

Training Project for Promotion of Community-based Fishery Resource Management by Coastal Small-scale Fishers in Thailand

**Report of Phase Two
(15-29 September 2007)**



International Cooperative Fisheries Organization
of the International Cooperative Alliance &
The Cooperative League of Thailand

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The Cooperative League of Thailand**



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Preface

The International Cooperative Fisheries Organization (ICFO) of the International Cooperative Alliance has implemented its Phase Two activity, *i.e.*, Fisheries Resource Management Study Visit to Japan. The Ministry of Agriculture, Forestry and Fisheries (MAFF), Government of Japan, funded this Project. Phase Two was implemented during 15-29 September 2007 in Tokyo and Hokkaido Prefecture, Japan. Nine trainees from Thailand and three advisors took part in Phase Two. I would like to express my thanks to all the resource persons and organizations who received the trainees during the course of Phase Two.

I would particularly like to thank:

- Mr Takashi Ono, Director, International Cooperation Division, International Affairs Department, Minister's Secretariat, MAFF, Government of Japan;
- Mr Shuji Otsuki, Director, the Central Wholesale Market of the Tokyo Metropolitan Government at Tsukiji, Tokyo;
- Mr Toshiro Shirasu, Director General, Fishery Agency, Government of Japan;
- Dr Akihiko Hara, Dean, Faculty of Fisheries Sciences, Hokkaido University;
- Mr Yoshio Takeuchi, Director, Fisheries and Forestry Department, Hokkaido Prefectural Government;
- Mr Takehiro Sakuraba, President, Hokkaido Prefectural Federation of Fisheries Cooperative Associations;
- Mr Ken-ichi Nakazawa, President, Notsuke Fisheries Cooperative Association, Hokkaido;
- Mr Hideyo Hase, Director, Shibetsu Salmon Museum, Hokkaido;
- Mr Masaharu Morita, Director, Notsuke Peninsula Nature Center, Hokkaido; and
- Mr Makoto Suzuki, President, Shibetsu Fisheries Cooperative Association, Hokkaido.

I hope that on the basis of information and experiences derived from Phase Two of the Project, Phase Three – a seminar on fisheries resource management in Thailand – will generate meaningful recommendations for better fisheries resource management in Thailand.

服部 郁弘

Ikuhiro Hattori
Chairman

30 November, 2007

International Cooperative Fisheries Organization
of the International Cooperative Alliance



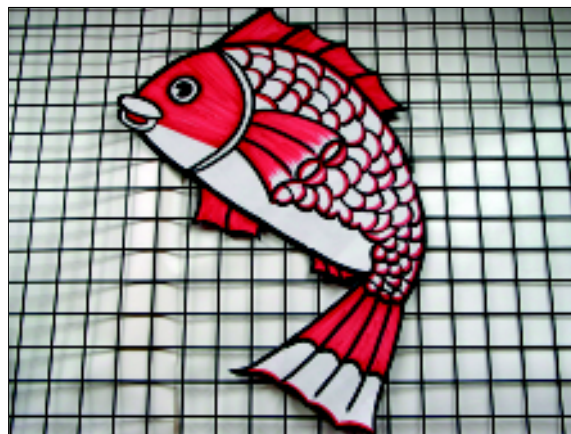
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- Fishery Agency, MAFF, Government of Japan, Tokyo.
- National Federation of Fisheries Cooperative Association of Japan (JF-ZENGYOREN), Tokyo.
- Tokyo Metropolitan Wholesale Market (Tsukiji), Tokyo.
- Faculty of Fisheries Sciences, Hokkaido University, Hakodate, Hokkaido.
- Department of Fisheries and Forestry, Hokkaido Government (DO-CHO), Sapporo, Hokkaido.
- Hokkaido Federation of Fisheries Cooperative Associations (DO-GYOREN), Sapporo, Hokkaido.
- Notsuke Fisheries Cooperative Association, Notsuke, Hokkaido.
- Notsuke Peninsula Nature Center, Notsuke, Hokkaido.
- Shibetsu Salmon Museum, Shibetsu, Hokkaido.
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- Bay of Bengal Programme Inter-Governmental Organisation, Chennai, India.
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- Mr Kosei Banura, International Cooperation Division, International Affairs Department, Minister's Secretariat, MAFF, Government of Japan.
- Mr Kentaro Watanabe, Deputy Director, Resources Management Promotion Office, Fishery Agency, Government of Japan.
- Professor Jun-ichiro Okamoto, Faculty of Fisheries Sciences, Hokkaido University, Hakodate, Hokkaido.
- Mr Jun Machiba, Deputy General Manager, Fishery Policy and International Affairs Department, National Federation of Fisheries Cooperative Association of Japan, Tokyo.
- Mr Izumi Ishizaka, Managing Director, National Federation of Fishery Mutual Insurance Associations (GYOSAIREN), Tokyo.
- Mr Masahiro Mino, Chief, Business Promotion Section, Fisheries Management & Loan Division, Agriculture, Forestry and Fisheries Credit Foundation, Tokyo.
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- Dr Kenneth Ruddle, Professor, School of Policy Studies, Kwansei Gakuin University, Kobe-Sanda Campus, Japan.
- Mr Masahiro Morita, Director, Hokkaido Fisheries Coordination Office of the Fishery Agency, MAFF, Government of Japan, Sapporo, Hokkaido.



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- Mr Ichio Sato, Executive Director, Notsuke Fisheries Cooperative Association, Notsuke, Hokkaido.
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1.0 Introduction

1.1 Background

The Training Project for 'Promotion of Community-based Fishery Resource Management by Coastal Small-scale Fishers in Thailand' is being implemented in three phases.

During Phase One, three experts visited Thailand during 15-24 July 2007 and undertook detailed field trips and held discussions/ meetings with the concerned officials of the Department of Fisheries, Government of Thailand; the Cooperative Promotion Department, Government of Thailand; the Cooperative League of Thailand; Southeast Asian Fisheries Development Center; the FAO Regional Office; the Faculty of Fisheries, Kasetsart University; Japan International Cooperation Agency, etc. The expert mission also met with a large number of shrimp farmers and coastal fishers and their associations. The Phase One visit was also utilised to prepare for Phase Two of the Project.

The objective of Phase Two 'Study-cum-Training Visit to Japan' is to expose participants to fisheries resource management system in Japan through field trips to fish markets, fish landing centers and the academia, as well as meetings and discussions with officials of the Central Government (Ministry of Agriculture, Forestry and Fisheries - Fishery Agency), the Prefectural Government, and Fisheries Cooperative Associations (FCAs).

The study visit is meant to help participants understand Japan's framework of community-based fisheries resource management, co-management and FCAs in day-to-day management of the resource. This understanding and exposure, it is hoped, will help participants in formulating policies and programs concerning fisheries resource management in Thailand.

Since fisheries cooperatives play a vital role in fisheries resource management in Japan, lessons and learnings through exposure to them should help participants in the task of strengthening and empowering fisheries cooperatives in Thailand.

The objective of the Phase Two is also to prepare for the Project Seminar (Phase Three), scheduled during February 2008 in Bangkok, Thailand.

1.2 List of Participants and Advisors

The Study-cum-Training visit was attended by nine participants, representing the Department of Fisheries, Government of Thailand; the Cooperative Promotion Department, Government of Thailand; the Cooperative League of Thailand; Fisheries and Aquaculture Cooperatives and Fish Marketing Organization. [Annexure 1](#) gives a list of participants and advisors with their full contact details.

1.3 Itinerary

It was a busy itinerary. The Thai team met officials of the Central Government, visited wholesale fish markets in Tokyo, met representatives of the Prefectural Government in Hokkaido and took part in a Seminar on 'Promotion of Community-based Fisheries Resource Management by Coastal Small-scale Fishers in Asia' (organized by the Faculty of Fisheries, Hokkaido University and the ICFO). They visited the fish market in Sapporo, then visited FCAs and their fish landing sites in Notsuke and Shibetsu towns.

[Annexure 2](#) gives the itinerary.



*Front row (L to R): Ms Boonsiri Chueliang, Mr Ikuhiro Hattori, Dr Yugraj S Yadava
 Rear Row: Mr Phanuwat Wanraway, Mr Mongkalut Pukanut, Mr Chucheeep Wongsung,
 Dr Udom Nuanhnuplong, Mr Mongkol Vacharangkul, Mr Takashi Ono, Dr Kungwan Juntarashote,
 Mr Pinyo Kiatpinyo, Dr Jun-ichiro Okamoto, Mr Masaaki Sato,
 Dr Pongpat Boonchuwong, Mr Pramuan Rugjai, Mr Jun Machiba, Mr Kosei Banura.*

2.0 Report

2.1 Day One (18 September 2007)

The opening ceremony of the Second Phase of the Training Project for 'Promotion of Community-based Fishery Resource Management by Coastal Small-scale Fishers in Thailand' was held at Meeting Room No 2 of the National Federation of Fisheries Cooperative Association of Japan (JF-ZENGYOREN), Sixth Floor, Cooperative Building, 1-1-12 Uchikanda, Chiyoda-Ku, Tokyo, Japan.

The opening ceremony began with self-introduction of participants and advisors followed by a speech by Mr Ikuhiro Hattori, President, JF-ZENGYOREN and Vice-Chairman, International Cooperative Fisheries Organization (ICFO) of the International Cooperative Alliance (ICA).

Mr Hattori extended a warm welcome to all the participants on behalf of ICFO and JF-ZENGYOREN for taking part in the Study-cum-Training Visit to Japan under the Training Project for 'Promotion of Community-based Fishery Resource Management by Coastal Small-scale Fishers in Thailand'. He was happy to note that in 2006-07, the project was successfully implemented in the Philippines, with full strategic support from the Cooperative Union of the Philippines and the Bureau of Fisheries and Aquatic Resources of the Government of the Philippines and said that those agencies are now translating the Palawan Declaration into action.



