

# Japan's Fisheries Cooperation: Principle, Programs and Achievements

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Fisheries resources are renewable but limited natural resources. Therefore, sustainability is the key word when discussing anything relating to fisheries development. Japan, as one of the major fishing and fish-eating countries in the world, has been cooperating to promote fisheries in developing countries, which includes fisheries grant-aid projects and technical cooperation through JICA and OFCF Japan. Japan is also playing an active role in international organizations such as FAO and RFMOs to ensure proper management of fisheries resources. Since fisheries resources are common property resources with no ownership until captured, adjustments to address the interests of all stakeholders are necessary whenever discussing the management of fisheries resources and promotion of fishing activities.

**KEYWORDS** fisheries cooperation; sustainability; fisheries management; grant aid; technical cooperation; JICA; OFCF Japan

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## 1. Introduction

Demand for fish products has been increasing due to several factors such as rapid expansion of the human population, improved diet thanks to increased incomes, growing concern about food safety caused by BSE and bird-flu epidemics, and the consciousness of human health. However, it appears that there is a ceiling of the production of

marine capture fisheries, which has been stable at around 90 million tons since the late 1980s, or decreasing if China's catch is excluded. The World Bank\* characterizes the challenges now facing the fisheries sector as follows: "Approximately 25% of the world's marine fish stocks are considered

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\*<http://web.worldbank.org/WBSITE/EXTERNAL/ TOPICS/EXTARD/0,,contentMDK:20451222~page PK:148956~piPK:216618~theSitePK:336682,00.html>

overexploited and an additional 50% are fully exploited. The depleted state of wild fish stocks is due to overfishing and increasing degradation of coastal, marine and freshwater ecosystems and habitats, as growing coastal populations exert increasing pressures on natural resources. Aquaculture production has grown at almost 9% per year since 1970 and aquaculture now provides 40% of the world's fish supply for direct human consumption, and brings new challenges to sustainable use of aquatic resources and environments."

At the same time, many fishers in developing countries are still living in marginal conditions, which justifies the need for continuation of international cooperation in the field of fisheries. The World Bank\* analyzes the situation as follows: "The livelihoods of about 200 million people rely on fisheries, aquaculture and associated activities and over 20% of the world's 38 million full-time fishers earn less than US\$ 1 per day. Many fishers live in the world's poorest countries where their communities are often marginalized and landless. As fishing is often the livelihood of last resort and fish often the only source of animal protein for the poor, the state of the world's fisheries can be critical in the fight against poverty in many parts the developing world."

Japan, as a country surrounded by waters with abundant fisheries resources, has a long history of utilizing these resources for human consumption. Because of this long history, Japan has developed techniques relating not only to the production and utilization of fisheries resources, such as harvesting, aquaculture, processing and consumption but also to the enhancement of stocks and stock management. Japan's production decreased to 5 million tons in 2005 from 11 million tons in 1989, when it hit its peak.

However, Japan is still one of the major fishing and fish-eating countries in the world.

Further, Japan can be characterized as the country with a unique history of enjoying the utilization of fisheries resources for hundreds of years, which has resulted in establishing community-based resources management as an activity of fisher's cooperatives. Therefore, Japan has the advantage of international cooperation in this field, especially for promotion of artisanal/small-scale fisheries which could be well addressed through community-based approaches.

Many developing countries, especially coastal countries including small island developing states, have a desire to promote their own fisheries, and Japan is expected to play a major role in this field. Sustainable development is the key word for the future development of fisheries. Taking account of the fact that fisheries resources are common property, development and utilization of these must also consider the interests of all stakeholders.

Japan, as one of the leading countries in the fisheries field, both in production and consumption, has been engaging in various kinds of international cooperation. This paper summarizes the principle, programs and achievements of Japan's cooperation in this field and discusses the challenges we are facing and possible course of action for the future.

## 2. Principle

### 2.1. Sustainable utilization

Fisheries resources are renewable natural resources. Therefore, they can be utilized in a sustainable way without causing any adverse effect on the conservation of resources through appropriate management measures. Sustainability is the fundamental principle for the utilization of fisheries resources which must be emphasized when discussing anything relating to the fishing activities.

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\*Refer to the footnote in the front page of this article.

## 2.2. Promotion of fisheries

Fisheries resources are valuable food resources for human consumption. In addition, they provide opportunities of employment and income, which is an important aspect of promoting fisheries especially in developing countries. Some products, which are popular in developed countries, bring foreign currency to developing countries through international trade. The utilization of fisheries resources creates the opportunity not only for production and consumption but also for processing and marketing activities as well.

Japan puts a priority on poverty reduction in accordance with the basic policy of its ODA Charter to ensure human security. Promotion of fisheries is one of the tools to achieve this objective and, therefore, an important element of Japan's cooperation.

