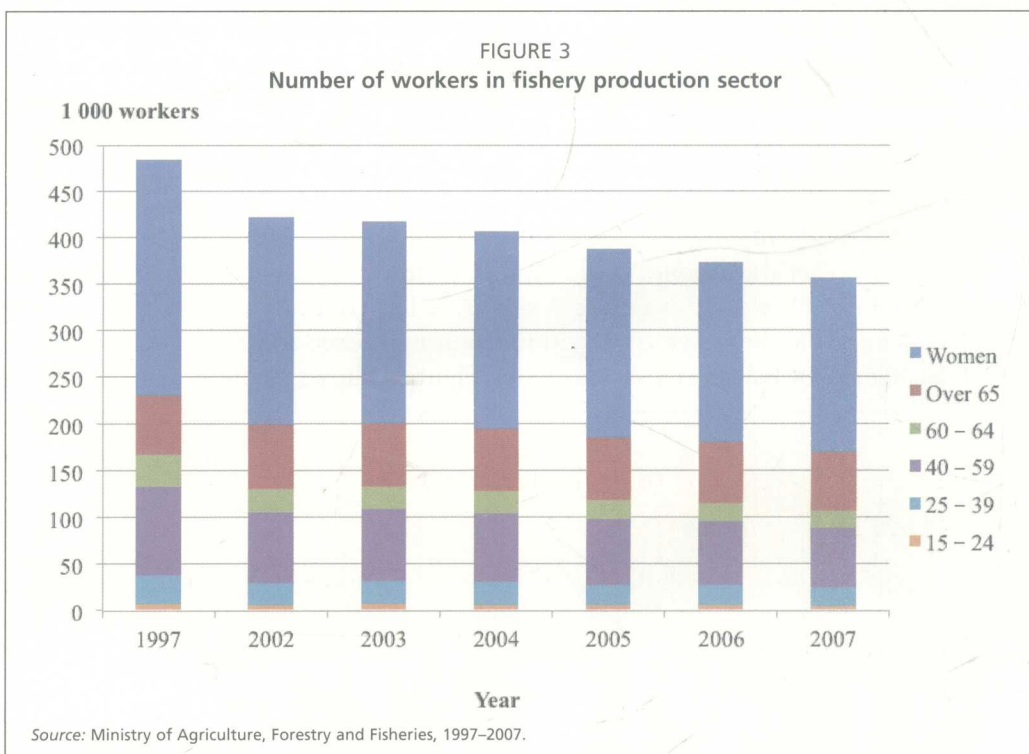
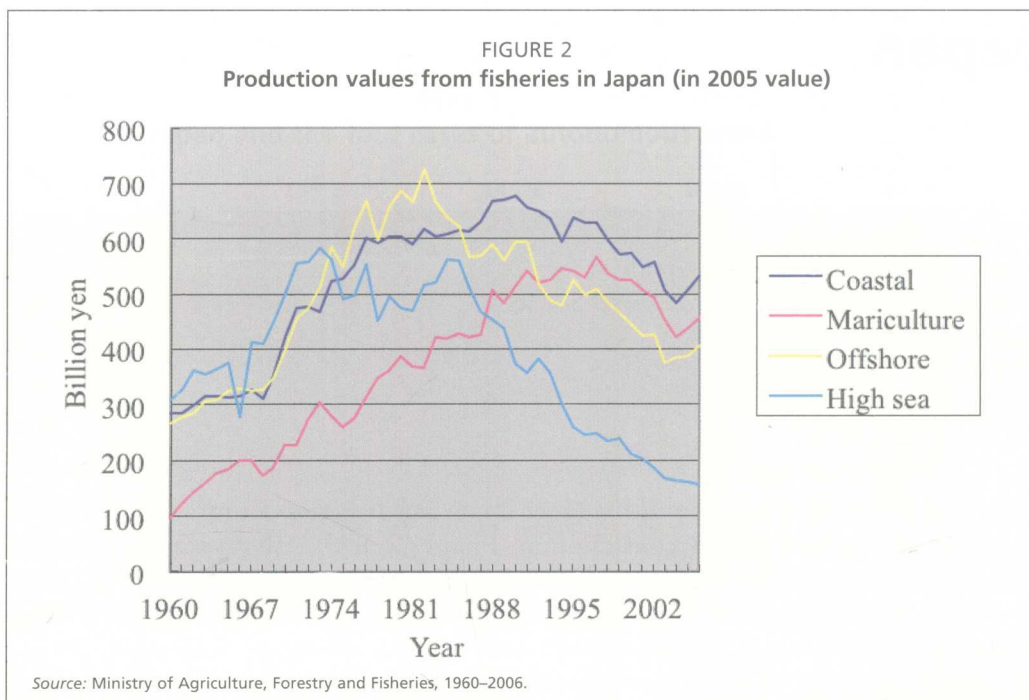
Japan has been known as one of the most important fisheries countries in the world in terms of production and consumption. Figures 1 and 2 show tonnage changes in Japanese catch and production value in Japanese yen from 1960 to 2006 (US\$1 = 97.6 JPY in February 2009). In the late 1960s and early 1970s, the high sea fisheries constituted the most significant fisheries sector in Japan. However, after establishment of the 200 nautical mile system globally, the importance of this fishery declined drastically. Offshore fisheries peaked from the late 1970s to 1980s. The main catch in that period, in tonnage, was Japanese sardine (*Sardinops melanostictus*). However, owing to natural fluctuation of biomass and overfishing, landings of Japanese sardine declined severely in the late 1980s (Yatsu *et al.*, 2005). The coastal fishery has shown relatively stable landings since the 1960s, with a slight decline in the last 15 years, and it has been the most important sector in terms of production value since the late 1980s. In the 1960s and 1970s, coastal mariculture developed considerably, and now it is the second-largest sector in terms of production value.