Mr Ikuhiro Hattori

Mr Hattori said that the fishery sector, like any other, has many issues and problems that need to be addressed. It is important for us to deal with each issue step by step and with patience. One of the burning issues is fisheries resource management. He hoped that during the Phase Two, 'Visit to Japan', the participants will experience good exposure to fisheries management practices adopted by fisher groups in Japan. He would indeed be happy if the knowledge and experiences gained in Japan help the process of sustainable development of fisheries and aquaculture in Thailand. The full text of Mr Hattori's speech is in [Annexure 3](#).

Mr Takashi Ono, Director, International Cooperation Division, International Affairs Department, Ministry of Agriculture, Forestry and Fisheries (MAFF), Government of Japan, presided over the opening ceremony. He welcomed the participants from Thailand. He said that decline of fisheries resources in recent years has been a serious problem, particularly in Asia. These resources have been affected by various factors such as pollution of marine waters, environmental change and overfishing – which is perhaps the main cause for decrease in fish stocks. Mounting demand for fish has added to fishing pressure, he added.

Mr Ono said that it is essential to restore fishery stocks to a level that can generate production to MSY levels. With this end in view, MAFF, Government of Japan, started to contribute funds from 2006 to the ICFO to help implement fisheries resource management activities in Asian countries. The Project on 'Promotion of Community-based Fishery Resource Management by Coastal Small-scale Fishers in Asia' is for a period of five years, from 2006 to 2010.

Mr Ono said experience tells us that coordination between self-help activities of fishery cooperatives and administrative institutions is one of the keys to effective fishery resource management. Thailand as a major player in global fisheries has been active in the ASEAN fisheries scene. He hoped that Thailand will be able to disseminate the know-how and knowledge acquired through this training course not only in Thailand but also in other ASEAN countries. [Annexure 4](#) gives the full text of Mr Ono's speech.

Concluding the opening ceremony, Mr Masaaki Sato, Secretary, ICFO gave a brief orientation on activities to be carried out under Phase Two of the Project and the arrangements made for the successful conduct of the programme in Tokyo and Hokkaido Province. He also gave a briefing about the documents given to participants on the fisheries sector of Japan, and talked in particular about management practices adopted by the Government of Japan and the Fisheries Cooperative Associations (FCAs) in the country.



Study material prepared by ICFO

The orientation was followed by a group photograph of participants and guests.

The opening ceremony was covered by **Suisan Keizei** News (The Daily News of Fisheries), a newspaper published from Tokyo. A English translation of the news clip is found in [Annexure 5](#).

Following the opening ceremony, five lectures were delivered. In the first lecture, Dr Yugraj Singh Yadava, Director, Bay of Bengal Programme Inter-Governmental Organisation (BOBP-IGO) and Advisor to the Project, explained the activities carried out by the three-member Mission in Thailand under Phase One of the Project.

The Mission, comprising Dr Yadava, Prof Jun-ichiro Okamoto, Marine Bio-Resource Management Strategy, Faculty of Fisheries Sciences, Hokkaido University, Hakodate, Japan and Mr Masaaki Sato, visited Thailand from 15-24 July 2007. Dr Yadava briefly explained the objectives of the Phase One Mission to Thailand, which included studying the present state of affairs of fisheries resource management in Thailand and collecting information/ data that would help prepare for Phase Two (Study Visit to Japan) and Phase Three (Terminal Project Seminar in Thailand) of the Training Project.

Phase One activities were carried out in close cooperation with the Cooperative League of Thailand (CLT), Department of Fisheries (DoF), Government of Thailand and the Cooperative Promotion Department of the Government of Thailand. Dr Yadava also acknowledged the support of the fish farmers and fisher cooperatives/ associations in making the Phase One visit to Thailand successful. A Report (*Training Project for Promotion of Community-based Fishery Resource Management by Coastal Small-scale Fishers in Thailand, Report of Phase One (16-24 July 2007), International Cooperative Fisheries Organization of the International Cooperative Alliance & The Cooperative League of Thailand, 2007, Pages 68*) on the activities carried out in Phase One was made available to participants.



Report of Phase One

Mr Jun Machiba, Deputy General Manager, Fishery Policy and International Affairs Department, JF -ZENGYOREN delivered the second lecture on 'Fisheries Cooperative Associations (FCAs) and Fisheries Resource Management in Japan'. He said that Japan has 39 coastal prefectures. The major fishing grounds are located within the 12 nautical mile area and are very complex because of the highly concentrated fisheries in the coastal waters. Voluntary management is very essential besides enforcement

of Government rules and regulations. For each fishery there is a different approach to fisheries management. The FCAs and the Government coordinate very well.

Common fishing rights are granted by the Governor of the Prefecture for small fishers through the FCAs. The other important activities carried out by the FCAs relate to supply, credit, marketing, etc. However, the guidance function of FCAs isn't performed satisfactorily, as they do not have enough staff. This activity therefore has to be supplemented.

Mr Machiba said that the fishery order in Japan, as we see today, started in the latter half of the 19th century when fishing rights were written into laws. Codes on the use of common-property resources had been in place in many autonomous fishing communities distributed along the coast of Japan. These codes transformed themselves into common fishing rights. Fisheries cooperatives came to be recognized as entities receiving and executing such rights. In this sense, it can be said that yesterday's minds are often attuned to today's problems. Subsequently, the FCAs developed into general enterprises, engaging in such services as credit, purchase, sales, ice-making and freezing and fishery guidance.



Mr Jun Machiba

The FCAs of Japan carry out several professional, business and community functions. They take active part in welfare programmes for fishers, such as financial service, festivals and health management. To enable regional autonomy, they provide manpower and financial services which regional governments are unable to. They help out with communications and disaster and crime prevention. FCAs often serve as core centers for the regions.

Mr Machiba said that a nationwide campaign to promote management-oriented fisheries, launched in 1991, has been initiated with several objectives: effective use of the stock's potential, recovery of the stock, increasing added-value and ensuring safety in fishing operations. The idea is to arrest the decline in fishery stocks and conclude extensive fisheries management agreements.

Over the past decade, subsidies have been allocated for rule making under the government's budgetary arrangements. As an example, the campaign to 'return small-size fish to the sea' was publicized widely through mass media, and won public understanding. Assistance by prefectural governments, mobilization of expertise from fisheries research organizations, supply of large quantities of seeds by fish farming centers, and setting up a campaign goal of 'promotion of management-oriented fisheries' at the national assembly of JF-Zengyoren also enabled progress towards the objectives.

On the role of women in fishing communities, Mr Machiba said that they are busy in many ways. They do fishing themselves together with other family members. They sort the fish by species and size after landing. They prepare the fish for shipping by loading ice in the fish box.

In Japan, housewives traditionally manage the family's finance. FCA women's group members do the book-keeping and provide follow-up tips on management. They thus play an important role in improving the management of fishing households, particularly in the small-scale coastal fisheries sector.

Further, women's group members have long been promoting savings and thereby contributing to the progress of FCAs' credit business development. In addition, they have also been busy getting insurance subscriptions – for fishing vessel insurance,



Fisherwomen unloading chum salmon in Notsuke, Hokkaido.

fishery insurance, life insurance. They have thus enhanced the FCA movement across the country.

In cases where fish stocks have been seriously depleted and require restoration and/or rehabilitation, strong administrative measures are necessary, such as fleet reduction or fishing prohibition. We have such an example in the Akit Prefecture. The fishing of sand fish (*Arctoscopus japonicus*) was banned for three years in the Prefecture; this helped restore the stocks of this species.

The Government of Japan is currently contemplating a programme to establish a mechanism that will work out a stock rehabilitation plan. Its elements include fleet reduction and abstention from fishing operations. Over-fishing and over-investment occur often in a free market system. To ensure sustainable development of fisheries, continued government support is essential. However, economic gain is essential to motivate resource management, otherwise management may not happen.

Prof Jun-ichiro Okamoto of the Hokkaido University delivered the third lecture on 'Coastal Fisheries Resources Management and Issues in Japan'. Prof Okamoto gave a comprehensive account of the evolution of coastal fisheries management in Japan, dating back to the 7th century. He said that the Japanese fisheries management system is unique. It has evolved gradually, over time, with many instances of success and failure.



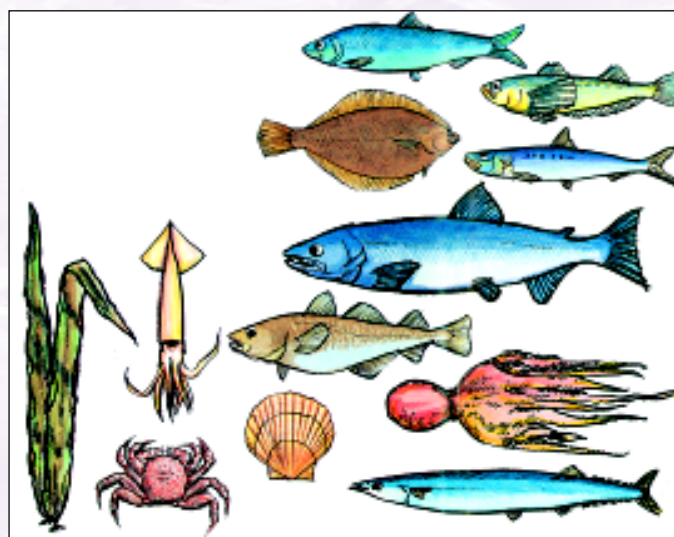
Professor Jun-ichiro Okamoto

Overfishing has been a problem with Japanese fishery throughout its history. During the feudal period in Japan (13th-19th Century), inshore fishing grounds were reserved for villages adjacent to the coast, while offshore fishing grounds were available for common use. In 1868 the power was shifted from Shogun to the Emperor. The order to establish fisheries associations was issued in 1885. In 1901, under the Fisheries Law (along with its 1911 amendment), coastal fisheries rights were classified. Exclusive fisheries rights were given to fisheries associations comprising fishermen of coastal villages.