## 2.3. Resources management

Fisheries resources, which are renewable but limited natural resources, could be exhausted without any appropriate and effective resource management in force. Therefore, resources management is indispensable when promoting fisheries. Further, since fisheries resources are common property with no ownership until captured, adjustments to address the interests of all stakeholders are necessary within the context of proper resources management.

## 2.4. Scientific research and study

All resource management should be based on scientific findings and no management could be deemed as proper management without a sound scientific basis. Therefore, scientific research and study for this purpose is essential for the management.

However, scientific research and study do not produce short-term and direct benefits to fishers and, since training of scientists, construction of laboratory, implementation of research and study, are cost con-

suming activities, it is often the case that inadequate financial resources are allotted to this field, especially in developing countries.

Scientific research and study are, therefore, an important area of Japan's international cooperation, although it is not directly related to the promotion of the industry and less priority is given to this aspect in many countries.

## 2.5. Consideration on environmental aspect

Recently, global environmental issues such as global warming and destruction of the ozone layer have attracted attention worldwide. As fisheries are activities which utilize natural resources, they are susceptible to changes in the environment. Deterioration of the environment, such as reduction or loss of critical habitats and pollution of waters, could have immediate adverse effects on the sustainability of fisheries.

On the other hand, fishing activities can affect the environment and cause undesirable influences on the environment. Attention should also be paid to this aspect. For example, considerable effort is made to solve the issue of over-fishing as challenges to resources management. Other environmental issues, such as leakage of fuel and dumping of used fishing gears, should also be addressed properly.

## 3. Programs

### 3.1. Multilateral approach

Although some fisheries resources are available only within a specific country's waters, others are utilized by several countries. Therefore, international cooperation for the management of such resources is important as an area of cooperation in the fisheries field in addition to the cooperation for the promotion of fisheries in developing countries. Japan is, therefore, making significant contributions to multilateral organizations such as

FAO (Food and Agriculture Organization of the United Nations) and Regional Fisheries Management Organizations (RFMOs) in this field.

### 3.1.1. FAO

FAO is a UN organization specialized in food, agriculture, forestry and fisheries. FAO has the Committee on Fisheries (COFI), under which the Sub-committee on Fish Trade and the Sub-committee on Aquaculture are established. FAO's undertakings include activities relating to the promotion of international cooperation on resources management, such as holding meetings of specialists, which concluded, for example, the Code of Conduct for Responsible Fisheries, as well as promotion of fisheries and proper management of fisheries resources in developing countries.

Japan, as an active member of FAO, is contributing by providing funds trusted to specific projects in addition to the contribution to the regular budget. Japan actively participates in the meetings of FAO and hosted, with the collaboration of FAO, the International Conference on Sustainable Contribution of Fisheries to Food Security in 1995 in Kyoto, which adopted the "Kyoto Declaration and Plan of Action".

### 3.1.2. RFMOs

In accordance with the UN Convention on the Law of the Sea (UNCLOS), all relevant countries should cooperate in the management of highly migratory species, fish stocks which occur both within the exclusive economic zone and in areas beyond and adjacent to the zone and resources of the high seas. For this purpose, many RFMOs and arrangements have been established targeting various kinds of stocks in regions all over the world.

Fishing fleets from Japan have been exploring the world's oceans and found many fishing grounds which are still utilized as important areas of operation. Japan participates in almost all RFMOs and arrangements

where the Japanese fleet is operating in order to contribute to the international resource management.

RFMOs discuss management measures to ensure sustainability of stocks based on scientific findings. Japan is contributing to the activities of these organizations by providing scientific data which are necessary to conduct scientific assessment of resources, undertaking scientific research and study. For example, the data from Japanese tuna fishing vessels are essential inputs for the stock assessments done by many tuna RFMOs.

Japan is providing funds trusted to such activities as data collection and tagging experiments by RFMOs in addition to contributing to the regular budget. Further, Japan hosted the Joint Tuna RFMOs Meeting in 2007 in Kobe, to strengthen cooperation and coordination of activities by five tuna RFMOs, which adopted the "Course of Actions for RFMOs from the Kobe Meeting of Joint Tuna RFMOs".

## 3.2. Bilateral approach

Japan is undertaking bilateral assistance programs as ODA, which includes cooperation in the fisheries field. This part briefly describes the kinds of such assistance.

### 3.2.1. Grant aid and Yen loan

As a program to assist developing countries, Japan is providing necessary funds for development projects. Grant aid is a program to provide funds without obligation of repayment, while Yen loan is a loan with eased conditions such as low interest rates.