Immediately after the Second World War, the number of fishers in Japan was more than one million. However, as Figure 3 shows, it has continuously declined, and in 2007 total workers in the fishery production sector numbered some 350 000. Moreover, the advancing age of fishers is a serious issue. Figure 4 shows a continuous decline, as

FIGURE 1
Fishery production in Japan



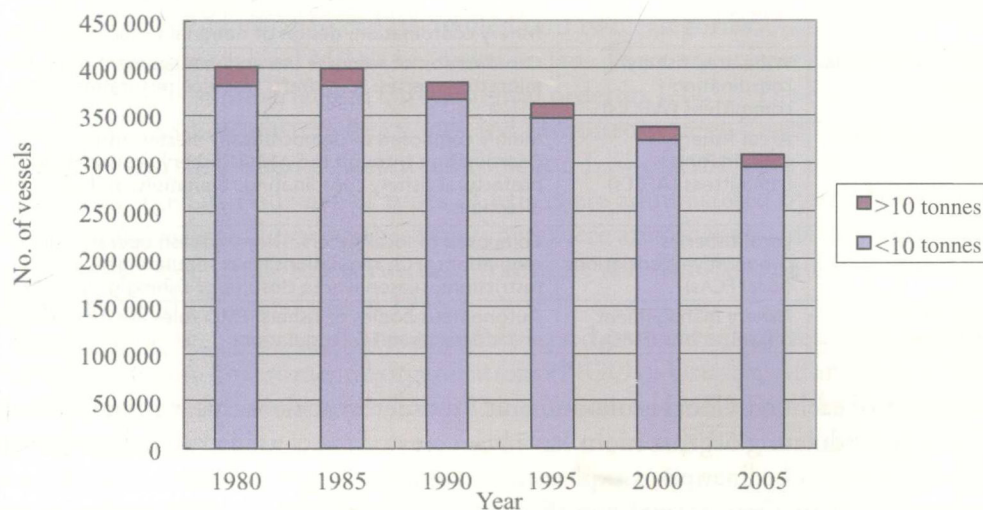
Source: Ministry of Agriculture, Forestry and Fisheries, 1960–2006.



well, in the number of powered fishing vessels in Japan in the last 25 years. It is worth mentioning that more than 95 percent of the powered fishing vessels in Japan are small-scale, coastal vessels (less than ten tonnes).

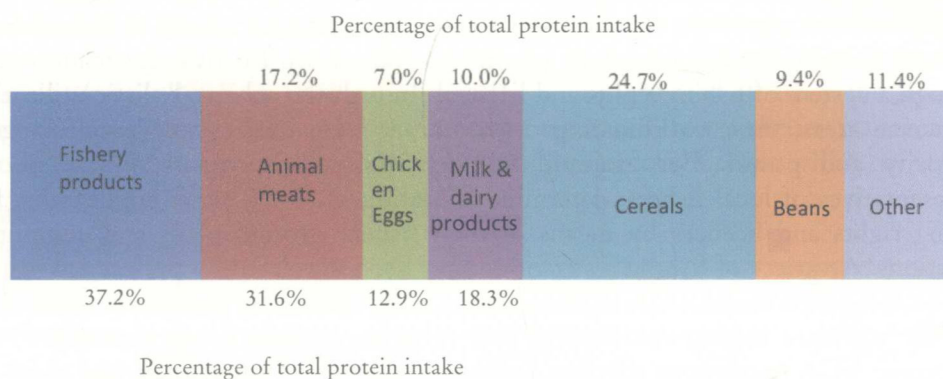
At the end of this section, it is worth mentioning the consumption aspects. Japanese people are fish-eaters. The average Japanese citizen consumes more than 66 kg of fishery products each year. Figure 5 shows the composition of the protein intake for the average Japanese person. Fishery products are the most important source of animal protein, covering 37 percent of total intake. This figure is one of the highest in the world, and indicates the importance of seafood to food security in Japan (Makino and Matsuda, 2011).