In the post-World War II period, the new Fisheries Cooperative Association Law and the new Fisheries Law were promulgated in 1948 and 1949 respectively. These further defined the rights and obligations of coastal fishers. Fisheries rights are now categorized as (i) Common fisheries rights, (ii) Set-net fisheries rights (iii) Aquaculture fisheries rights, (iv) Inland fisheries rights, etc.

Fisheries rights are not leased or subject to mortgage. They are not tradable either. They are for exclusive use of fishers. Common sea-fisheries rights are meant for users of very passive gear such as artificial reefs, and for those who engage in diving, fishing, seed and weed collection, bottom set nets, etc. In the old fisheries law, property rights were allowed where fishers could trade their rights. The rights vested with fishers until they gave up the rights. In those days, rights were allocated on a first-come, first-served basis. Today, there is a priority order for allocation of rights.

Prof Okamoto described the activities of the Stock Enhancement Centers in Japan and the Fisheries Resource Recovery Programmes (RRP). The number of species under the programme has touched 80. However, despite the stock enhancement programme, stocks are still declining. Therefore the Government has planned fisheries RRP.



The Professor outlined the steps necessary for effective fisheries management. These steps are as follows:

- *Strong political will;*
- *Some autonomy for stakeholders to address issues;*
- *Democratized mechanism for decision making by both government and stakeholders; and*
- *Appropriate monitoring, intervention and support schemes by government to secure fairness, justice and appropriateness.*

Mr Izumi Ishizaka, Managing Director, Gyosairen – National Federation of Fishery Mutual Insurance Associations, Tokyo, made the next presentation on ‘Fishery Mutual Insurance in Japan’. Mr Ishizaka said that fisheries and aquaculture pose a number of uncertainties; insurance is therefore essential. Fishing gear and vessels are liable to damage, and production may decrease or even stop.



Mr Izumi Ishizaka

In aquaculture, fishes may escape, die or get infected with diseases. Sometimes the growth of fish is poor and fish culture pens and other facilities may be lost or damaged because of various reasons. Japan, with its unique climatic and oceanographic conditions, is vulnerable to calamities such as typhoons, tidal waves, water temperature fluctuations, red tides, etc. Such events can severely affect fisheries and aquaculture.

Mr Ishizaka said that fisheries and aquaculture in Japan are mostly small-scale enterprises with limited financial resources; they are basically family units that struggle to cope with such losses. He said the purpose of the Fishery Mutual Insurance (FMI) is to secure a stable basis for fishery development by cushioning small-scale fishers and fish farmers from economic losses.

The FMI has come to being because of strong demand from fishers and their associations – Fisheries Cooperative Associations. The FMI is designed to cover fishery production costs and not profits; in essence it is aimed at ensuring the sustainability of fisheries. The FMI undertakes four categories of insurance – (i) Harvest Insurance, (ii) Aquaculture Insurance, (iii) Special Aquaculture Insurance and (iv) Fishing Gear and Aquaculture Facilities Insurance.

Harvest insurance compensates for loss of income caused by poor catches. This type of insurance involves marine alga, sedentary invertebrates, capture fisheries and set-net fisheries. Aquaculture insurance compensates farmers for loss of aquaculture products or facilities such as fish pens or equipment lost or damaged. This insurance includes 12 types of species.

The Special Aquaculture Insurance compensates for loss of gear, damage to gear, or loss of aquaculture products (based on standard of harvest insurance). This insurance includes six types of organisms/ groups. The Fishing Gear and Aquaculture Insurance covers loss of and/ or damages to fishing gear in capture fisheries or in aquaculture and includes three types of aquaculture policies.

The FCAs play an important role in the success of FMI, by collecting data, facilitating timely subscription, receiving notices on insurance claims, etc. Fishery insurance has an important role in the Government’s disaster relief programme. From this standpoint, the Government continues to provide support to the FMI.

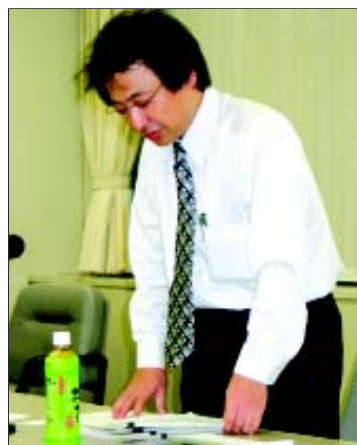


Visit to Tokyo Metropolitan Central Wholesale Market at Tsukiji.

Providing some details on the insurance claims and other attributes of FMI, Mr Ishizaka said that in harvest insurance, the amount of insurance paid has constantly exceeded the premium collected during the period 1991-2004. However, during the period 1991- 2005, there have not been many years when the aquaculture insurance money paid exceeded the premium collected. The percentage of subscription is low. The fishing population is ageing; this makes it much more difficult to increase the subscription rate.

In conclusion, Mr Ishizaka said that sound data is absolutely essential for fisheries insurance. On the whole, fishery insurance plays an important role in keeping fishers in business, in making it economically viable.

The final presentation of the day was by Mr Masahiro Mino, Chief, Business Promotion Section, Fisheries Management & Loan Division, Agriculture, Forestry and Fisheries Credit Foundation, Tokyo, Japan. Mr Mino said that the credit guarantee insurance system for medium and small-size fisheries is designed to establish the system of the Fisheries Credit Fund Association (FCFA). Its main task is to guarantee liabilities regarding the loans of fisheries cooperatives associations to medium and small-size fishers. It is also concerned with credit insurance, which the Incorporated Administrative Agency (IAA), Agriculture, Forestry and Fisheries Credit Foundation (AFFCF) execute regarding guarantees. The aim is to smoothen the flow of funds to fisheries enterprises such as medium and small-size fishers.



Mr Masahiro Mino

He said that the medium and small-size fisheries credit guarantee insurance system was based on a law concerning Loan Guarantees for Medium and Small-Size Fisheries, instituted in 1952. When medium and small-size fishers borrow funds from financial institutions such as fisheries cooperative associations, the FCFA guarantees the loan liability, thus facilitating the loans.

Mr Mino said the general fisheries situation in Japan is still stringent because of declining resources and falling production. Rising fuel prices have further constrained fisheries enterprises. In this context, the guarantee system that facilitates fisheries finance becomes even more important.

The first day's activities concluded with a welcome party hosted by JF-ZENGYOREN at the Floor 'B I' Canteen of the Cooperative Building. Mr Kuniyuki Miyahara, Senior Managing Director, JF-ZENGYOREN, presided. Participants, advisors and guests thoroughly enjoyed the party.

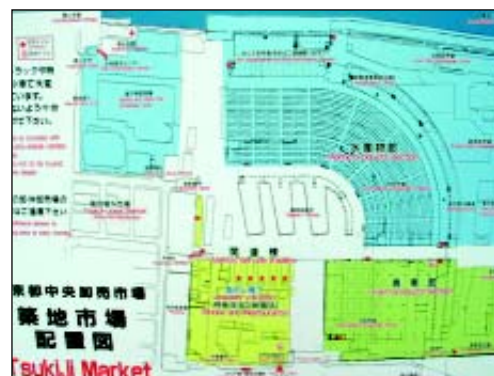
2.2 Day Two (19 September 2007)

The second day began with an early morning visit to the Tokyo Metropolitan Central Wholesale Market, popularly known as the Tsukiji market. Located at the intersection of Tsukiji and Sumida rivers (at 2-8-1 Nishishinjuku, Shinjuku-ku), the market is spread over an area of 23 hectares in the heart of Tokyo.

The Tsukiji market was established in 1935. In 2001, it was decided to move the facilities from Tsukiji to Toyosu area, on the basis of the Seventh Tokyo Metropolitan Government Wholesale Markets Development Plan. According to the Plan, the new facilities are to be completed in fiscal year 2012. The area of the new wholesale market in Toyosu is expected to be approximately 15 times larger than that at Tsukiji.

Tokyo has 11 wholesale markets of which three deal with fish (fishery products). The Tokyo Central Wholesale Market at Tsukiji is the world's largest wholesale fish market in terms of both quantity and value.

Besides fishery products, the Tsukiji market deals with vegetables and fruits. It supplies not only the metropolitan city of Tokyo but also neighbouring prefectures in the Kanto region. Tsukiji is a price leader: other wholesale markets quote or refer to Tsukiji's prices.



Layout of Tsukiji Market

The Tsukiji wholesale market deals with approximately 480 kinds of fishery products (including shellfishes, crustaceans, echinoderms, cephalopods, seaweeds, etc.). Average daily fishery transactions in 2006: 2 090 tonnes valued at 1 790 million yen. Some 42 000 persons visit the market daily. Tsukiji's total area: 230 836 square meters. Total floor area of building: 288 567 square meters (excluding facilities of private companies). Fish holding capacity in cold storages: 26 400 metric tonnes. Major players in market transactions are wholesalers, intermediate wholesalers and authorized buyers.

Wholesalers: are companies permitted by the Minister of Agriculture, Forestry and Fisheries to operate within the premise of the Tokyo Central Wholesale Market. Seven wholesalers operate in the fishery products division. To qualify as wholesaler, a company needs to have assets worth at least three days of transactions. The wholesalers' auction goods consigned to them by producers, at a commission of 5.5 percent of the wholesale price for fishery products.

Intermediate Wholesalers: are companies permitted to operate at the Tsukiji market by the Governor of Tokyo, and run small shops in a special area of the wholesale market. They buy from wholesalers and sell to retailers including restaurants. The fishery products division has 796 intermediate wholesalers, each of whom has a shop with a unit area of 7 square meters. Some intermediate wholesalers run several shops. The Tsukiji market can accommodate 1 650 intermediate wholesalers. But in September 2007, the actual number was just 795, since some companies owned two or three such units.

Authorized buyers: are retailers, processors and supermarkets approved by the Governor of Tokyo. They may buy from both intermediate wholesalers and wholesalers. The fishery products division has 339 authorized buyers.