As grant aid is without obligation of repayment, it is mainly targeted at relatively small projects and least-developed countries. The Ministry of Foreign Affairs is responsible for the grant aid and the Japan Bank for International Cooperation (JBIC) is responsible for Yen loans. However, JICA (Japan International Cooperation Agency) will be the implementation agency for both grant aid and Yen loans from mid-2008 to facilitate a unified approach to Japanese international cooperation.

### 3.2.2. Technical cooperation

Technical cooperation is a program for human resources development in developing countries. JICA is the major implementing agency of technical cooperation, although some public service corporations are also conducting technical cooperation in the field of their expertise with the support of the relevant ministries.

Technical cooperation includes projects with acceptance of trainees and dispatch of specialists, development studies and dispatch of Japan Overseas Cooperation Volunteers (JOCV).

### 3.2.3. OFCF Japan

The Overseas Fishery Cooperation Foundation (OFCF Japan) is an organization established with the approval of the Ministry of Agriculture, Forestry and Fisheries, and focuses on international cooperation on fisheries. It implements such technical cooperation as the development and promotion of overseas fisheries, and international resources management and research.

OFCF Japan was established as a unique organization to secure overseas fishing grounds for stable operation of the Japanese fishing fleet and then to facilitate development of the fisheries of Japan through implementing various kinds of international cooperation.

Cooperation by OFCF Japan includes projects with acceptance of trainees and dispatch of specialists as well as provision of low interest funds to Japanese organizations which execute cooperation projects.

## 4. Achievements

### 4.1. FAO

In addition to the regular activities such as COFI meetings and technical cooperation including holding workshops, FAO concluded various kinds of international instruments for promotion and management of sustainable fisheries including:

- 1993 Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (came into force in 2003)
- 1995 Code of Conduct for Responsible Fisheries
- 1999 International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries;  
International Plan of Action for the Conservation and Management of Sharks;  
International Plan of Action for the Management of Fishing Capacity
- 2001 International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing

## 4.2. RFMOs

In addition to Table 1, discussions are underway to establish new mechanisms for management of species other than tuna in the South Pacific Ocean and the Northwestern Pacific Ocean.

## 4.3. Grant aid and Yen loan

Yen loan projects for the fisheries sector are limited and mainly for the construction and rehabilitation of fishing ports.

Figure 1 shows the budgets for the fisheries grant aid. (Japanese fiscal year is from April to the following March.)

Major areas of the fisheries grant aid projects are summarized for the following six areas:

- Scientific research and study (e.g. Construction of fisheries research laboratory),
- Promotion of artisanal and/or small-scale fisheries,
- Technical training (e.g. Construction of training center for fishers),
- Construction and/or rehabilitation of fishing ports,
- Facilities relating to processing and marketing,
- Aquaculture and stock enhancement.

Table 1. Major RFMOs.

Name	Standard Nomenclature	Area of Competence	Established in	Major Species
<b>Tuna Fisheries</b>				
WCPFC	Western and Central Pacific Fisheries Commission ( <a href="http://www.wcpfc.int">www.wcpfc.int</a> )	Western and Central Pacific Ocean	2004	Tuna
IATTC	Inter-American Tropical Tuna Commission ( <a href="http://www.iattc.org">www.iattc.org</a> )	Eastern Pacific Ocean	1950	Tuna
IOTC	Indian Ocean Tuna Commission ( <a href="http://www.iotc.org">www.iotc.org</a> )	Indian Ocean	1996	Tuna
ICCAT	International Commission for the Conservation of Atlantic Tunas ( <a href="http://www.iccat.es">www.iccat.es</a> )	Atlantic Ocean	1969	Tuna
CCSBT	Commission for the Conservation of Southern Bluefin Tuna ( <a href="http://www.ccsbt.org">www.ccsbt.org</a> )	n.a.	1994	Tuna
<b>Other Fisheries</b>				
NAFO	Northwest Atlantic Fisheries Organization ( <a href="http://www.nafo.int">www.nafo.int</a> )	Northwest Atlantic Ocean	1979	Redfish, Greenland Halibut, Shrimp
NEAFC	North East Atlantic Fisheries Commission ( <a href="http://www.neafc.org">www.neafc.org</a> )	Northeast Atlantic Ocean	1982	Redfish, Herring, Mackerel, Blue Whiting
SEAFO	South East Atlantic Fisheries Organization ( <a href="http://www.seafo.org">www.seafo.org</a> )	Southeast Atlantic Ocean	2003	Alfonsino, Orange Roughy, Oreo Dories
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources ( <a href="http://www.ccamlr.org">www.ccamlr.org</a> )	Antarctic Ocean	1982	Krill, Toothfish

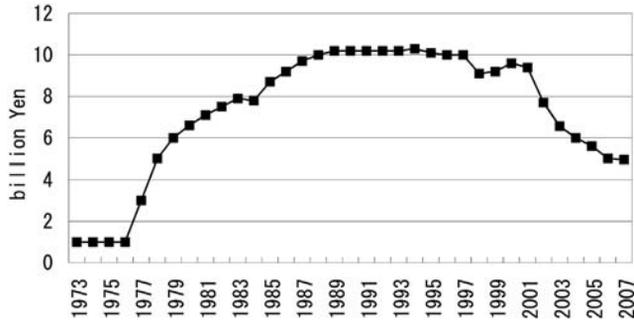


Fig. 1. Budget for fisheries grant aid.