FIGURE 4
Number of powered fishing vessels



Source: Fisheries Agency, 1980–2005.

FIGURE 5
Composition of protein intake for the average Japanese person in 2007



2. FISHERIES AND SPATIAL MANAGEMENT

Marine fisheries are classified into three categories in Japan: (i) fishing rights for coastal fisheries, including mariculture; (ii) fishing licences for offshore and high seas fisheries; and (iii) free fisheries (Ruddle, 1987). Although the expiration period is fixed in the Fisheries Law of 1949, fishing rights are regarded as real rights, and the provisions of the territorial rights law are applied *mutatis mutandis*. However, they do not include the right to privatize the sea surface or marine resources into portions. Fishing rights are rather similar to use rights in their attributions, i.e. the right to conduct fishery operations exclusively in specified areas by specified methods. Fishery licences, on the other hand, are not real rights, but, taking the large capital investments of licence holders into account, they are also strongly protected.

The fundamental concept of fisheries management in Japan is “the holistic utilization of the sea surfaces” by resource users themselves, as stated in section 1 of the Fisheries Law of 1949 (as amended) (Makino and Matsuda, 2005). Under this concept, the wide range of fishing operations conducted within an area are to be arranged and coordinated with the overall impact of usage in mind, and not simply from the

TABLE 1
Coordinating organizations in Japan

Level	Organization	Function
National level	Fishery Policy Council	The advisory body to the Government for national-level fishery coordination, design of national fishery policy, etc.
Multijurisdictional level	Wide-area fishery coordinating committees (WFCCs)	Coordination of resource use and management of highly migratory species. Also drafts resource restoration plans.
Prefectural level	Areal fishery coordinating committees (AFCCs)	Mainly composed of democratically elected fishers. Coordination through the AFCCs' fishery ground plans, prefectural fishery coordinating regulations and committee directions.
Local level	Local fisheries cooperative associations (local FCAs)	Composed of local fishers. They establish operational regulations (FCA regulations) that stipulate gear restrictions, seasonal/area closures of fishing grounds, etc.
Specialized purposes	Fishery management organizations (FMOs)	Autonomous bodies of fishers. FMO rules are more detailed and stricter than FCA regulations.

viewpoint of each individual economic unit. In order to achieve this, various levels and scales of coordinating organizations have been created to act as instruments to facilitate holistic fishery coordination as explained in Table 1.

In addition to these formal coordinating structures, autonomous bodies of local fishers known as fishery management organizations (FMOs) have initiated various management measures to maintain and improve their incomes, and to sustain resources. FMOs are often formed by a group of fishers within a fisheries cooperative association (FCA). According to the biological nature of the target species, FMOs are sometimes organized by members from several neighbouring FCAs or even by members of FCAs from several prefectures (FAO, 1993).

Within this framework, the principal decision-makers with regard to management are local fishers. The Fisheries Law provides a framework for fisheries management through a system of fishing rights and licences. In order to achieve holistic utilization of marine areas, these coordinating organizations have been granted wide-ranging authority and power. For example, the AFCCs, which consist mainly of the representatives of local fishers, determine allocation of, and restrict applications for, fishing rights and licences by means of their fishery ground plans and committee directions. A variety of fishing restrictions have been stipulated by prefectural fishery coordinating regulations, FCA regulations and FMO rules. The prefectural regulations broadly stipulate fishing restrictions, and these regulations apply throughout the prefecture. FCA regulations stipulate fishing restrictions in more detail, and these are applicable only locally. In particular, FCA regulations consider the restrictions set out in the prefectural fishery coordinating regulations and make additions to them. Similarly, the FMO rules constitute a further refinement of the FCA regulations. Thus resource conservation is an integral part of resource use by local fishers.

In addition to these fisheries management activities, there are other types of spatial conservation measures implemented by the environmental administration. For example, the national park system, founded in 1970, covers more than 1.7 million hectares (ha) of coastal areas in order to protect outstanding marine scenery. In these areas, artificial constructions or land refills are regulated by the Ministry of the Environment or the governors of prefectures. Also, the take of endangered species such as sea turtles is prohibited in the "special area" of the National Park, and these species are strictly conserved (details are provided in the following section).

3. MPA DESIGN AND MANAGEMENT STATUS

For the moment, there are no agreed national definitions of marine protected areas (MPAs) in Japan. This section tentatively follows that of the Convention on Biological Diversity (CBD): "...any defined area within or adjacent to the marine environment, together with its overlying waters and associated flora, fauna, and historical and cultural