Study visit participants took a guided tour of the Tsukiji market with officials of the Tokyo Central Wholesale Market and observed the auctioning of fresh and frozen tuna. They also visited the sections dealing with shrimps and prawns, live fishes and the Intermediate Wholesale Shop Area. They saw a video film on the market and then took part in a question-answer session with market officials.

After Tsukiji, participants visited the MAFF, Government of Japan. The MAFF session was conducted at the **Kaigai Chuo Kenshushitsu** (meeting room for visitors from foreign countries), 4th Floor, MAFF, 1-2-1, Kasumigaseki, Chiyoda-Ku, Tokyo. The first lecture here was delivered by Mr Kentaro Watanabe, Assistant Director, Resource Management Division, Fishery Agency of MAFF. His presentation dealt with resource management as well as with the Government's Basic Fisheries Plan adopted in March 2007.

Talking about resource management, Mr Watanabe said Japan has the world's sixth-largest Exclusive Economic Zone (EEZ) of 4.5 million sq. km. The country ratified the United Nations Convention on Law of the Seas (UNCLOS) in 1996. Domestic laws concerning the EEZ, the Continental Shelf, sovereign rights over fisheries in the EEZ and conservation and management of marine living resources were also enacted. Mr Watanabe said that Japan's once-abundant major fishing grounds were now declining. Wise management of fish stocks was essential now, also coordination among fishers and other stakeholders.

Mr Watanabe said the stock management system in Japan included both 'entrance regulations' and 'exit regulations'. These facilitated recovery of declining species which urgently needed such recovery. Japan has been following the practice of Total Allowable Catch (TAC) since 1997. To cushion the direct effects of TAC, fishers get support through various means to remain viable. At present, seven species come under TAC arrangements. Highly migratory species are excluded from the TAC since they come under the management fold of inter-governmental organizations.



*Presentation of a memento to
Mr Kentaro Watanabe*

Describing the Resource Recovery Plans (RRPs) introduced in 2001, Mr Watanabe said that 42 RRP covering 66 species were being implemented by the Central Government and the Prefectures in close co-operation with fisher groups and their associations. RRP are effective in the long-term. But in the short-term, they impact on fishers' business. Extensive consultations are therefore undertaken before RRP are implemented. Management practices based on Total Allowable Effort (TAE) were introduced in March 2003, to support the RRP. At present, nine species are covered by the TAE.

Explaining the Basic Fisheries Plan, Mr Watanabe said it focuses on (i) implementation of fisheries management and promotion of rational resource utilization, (ii) addition of target species to TAC and TAE systems, (iii) introduction of individual quotas (IQ) and (iv) promotion of the stock recovery plan and introduction of a post-stock recovery plan. The Basic Fisheries Plan takes into account both biology and economics, so that the fishing business is sustainable.

The second presentation was made by Mr Kosei Banura, Section Chief, International Cooperation Division, MAFF, on 'Japan's New Development Initiative for Trade'. Describing the new initiative as the backbone of Japan's trade, Mr Banura said it was launched to help developing countries to benefit from the multilateral trade system.

The New Development Initiative is based on three pillars - **produce, sell and buy**. Other features of this initiative: (i) duty-free and quota-free access for LDCs, (ii) enhancement of productivity, (iii) expansion of marketing channels, (iv) export promotion, (v) expansion of south-south trade, (vi) support through neighbouring countries and (vii) partnership with NGOs and private sector.



Mr Kosei Banura



*Auction at the Fishing Harbour, Hakodate (top).
Morning market, Hakodate (bottom).*



After the two presentations, a video film on 'Japan's Fishery Policy' was shown to participants.

After a very productive and useful visit to the Tsukiji Market and later to MAFF, the participants flew to Hakodate city in Hokkaido Prefecture from the Haneda airport, on flight NH 863.

2.3 Day Three (20 September 2007)

On day three, the participants visited the fish landing and auction place in the Hakodate Harbour premises and witnessed the landings of a variety of fin and shellfish species and their auction. They then visited the market area where fresh fish were being sold through retail vendors.

Next on their agenda was a visit to the Faculty of Fisheries Sciences, Hokkaido University, where a Seminar on 'Fisheries Resource Management in Asia' was organized jointly by the Hokkaido University and the ICFO. Besides the visitors, University students and faculty, local fisheries experts and staff of the Fisheries Department of the Hokkaido Prefecture took part in the Seminar.

Dr Akihiko Hara, Dean of the Faculty of Fisheries Sciences at Hokkaido University, welcomed participants. He said that Hokkaido University was established more than 130 years ago in Sapporo. It now had 12 under graduate schools and 17 graduate schools. The fisheries school was located in Hakodate. It celebrated its 100th anniversary in 2007. Some 13 000 students had graduated over the past 100 years. The school currently had 19 scientific and educational exchange programs with schools and institutions in nine countries.



Dr Akihiko Hara

Hokkaido is an important fishing area in Japan. It houses 14 percent of Japan's fishers and accounts for a full quarter of the country's total fish catch. Hakodate is one of Japan's major fishing ports. The Hakodate municipal government seeks to become a hub of fisheries and oceanic sciences. Dr Hara said the fisheries school was a part of this endeavour. It was cooperating with several institutions in Hakodate to promote fisheries and ocean sciences.

Dr Hara described the Seminar of the day, on coastal fisheries resources management by small-scale fishers in Asia, as very timely. Fish stocks around the world have suffered from over-exploitation and ineffective fisheries management. Interest in community-based fisheries management (CBFM) and rights-based fisheries management has gone up among fisheries policy makers around the world. In the context of CBFM, the coastal fisheries management system in Japan is often cited as a success. But Japan faces various problems in fisheries resource management.

Dr Hara mentioned the agreement with the Faculty of Fisheries, Kasetsart University. In March 2007 an introductory meeting was held at Kasetsart. In August, two faculty members of the Hokkaido University visited Kasetsart to give lectures. Likewise, two faculty from Kasetsart University would visit Hokkaido to give lectures. He hoped that such exchanges would help deepen understanding of Asian fisheries and improve the fisheries management system in Japan.

Mr Masaaki Sato welcomed Seminar participants and guests. He said the Seminar would broaden understanding of fisheries resource management systems in south and southeast Asia. He introduced the four Seminar speakers.



Participants at the Seminar.

The first presentation was made by Dr Kungwan Juntarashote, Director, Coastal Development Centre, Faculty of Fisheries, Kasetsart University, Bangkok, Thailand on the 'Status of fisheries and fisheries resource management in southeast Asia and higher fishery education in Thailand'.

Dr Juntarashote said the marine fishery industry contributed significantly to the national economy of southeast Asian countries. It provided high-quality animal protein, created national income and jobs, generated both upstream and downstream industries and earned foreign exchange. Marine capture fishery in southeast Asian countries could be classified in terms of scale into small-scale fishery (coastal fishery), commercial fishery (offshore fishery) and large-scale commercial fishery (overseas fishery).



Dr Kungwan Juntarashote

The total fish production in southeast Asian countries in 2004 was 21.1 million metric tonnes (mmt), valued at approximately 15 billion US\$. The marine capture fishery contributed 13.4 mmt (63 percent of the total fishery production), or US \$ 7.4 billion in value, 49 percent of the total. Indonesia was the highest producer in southeast Asia.

Dr Juntarashote said every country in the region had implemented management measures to keep the fishery industry sustainable. In the past, fishery management was centralized. All management measures were formulated by government departments or ministries. The most popular measures in the region were area closure, seasonal closure, fishing gear restriction and entry limitation by license. Despite such measures for more than half a century, fishery resources had yet to recover to a satisfactory level. Some important reasons:

- Collaboration by fishers is limited. Fishery resources are treated as common property in an open-access fishery. Fishers are reluctant to collaborate with the government for monitoring, control and surveillance (MCS) of resources. They just want to catch as much as they can. They believe that if they follow the government's management regime, they will be the losers.
- Cost of law enforcement (e.g. operation of patrol boats) is very high. It is doubtful whether the benefits from recovery of fishery resources can meet the costs of law enforcement.
- Staff and wherewithal *vis-à-vis* the long coast line is limited and this makes MCS difficult.
- The right management decisions are not made because of political pressure.
- The statistical and information base for fishery management objectives is weak.
- Lack of understanding of fishery economics and sociology, especially in a government set-up. This can lead to misunderstanding and misinterpretation of cause and effect.
- Inappropriate or inadequate policies and objectives, and conflicts in objectives.
- Failure to implement measures in time to prevent serious overfishing.
- Conflicts between the government's management objectives and the fishermen's profit motives.

During the last decade, fishery co-management (FCM) and CBFM have been introduced and implemented as pilot projects in some southeast Asian countries (Philippines, Thailand and Indonesia). Under this new regime, fishers and other



Faculty of Fisheries Sciences, Hakodate, Hokkaido.

stakeholders have a chance to take part in the coastal fishery management process. The FCM and CBFM of Japan is the principal model for the region. But the Japanese model cannot be transferred wholesale to other countries. It needs to be adapted or modified to suit the circumstances and requirements of each country. Further, an effective FCM and CBFM regime call for hard work from all stakeholders and an appropriate legal framework. Continuous financial support is a must.

Dr Yugraj Singh Yadava, Director, BOBP-IGO, Chennai, India, made the next presentation, on 'Fisheries Management in the Bay of Bengal Region'. (The scope of his presentation was limited to four member-countries of his Programme: Bangladesh, India, Maldives and Sri Lanka.) Dr Yadava said that the BOB covers some of the most productive waters in the world, and supports a large population of small-scale fishermen: some 6-8 million directly and an additional 35- 40 million engaged in ancillary activities related to fisheries. Coastal fisheries in the BOB contribute substantially to nutrition and economic well being.

Dr Yadava said that in recent years, the growth rate of capture fisheries in the BOBP region was slowing down. Further decline of fisheries would severely impact the livelihood security, food availability and national economy of member-countries. Rising population, reduced productivity of coastal fisheries through unsustainable fishing practices, habitat degradation, post-harvest losses - all these threatened the livelihoods of millions of small-scale fishers in the Bay.