Table 2. Record of JICA's technical cooperation in the fisheries field (source: JICA).

	2001	2002	2003	2004	2005
Acceptance of trainees	400	584	573	660	962
Dispatch of specialists	123	89	69	76	84
Survey mission	322	234	169	141	168
JOCV	11	13	10	9	11
Other volunteers	7	10	11	5	9

#### 4.4. Technical cooperation

Table 2 summarizes the JICA's record of activities relating to the fisheries.

#### 4.5. OFCF Japan

Figure 2 summarizes major programs implemented by OFCF Japan.

### 5. Discussion

Fisheries resources have two particular characteristics, namely limited but renewal natural resources and no ownership until captured. Therefore, we should not only ensure sustainability of resources but also adjust the interest among stakeholders when managing these resources.

As Japan has a long history of utilizing fisheries resources, it has established a unique system of management. It is said in short that "coastal resources are managed by

the local community while offshore stocks are the common property".

#### 5.1. In the case of offshore stocks

When the fishing technology was primitive relative to the abundance of resources, there was no need for management and fishers enjoyed the freedom of operation. It was a concern over conflicts among stakeholders that made the government introduce the limited entry system for offshore resources. Although the central government or local government limits the number of permits, they were decided mainly to adjust the interest among stakeholders. However, the depletion of certain resources in the offshore areas required the government to consider the sustainability of resources, especially after the ratification of UNCLOS.

As technology evolved, fishers eventually expanded the operation area from the



Fig. 2. Major Overseas Fisheries Cooperation Programs

### Programs Implemented by OFCF (2000~2004)



Implemented by OFCF Japan (2000-2004; source: OFCF Japan).

offshore to distant waters. It was partially because fishing vessels operating in the offshore areas should be reduced to adjust the interests of all stakeholders in the fishing grounds. Since the 200 mile zone regime was established in the late 1970s, the coastal countries started to exercise their rights to manage resources in their waters. Therefore, the management of stocks on the high seas is the major challenge for which international cooperation is most required.

The management of the offshore fisheries in Japan has been conducted mainly by restrictions of input such as the limited entry system. However, it initiated output restrictions (i.e., TAC) to supplement the conventional management scheme upon the ratification of UNCLOS. To the contrary, the international management measures have tended to use output restrictions such as TAC and allocation of allowable catch to member countries, although the necessity of input restrictions, especially the control of fishing capacity is to be recognized.

Input restrictions have the merit of less costs for administration, although it is sometimes difficult to propose specific conservation measures which all stakeholders can easily understand, for example, how to measure the fishing capacity of different fishing fleets. On the other hand, the output restriction require higher costs for administration especially in the case where many fishers are involved, but conservation measures such as TAC are easy to understand among stakeholders. Nevertheless, it is critically important to obtain the consent of all stakeholders concerned to ensure effective implementation of the conservation measures.

## 5.2. In case of coastal resources

The most significant feature of the management of the coastal resources in Japan is the system to delegate the management authority to the local community, which is realized as a fishing right-based fishery under the current law. Under the system, all the interest of stakeholders at the local community can be reflected on the management mea-

asures through fisheries cooperatives.

Although this system has the weakness of possibly excluding new entries from outside interests to the fisheries, it has successfully ensured stable production from the fishing grounds, even though the form of production might change from capture to aquaculture. Actually, the production of coastal fisheries in Japan has been stable for decades despite the fact that the long coast line of Japan has been subject to rapid development by other industries.

The key to success of the system is to ensure the involvement of all stakeholders to the management in the local community, which enhances the awareness of the necessity of proper resources management. Further, this would not only facilitate planning the conservation measures but also smooth and cost-effective implementation of these measures. However, because of the technological development in the field of coastal fisheries, concern about the deterioration of resources will also call attention to the sustainability of the stocks.

Based on the experiences described above, promotion of the proper management of fisheries resources is a very important area as the international cooperation of Japan in addition to conventional undertakings such as the construction of basic infrastructures and technical cooperation on fishing and processing technology. As one major area of interest of developing countries is to enhance their artisanal fisheries in the coastal areas, the knowledge on Japan's practices in the coastal area (i.e., fishing right-based fishery) should be used in this area.

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