Given that coastal resources, particularly near-shore resources, are exploited close to sustainable levels, improving management is critical. There is growing optimism that the BOB can produce significantly more fish than at present through improved resource management. It would clearly benefit from better and more scientific technological inputs, better all-round awareness, greater community involvement in management of fisheries resources, and approaches based on the principles of co-management.

The BOBP's member-countries -- Bangladesh, India, Sri Lanka and Maldives -- have large populations and are rich in marine waters, Dr Yadava said. The Government is still the major facilitator in the fisheries sector in all the countries. Institutional changes and initiation of a co-management process do indicate signs of a paradigm shift in favour of shared management. But this will take time as grassroots-level organizations have to be strengthened to shoulder the burden of management along with the government.

Dr Kenneth Ruddle, Professor, School of Policy Studies, Kwansei Gakuin, Kobe-Sanda Campus, Japan in his presentation on 'The Role of Rights in Fisheries Resource Management in Asia' said that in any fishery, four existing or potential problems require management. These are: (i) Resource flows (or the regular availability of harvestable fish); (ii) Stock externalities (or economic and social impacts of harvesting interactions); (iii) Technical (gear) externalities (or the incompatibility of various gear); and (iv) Allocation problems (or competition for access to unevenly distributed resources).



Dr Kenneth Ruddle

There are two basic ways of addressing these issues, Dr Ruddle said. One is 'conventional' or Western scientific fisheries management that focuses on fish stocks and stock externalities, and assumes an open access resource regime. In other words, it focuses on trying to manage what is unknown-(and perhaps inherently unknowable) and thus unmanageable.

In contrast, according to Dr Ruddle, local or 'traditional' management systems in the Asia-Pacific and other regions take a different approach. They focus on (i) gear externalities and allocation problems; (ii) implementation based on defined and geographical areas and controlled access; (iii) self-monitoring by local fishers, and (iv) enforcement by local moral and political authority. So, in striking contrast to conventional fisheries management, such local systems focus on human problems that are inherently manageable. This implicitly accounts for the complex multi-species and multi-gear nature of the tropical fisheries resources.

Dr Ruddle said that from the above, it becomes evident that there are several key elements that characterize successful local management systems. Five sets of 'design principles' can be distinguished: (i) authority or leadership, (ii) rights, (iii) rules, (iv) monitoring, accountability & enforcement, and (v) sanctions. He further said it is important to understand that traditional community-based systems of fisheries management are based on a specific area of sea space that comprises a common property of the fishing community.

Almost universal throughout the Asia-Pacific Region is the principle that members of fishing communities have primary resource rights by virtue of their status as members of a social group. Such rights to exploit fisheries are subject to various degrees of exclusiveness, which depends on community social organization and local culture. Most commonly, traditional fisheries rights apply to areas, but superimposed on these may be claims held by individuals or groups to a particular species or to a specific fishing technology.

In conclusion Dr Ruddle said that we must exercise caution in replicating or adapting the model to other cultures or countries. All primary resources management models, and not just those of Japan, have developed within particular cultures to serve the needs of that individual culture group. So it would be foolhardy to think of transferring any model in totality. However, there is nothing wrong with transferring 'basic design principles' of the Japanese system (authority, rights, rules, monitoring, sanctions, etc.), since design principles are universal and fundamental characteristics of any resource management system. They are certainly not unique to the Japanese or any other system. But their application in any given local circumstance is detailed, highly varied, and perhaps in some cases even unique.

The last seminar presentation was by Mr Masahiro Morita, Director, Hokkaido Fisheries Coordination Office, Fishery Agency, Sapporo, Hokkaido, Japan on 'Some efforts towards fisheries resources management in Hokkaido'.

Mr Morita said that the Hokkaido Fisheries Coordination Office (HFCO) is one of the regional subsidiary offices of the Fisheries Agency. It is concerned mainly with fisheries enforcement and adjustment, and fishery license control. It is also the Executive Office for the Regional Fisheries Adjustment Commission (RFAC) – which is responsible for policy planning for the recovery or rehabilitation of regional fisheries resources present in waters of more than one prefecture.

The HFCO is responsible for the waters around Hokkaido. Many domestic fisheries including diverse coastal fisheries – such as the small-medium size off-shore trawl fishery, the squid jigging fishery, and the Pacific saury fishery – operate off Hokkaido. In addition, foreign vessels from Russia and Korea are allowed through access agreements to fish in the EEZ.



Mr Masahiro Morita

In view of all these diverse fisheries occurring around Hokkaido, the HFCO took the initiative to develop and promote fisheries resource recovery programmes, Mr Morita said. Further, as part of national policy, the HFCO also manages and executes the Total Allowable Catch (TAC) system and the Total Allowable Fishing Effort (TAE) system in the waters of Hokkaido for resource conservation. In terms of enforcement, the HFCO operates patrol boats to guide and ensure normal fisheries operations.

The province of Hokkaido is surrounded by three waters; the Pacific Ocean, the Sea of Japan, and the Okhotsk Sea. It has a 3 045 km coastline which makes up 9 percent of Japan's coastline. There are very productive fishing grounds east of Hokkaido, where a branch of the current from the northward-flowing Kuroshio warm current and the southward-flowing Oyashio cold currents meet. There are also wide continental shelves and seamounts.

In 2005, the total fisheries production including aquaculture from Hokkaido was 1.4 million tonnes, which constituted 24.8 percent of Japan's total national production (5.67 million tonnes). The main fisheries are scallop, salmon, Alaskan Pollack, Atka mackerel and kelp. Hokkaido accounts for almost the entire national production of these species.

As regards the value of fisheries production, the total ex-vessel value was 280 billion yen, and the value of processed fish was 640 billion yen. These added up to 920 billion yen. The fisheries sector in Hokkaido is a major economic sector of the prefecture, constituting about 15 per cent of the total primary industries production (6 trillion yen) of Hokkaido, Mr Morita said.

Fisheries resources in Hokkaido are generally declining. The numbers of fisheries households, working fishers and fishing vessels are decreasing. It is therefore important to promote resource management oriented fisheries. For this purpose the Prefectural Government of Hokkaido established the Fisheries Resource Management Council comprising administrators, researchers and other stakeholders and developed the 'Manual for Fisheries Resource Management in Hokkaido', which provides management methods for 23 species.

The purpose of the resource recovery programme (RRP) is to quickly recover declining stocks to a level that allows sustainable utilization and ensures stable fisheries production. The programme adopts stock enhancement and reduces fishing effort by removing fishing vessels and by limiting fishing periods, Mr Morita said. To make the programme effective, the national government sometimes provides a subsidy and encourages introduction of the TAE, which set the level of fishing effort under the 1997 Marine Bio-resource Conservation and Management Law.

The RRP is classified into a national programme and a prefectural programme, Mr Morita said. The 2003 national programme covered Pacific mackerel stock that occurs from Honshu Island to Hokkaido, the 2007 programme included the Northern Japan sea stock of Alaskan Pollack that occurs from Hokkaido to Ishikawa Prefecture. The Hokkaido Prefectural programme also included two species -- the 2005 programme covered the Pacific sand lance stock in the Soya Strait and the 2005 programme, the barfin flounder stock west of Erimo area in the Pacific.

Barfin flounder or *Matsu-kawa* (*Verasper moseri*) is a large-sized flounder distributed in the Pacific off Hokkaido, and is a valuable species in the Japanese market. The production of barfin flounder drastically declined from a peak of 60 tonnes in the 1960s to less than 1 tonne in the 1990s. The overexploitation of both juvenile fish and the spawning stock is regarded as the main reason of the decline.

In order to recover the species, the Hokkaido Prefectural Government developed a RRP for barfin flounder with catch size limits and mass cultivation of seeds. The



*Participants on Mount Hakodate. Panoramic view of Hakodate city
in the background.*

programme's capture production goal was set at 150 tonnes by 2011. With these measures, catch has increased steadily to 3.5 tonnes in 2003. As the coordination between the Hokkaido Prefectural Government and stakeholders like fisheries cooperative associations concerned works well, it is expected that the goal of the programme could be attained if their cooperation continues.

The Alaskan Pollack (*Theragra chalcogramma*) is one of the important demersal fish species distributed off the northern part of Honshu Island and Hokkaido. The estimated population of the Northern Japan Sea stock has declined from a peak in 1990 to 10 percent of that level. Spawning stock has been declining in numbers; current fishing effort will further reduce population. Environmental change or regime shifts are also regarded as a reason for stock decrease and over-exploitation. Research is therefore being conducted on the impact of environmental change on the stock.

To ensure the stability of local fisheries that rely on the stock, the national government took the initiative to develop and implement a RRP – since the stock occurs within the waters of more than one prefecture. The programme aims at maximum reduction of fishing effort on the stock without seriously damaging fisheries business management. It seeks to arrest further decline of the stock through reduction of fishing effort. As the programme covers more than one prefecture, diverse fisheries are involved—a mid-size trawl fishery, small-scale trawl fishery, bottom long-line fishery, and a bottom gill-net fishery. But the main fishing ground for the stock is in Hokkaido, so the most important fisheries are the Hokkaido mid-size trawl fishery, coastal bottom long-line fishery and bottom gill-net fishery.

The measures to be taken under the programme between 2007 and 2012 are as follows, Mr Morita said.

- (i) Mid-size trawl fishery in Hokkaido:
 - The fishing effort on the stock shall be reduced by 10 percent of present annual fishing days.
 - Fishing activity in the fishing ground concerned will be voluntarily suspended when the proportion of small-sized fish reaches an agreed ratio.
 - If it is found the recruitment of the dominant stock born in specific year is not sufficient, further reduction of fishing effort will be considered to conserve such dominant year class stock.
- (ii) Bottom long-line and gill-net fisheries in Hokkaido: Measures to protect the spawning stock shall be strengthened by area and time closures.
- (iii) Fisheries outside Hokkaido will be requested not to change their current fishing behaviour and not to take any further action to increase fishing effort on the stock.

According to the agreed principles, a concrete implementation plan for reducing fishing effort on the stock is under consideration, fishery by fishery.

The afternoon session was devoted to discussions, facilitated by the advisors. The participants discussed the applicability of the Japanese system of fisheries management to Thailand. They also considered options that would meet the requirements of Thailand's fisheries sector. The conclusion was that effective implementation of community-based fishery resource management (CBFRM) in Thailand would need the following:

- Strong political will from national to provincial levels
- Clear legal framework for supporting CBFRM
- Strong institutional arrangements
- Strong financial support at both local and national levels



Participants at the Bureau of Fisheries, Department of Fisheries and Forestry, Hokkaido Government.

- High efficiency in enforcement of the legal framework
- Strong participation of fishers in CBFRM
- Strengthening of fishery cooperatives
- Capacity enhancement of stakeholders, mainly the fishers

In the evening the participants drove to Mt Hakodate to catch the charming night view of Hakodate city from the hill.

2.4 Day Four (21 September 2007)

On the morning (0830 hrs) of the fourth day, participants left for Sapporo by train (Hokuto No 3). In the afternoon they visited the office of the Fishery and Forestry Department of the Hokkaido Prefectural Government, where they were received by Mr Hiroshigo Okazaki, Senior Director, Bureau of Fisheries, Department of Fisheries and Forestry, Hokkaido Government.

Welcoming the participants, Mr Okazaki asked them to note that September was the harvesting season in the area and the countryside looked very beautiful. He said that about one-fourth of Japan's fish production comes from Hokkaido. The Prefecture is also important for aquaculture production. The main concerns in fisheries are resource sustainability and fishers' livelihoods. Referring to global warming, Mr Okazaki said that many fishers have reported the changes they see in fisheries because of increase in temperature. Some fishers have started planting trees. This will hopefully improve the ecology and the environment. He wished the participants a pleasant stay in Hokkaido.



Mr Hiroshigo Okazaki

A detailed presentation on 'Fisheries of Hokkaido and voluntary agreement on management of fish stocks' was then made by Mr Teruo Hatamiya, Deputy Director and Head of Fisheries Planning Group, Administrative Division, Department of Forestry and Fisheries, Hokkaido Government.

Mr Hatamiya said that Hokkaido is Japan's largest fishery base. It abounds in fishery resources such as scallops, Walleye Pollock, Arabesque greenling, salmon and kelp. In recent years, however, the industry has been hit by decreasing resources in coastal waters and low prices for local products due to increased imports. There is also concern over the diminishing vitality of fishing villages because fishers are going down in numbers and going up in age. He further said the capture fishery is fluctuating from year to year. More and more attention is now paid to aquaculture.

Mr Hatamiya was assisted by three colleagues who spoke on the (i) Economic performance of the Fishermen Cooperative Associations (FCAs) in the Prefecture, (ii) Fisheries legal system in the Prefecture and (iii) Stock management system.

Credit, insurance and marketing were some of the issues concerning the economic performance of FCAs, the team said. Marketing is a pre-eminent issue: more than 50 percent of the FCAs' income derives from marketing. In 2003 the marketing business earned 38 million Yen. But the business performance needed improvement. As many as 40 percent of the FCAs were in deficit. The credit division of FCAs in 2003 was in deficit by approximately 19 million Yen.

On the fisheries legal system, the speaker said that a medley of authorities (Prefecture Governor, Minister of MAFF, etc) was responsible for licensing different fisheries. Coordination was essential in such a pluralistic set up, else conflicts could occur.



Participants and Advisors with Mr. Takehiko Sakuraba, President, JF-Hokkaido Gyoren.

A plus point was that fishers often set up consultation groups on a voluntary basis and discussed conflicting interests. The Prefecture administration extended support to such groups.

About the stock management system, the speaker said that in Hokkaido, representatives from coastal and offshore fisheries consulted each other and concluded agreements on the harvesting sizes of species such as Pollock, right-eyed flounder/point-head flounder, olive flounder and barfin flounder. The speaker explained the voluntary stock agreement by fishers in respect of capelin and Sakhalin surf clam.

The final visit of the day was to Hokkaido Prefectural Federation of FCAs (JF - Hokkaido Gyoren). The meeting was held in No 1 Meeting Room, 7th Floor, Dai-ichi Suisan Building, Sapporo, Hokkaido.

Mr Takehiko Sakuraba, President, JF-Hokkaido Gyoren, welcomed the participants from Thailand. He said that Hokkaido is blessed: it is a beautiful island, has a rich natural environment and abundant marine fisheries resources. Hokkaido accounts for approximately one-fourth of Japan's total fishery production. It can well be described as a fishery kingdom.

Mr Sakuraba said that fish prices in Hokkaido showed an upward trend the previous year, except for some species, perhaps in keeping with global shifts in demand and supply. So the value of fisheries production went up as compared to the previous year, though quantitatively production had fallen.

He described the business management environment as severe because of several factors: fishers were aging, the number of fishers was going down, there were WTO-related and globalization-related uncertainties in trade of fishery products. To overcome such difficulties, decision-makers in the JF sector were coming to grips with fisheries resource management, and were studying other solutions as well.

Mr Sakuraba said he would be happy if the Thai participants found their visit and the lectures useful for developing stock management in their country in line with the training Project's objectives. Noting that they would be seeing some more places in Hokkaido and then visiting Tokyo, he urged them to take care of their health, enjoy nature's magnificence in Hokkaido and the delicious seafood. He wished Thai fisheries further progress and prosperity.

Mr Yasushi Oyama, Manager, Guidance and Education Department of JF Hokkaido Gyoren, outlined the activities of the Hokkaido Federation. He provided some statistics. As of 1 July 2007 the Federation had 87 members and 316 employees (234 men and 82 women). Capital: about 5.5 million Yen. He said his Department sought to help the cooperative movement. It strove for fair trade through WTO and other global instruments. It carried out training and education programme for the FCA. It tried hard to promote conservation and environmental betterment of fishing grounds through the co-operative movement.

Mr Isao Watabe, Deputy General Manager, focused in his presentation on the relationship between coastal and offshore fisheries. Coastal fisheries was designated for fishing vessels of 20 gross tonnage and below. Such vessels mostly used gill nets and the like. Coastal fishers were either licensed or granted common fishing rights. The offshore fishery involved stern trawlers of 90-160 gross tonnage. These trawlers were licensed by the Minister of MAFF.

Mr Sato explaining a point to the participants.





Lake Akan (left), Lake Kussharo (middle) and Lake Mashu (right).



Chum salmon ascending a stream in Utoro.

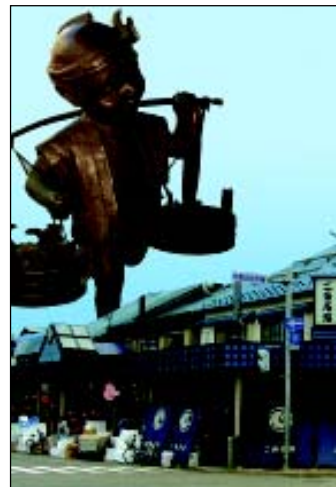
He said that a stock management agreement is in force between offshore and coastal fishers. They consult each other on the use of common fishing grounds and on the tapping of stocks. Conclusions at such consultations are often difficult because interests vary. To help such fishers to work out a stock management agreement, the Fishery Agency has enacted a new law, 'The Marine Fisheries Development and Promotion Act', which both groups have agreed to. So far, four species have been covered under the Act.

Fishers are now aware, Mr Watabe said, that they should refrain from fishing small-sized species. However, falling catches and incomes make them go for whatever they can, big or small. The stock management dilemma is that we have to conserve the resource for sustainability, yet keep the fishers in business. 'We need to strike a balance'.

2.5 Day Five (22 September 2007)

Day five began with an early morning visit to '*Nijo Ichiba*' (South 2nd Street Market). The market is more than 100 years old and was once also ravaged by fire. Today, the retail shops in *Nijo Ichiba* have established a cooperative, which also carries out PR activities for the members.

It is a market for general consumers and tourists. Many tourists come to visit the market since they can buy almost all kinds of fish and fishery products produced in Hokkaido. The population of Sapporo city is about 1 800 000 and consequently the demand for fish and fishery products is very high. *Nijo Ichiba* attracts people not only from within the country but also from neighbouring countries such as Taiwan, Korea, Russia and China, etc.



Nijo Ichiba

After visit to *Nijo Ichiba*, the participants flew to Nemuro - Nakashibetsu by NH 4833. The night halt was made at Akan-Cho, located on the banks of Lake Akan. Lake Akan is a beautiful crater lake situated in Akan National park. It is home to *marimo*, a very rare alga, which forms into beautiful green balls. The evening of day five was left free for the participants to consolidate their visit experiences.

2.6 Days Six and Seven (23 - 24 September 2007)

Days six and seven, being Sunday and National Holiday for Autumnal Equinox Day respectively, were kept free for the participants to visit sites in Akan National Park (Lakes Akan, Kussharo and Mashu) and Shiretoko National Park. The participants also observed migration of salmon in Utoro area.

Lake Kussharo is a beautiful caldera lake in the Akan National Park. With a circumference of 57 sq.km, it is the Park's largest lake.

Lake Mashu, one of the three caldera lakes in Akan National Park (Lake Akan and Lake Kussharo are the other two), is known for its remarkable water clarity and heavy mist which often shrouds it. The lake holds the world record of transparency (41.6 meters (137 feet) below the surface in 1931). The Lake has a surface area of 19.2 sq. km. Although there are three observatories around the lake, heavy mist often obscures the lake surface like immaculate deep-blue velvet. Thus, the lake is generally regarded as being hidden and inaccessible, and is sometimes called 'the mysterious lake'.



Participants at Notsuke Fisheries Cooperative Association.

Although there are no rivers running into or out of the quiet lake, the water level barely changes throughout the year, which adds to the mystery. Surrounded by sheer cliffs, the lake features a small isle in its center. The isle is the peak of a lava hill which rises about 230 meters (755 feet) from the bottom of the lake. The *Ainu* people who have long lived here call the isle 'Kamuishu,' which roughly means 'Island of the Gods.'



Sulphur mountain

The visit also included a trip to 'Iozan' or 'Sulphur Mountain', which is an active volcano in the vicinity of Lake Kussharo and Lake Mashu. Its sulphurous vents can be viewed from a close distance.

The streams of the Shiretoko peninsula are home to mostly salmonids. This region is renowned for supporting freshwater fish that depend on pristine conditions. Only two species, the Cherry salmon (*Oncorhynchus masou* or Sakuramasu in Japanese) and Dolly Varden (*Salvelinus malma*), spend their full year in freshwater, but in fall both Pink and Chum salmon return to streams by the thousands to spawn. An abundance of salmonids returns to Shiretoko, and native spawning runs still persist in many streams. The young that follow streams to the sea spend years maturing in the Pacific Ocean, then return to their birth place bringing gifts for the brown bears, fish owls and other creatures of the forest.

2.7 Day Eight (25 September 2007)

On the early morning of day eight, the participants visited the fish landing site of Notsuke Fisheries Cooperative Association (FCA) and observed the landings of chum salmon (*Oncorhynchus keta* or Shirozake in Japanese). Being a windy day, many boats did not venture for fishing the previous night and therefore the catches were much less than the previous days. Later, the participants also observed the auction of chum salmon at the fishing harbor.

After observing auction of chum salmon, the participants visited the Notsuke FCA, where Mr Ichio Satoh, Executive Director Trustee welcomed them. In his welcome speech, Mr Satoh said that he was pleased to receive the delegation from Thailand. In the past, the FCA has received delegations from countries such as China, Canada and Korea. But this was the first time for a Thai Delegation to visit the FCA. Mr Satoh also recalled his visit to Thailand a couple of years ago, where he observed conversion of waste products such as offal to fertilizers. I was very much impressed with the practice of such waste disposal. The food and the people were very good in Thailand. When I knew that the Thai delegation was visiting our FCA, I thought we must welcome them with full heart. Though time is limited but my staff will give you a presentation to make you aware about our cooperative and its activities, said Mr Satoh.



Mr Ichio Satoh

The detailed presentation on the activities of the JF Notsuke FCA was made by Mr Satoshi Yamazaki, General Manager, General Affairs Department. He said that the Notsuke FCA has been organized by the fishermen of a small town named 'Bekkai Cho' (Bekkai town) in the 'Notsuke-gun' (Notsuke county) along the east coast of Hokkaido. The town is situated on the Nemuro Strait between the Okhotsk Sea and the Pacific Ocean, or between Hokkaido and the southernmost tip of the Kuril Islands.

This is a typical small-scale fishing community in Japan. The Bekkai town has a population of 16 000. The town has 932 agricultural households and 261 fisheries households (361 households including the neighbouring town).

Mr Yamazaki provided the details on various attributes of the FCA such as its organizational structure, number of members at the end of the fiscal year 2006 (*i.e.* 31 December 2006), number of share capital at the end of the fiscal year 2006, changes in the amount of share capital during the period 1993-2006, etc. (see tables and chart below and on facing page). Mr Yamazaki further stated that the credit business of the FCA is good and there are no bad loans. The FCA owns fish processing plants, cold storage and also a retail shop 'Kaimon', which does excellent business. This retail shop was opened nine years ago and provides good publicity to the FCA, as also feedback from the customers on their choice of products. The number of fishing vessels owned by the member of the Cooperative is 538, which range from 15-20 gross tonnes in size. The FCA engages in different types of fishing but the most prominent are salmon, Hokkei shrimp and scallop fishing, which are briefly explained below:

Salmon fishing: There are 35 units of set-nets in the FCA for salmon fishing and 250 members take part in the set-net fishing. The set-net is established in August and the harvesting starts on 01 September and lasts for 3 months. Each unit of the set-net is about 250 m in width and 1 000 m in length from the shore.

Number of members at the end of fiscal year 2006

Member	Number
Regular Member (= Fully qualified members with voting right)	260 (of which women: 15)
Associate member (= Members who are not fully qualified but have voting right)	14 (of which women: 0)
Total	274

Number of share capital at the end of fiscal year 2005 (= December, 2006)

Member	Share Capital
Regular member	253 153
Associate member	487
Total	253 640

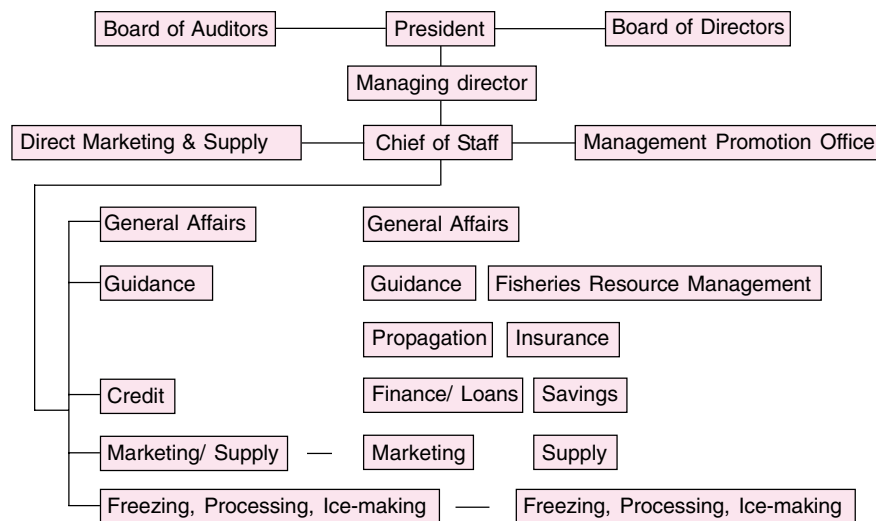
Changes in the amount of share capital from 1993 to 2006

Unit: 1 000 Yen

Year	Total amount	Amount of share capital per member
1993	1 581 000	5 730
1997	1 708 000	6 140
2003	2 365 000	8 500
2004	2 408 000	8 750
2005	2 471 000	9 450
2006	2 536 000	9 710



Organizational structure



Hokkei shrimp fishing: The fishing for this species takes place twice a year, in summer and autumn. The total production of this species amounts to about 50-70 metric tonnes/ year. Fishing is done using traditional boats with wind power for propulsion as well as for operation of the gear. The gear is called 'Utase-ami', which is operated in depths of 2-3 meters and is hand-hauled. About 30 fishers are engaged in Hokkei shrimp fishery. Fishers observe mesh size regulation for sustainable harvest of this species, which is unique to the area. The shrimp fetches good price in the market; 2 000-3 000 Yen per kg. The total production of Hokkei shrimp in Hokkaido is about 200 tonnes per year.



Utase-ami

The Hokkei shrimp fishery is restricted to the Notsuke bay, which has an area of approximately 5 200 ha. Before the shrimp fishing starts, an independent assessment of the shrimp population is undertaken by the Guidance Division of the FCA in cooperation of the Fisheries Station of the Prefecture Government. Based on this stock assessment the total quantity of catch that can be harvested is fixed. This is a conservation measure. The species spawns in May, and the brood is not caught during the spawning period. The bay itself functions as a spawning ground for the shrimp.

Scallop fishing: With regard to scallop fishing, the Governor of Hokkaido Prefecture grants the license to the FCA. Prior to the fishing season, the FCA collects statistics on the income of each participating fisher and in order to equalize their annual income, equitable distribution of fisheries resources is done. In other words, it is assured that the rich fisher do not marginalize the other fishers. This maintains harmony amongst the fishers using common fishing grounds. The Guidance Division of the FCA undertakes this work. This type of equalization of income of fisher members is done only in this FCA in Japan, which is an excellent example of distribution of common fishing rights.

Scallop fishing is conducted during the period December-July. Starfishes predate on scallops and they are removed before ranching is done. The depth of the fishing grounds is about 15 meters. Scallops are plankton feeder. Rotation method of harvest is adopted (4-yearly basis). The weight of each harvested scallop is around 600 gm.



Participants at Shibetsu Salmon Museum (top left), at Notsuke Peninsula Nature Centre (top right) and at the Notsuke Fishermen Cooperative Association (above L & R).

In the afternoon the participants first visited the Shibetsu Salmon Museum located at 1-1-1 Nishi 6, Chome Kita 1 Jyo, Shibetsu-cho, Shibetsu-gun, Hokkaido 086-1631. Mr Makoto Tsukada, Manager conducted a guided tour of the Museum. The central facility of the Museum houses an aquarium that displays 20 species of salmon from different parts of the world. From the observatory tower of the Salmon Museum, the Shiretoko Mountain ranges, Shibetsu River and Hoppou Ryodo Kunashiri Islands can be seen. The Museum also has a fishway tank, which is connected to the river and the participants could observe chum salmon ascending against the flow of the river in the tank. The Museum's Exhibition Room has a vivid display of the 'Ecology of Salmon', Migration of Salmon', Salmon Fishery of Shibetsu and 'Salmon and Human Beings'.

The last visit of the day was to the Notsuke Peninsula Nature Centre, where Ms Satoe Ishikawa, Expert gave vivid details of the Notsuke-hanto Peninsula through a video presentation. Notsuke-hanto Peninsula looks like a shrimp's bent back and has been formed by sea currents moving the sand and earth that has been flushed out of the Shibetsu-gawa River. Located in eastern Hokkaido, this expanse of land stretches like a fine thread between the Nemuro Straits and Notsuke Bay. It is made up of fields and marshes. It is 28 kilometers in length and is Japan's largest branching sandbank. The Peninsula is also a Ramsar International Site.

2.8 Day Nine (26 September 2007)

Day nine began with a visit to JF Fisheries Cooperative Association located at Kita 6 Jyo, Higashi 1 Chome, 1 Gou, Shibetsu-cho, Shibetsu-gun, Hokkaido 086-1632. Mr Mutsuro Yamazaki, Chief of Staff and Mr Akiyoshi Narita, Assistant Manager of the General Affairs Department of the FCA welcomed the participants. Mr Yamazaki said that a larger part of his presentation would focus on the HACCP (Hazard Analysis and Critical Control Points). Mr Yamazaki provided the basic details of the FCA, which are presented in the tables and figure (see page 36).

With regard to HACCP, Mr Yamazaki said that in the fiscal year 1999, the Hokkaido Prefecture created a model programme for quality control improvements, from producers to markets, using fall salmon as model fish species. The programme was centered on the Prefecture's Marine Products Quality Control Improvement Promotion Operations. Shibetsu was selected to become the model district.

In addition to its position as Japan's leading producer of fall salmon, Shibetsu received high marks for its efforts to promote advanced measures to preserve freshness, as well as its approach to enhance the quality control of the marine products taken from local waters, such as the positive sanitation and hygiene measures adopted by local processors.



Mr Mutsuro Yamazaki

After the 1999 Shibetsu Town District HACCP Promotion Activity, Shibetsu also implemented a local HACCP manual preparation effort in cooperation with the Hokkaido Government, covering every step from harvesting through market auction, processing and distribution of all marine products harvested from the local waters. Mr Yamazaki said that very strict hygienic and sanitary controls are carved out. Every week the shellfish poisoning test is carried out. There are 13 salmon processing plants, which are approved as per HACCP requirements. There are 120 items, which are checked by the HACCP system. Even for transportation of products, the HACCP process is used. Through this HACCP effort, the industry in Shibetsu was integrated and literally began operating with a uniform approach. Today we consider it our obligation to supply 'safe, worry-free' food products of the highest quality, said Mr Yamazaki (see box on page 37 for more details).

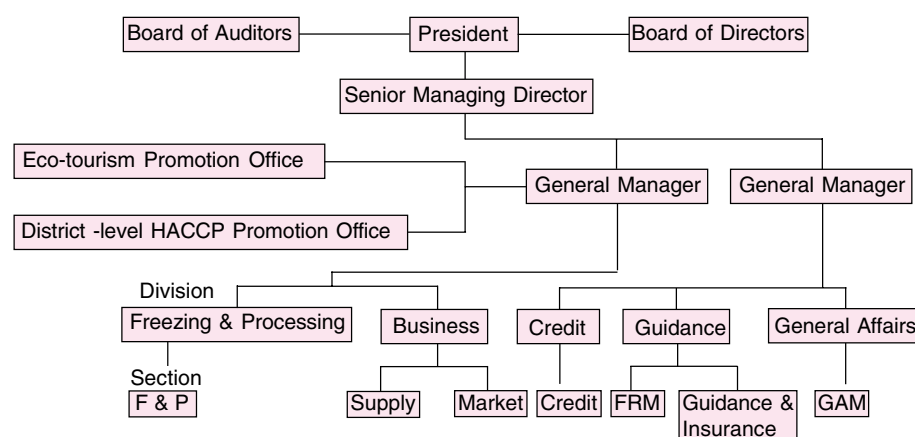
Number of members at the end of fiscal year 2006

Members	Number
Regular Member (= Fully qualified members with voting right)	
1 Fishers	191
Of which women	15
2 Fishing companies	6
Sub-total	197
Associate member (= Members without voting right)	
1 Fishers in the area under the JF Shitetsu FCA	14
2 Fishing companies	10
3 Fisheries production association	1
Sub-total	25
Total	222

Number of share capital at the end of fiscal year 2005

Members	Number
Regular member	10 062 476
Associate member	70 300
Total	10 132 776

Organizational structure



The Shibetsu Town District HACCP System

In the year 1999, the Prefecture of Hokkaido created a model programme for quality control improvements, from producers to markets, using fall salmon as a model fish species. Shibetsu was selected to become the model district.

The range of marine products harvested and processed in Shibetsu include items such as salmon roe and scallop products that do not undergo any processing, which applies heat during the processing method. These products are important specialty products of Shibetsu. To adequately ensure the safety of such products, not only is sanitation and hygiene control at the processing plant important, controls to preserve freshness and quality control assurance at the raw material stage are critical as well.

In Shibetsu Town the HACCP procedure-based system has been set up in a supply chain mode that is consistent from production to auction and processing and distribution. Besides promoting conservation of the natural environment including salmon-run rivers, the environment around the fishing port and fishing zones and also in the town is conserved and maintained. These actions complement the requirements of the HACCP process. Potential hazards have been analyzed, critical points in each process have been identified, and a system has been established to reject every seafood product that does not satisfy the control criteria. Only those products that meet strict quality control standards are approved and advanced to the next process. This is the Shibetsu Town District HACCP System.

Producers in Shibetsu now understand how important the introduction of HACCP is for preserving clean oceans and for maintaining the freshness of harvested marine products.

To satisfy today's demands and as a regional obligation, a system has been created that enables the Town to provide 'safe and worry-free' marine products and processed goods that boost the fishing industry as well as the economy of the region. The Shibetsu Town District HACCP System is the first such approach in Japan that can certify the safety of marine products and processed goods from a particular area.





Sun rise in Odaitou

Mr Yamazaki informed that in 1995-96 large quantities of salmon were caught, which led to reduction in price. This motivated the FCA to look for external markets. In the same year, experimental consignments were exported to China (625 metric tonnes) and to Thailand (25 metric tonnes). In 1996, 336 mt were exported to Thailand. Based on two year's export, a delegation went to Thailand in 1997 to explore the market. Subsequently, exports continued to China but not to Thailand. The FCA hopes that fish caught from Shibetsu waters will be exported to Thailand in future.

After the visit to the Shibetsu FCA, the participants proceed to Nemuro -Nakashibetsu Airport to catch the flight (NH 840) for Haneda Airport, Tokyo.

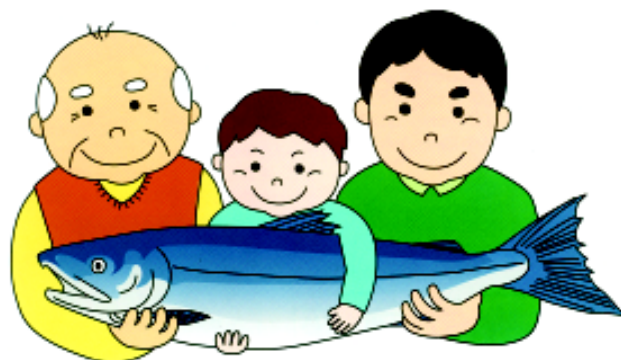
2.9 Days Ten and Eleven (27-28 September 2007)

On return to Tokyo, the participants spent the next two days consolidating their experiences gained from interactions with officials of the Central and Prefectural Governments and field visits to FCAs and fish markets in Tokyo and Hokkaido Prefecture. The meetings were held at *Chu-kaigishitsu* (Medium-size Meeting Room) of JF-ZENGYOREN. On behalf of the participants, Mr Pinyo Kiatpinyo made a consolidated presentation highlighting impressions of the visit and also their views on implementation of Phase Three Seminar in Bangkok during February 2008. Mr Kiatpinyo said that the most salient features of Japanese fisheries management could be summed up as (i) Self regulation, (ii) Devolving of power, (iii) Awareness on the resources status and (iv) Resource recovery.

It was agreed that Dr Pongpat Boonchuwong will prepare the final write-up on behalf of the participants and the write-up would be included in the Phase Two Report (presented under chapter 3.0 of this Report).

At the conclusion of the Programme, a farewell party was organized by ICFO at the Canteen (B 1 Floor) of the Cooperative Building. Mr Kuniyuki Miyahara, Senior Managing Director, JF - ZENGYOREN presided over the farewell party. In his farewell address, Mr Miyahara hoped that the Study Visit was useful and the participants enjoyed their stay in Japan. He would be happy if the lessons learnt in Japan could be of use in sustainable development of fisheries in Thailand. Mr Miyahara thanked all the Advisors for the successful conduct of Phase Two of the Training Project. The participants expressed sincere thanks to MAFF and ICFO for organizing the Study Visit to Japan, which was very productive and meaningful. The participants hoped that they would be able to utilize the new experiences in developing the Thai fisheries and aquaculture.

The participants returned to Bangkok, Thailand on 29 September 2007.





3.0 Adapting Japanese Community-based Fisheries Resources Management Practices to Thai Fisheries - Observations and Suggestions by the Participants¹

3.1 Introduction

Thailand is one of the top fish-producing nations in the world: annual fish production during 2000-2004 was 3.7 - 4.1 million tonnes. Geographical advantage is a plus point of Thai fisheries. Thailand has a total land area of about 5 40 000 km² and a coastline of 2 614 km. Marine fishing grounds that fall within Thailand's Exclusive Economic Zone (EEZ) lie partly in the Gulf of Thailand and partly in the Andaman Sea, covering a total area of about 316 000 km². The area of inland waters is approximately 3 750 km². Besides, over one million hectares of coastal area have a potential for coastal aquaculture.

In 2006, the gross domestic production (GDP) of the fisheries sector at current market prices was 98.9 billion baht². This accounted for about 1.3 percent and 11.9 percent of the national GDP and the agricultural GDP respectively.

The fisheries industry has contributed directly to the development of other related industries such as ice plants, cold storage, fish processing plants, ship building, etc. The number of people engaged in this sector was estimated about 2 million, of which 40 percent are fishermen and fish farmers, and 60 percent are in related industries and fisheries support industries.

The fish produced are both consumed domestically and exported to generate foreign exchange earnings. It is an important source of protein – hence the per capita fish consumption of 32-35 kg during the past decade. The export value of fish and fishery products has increased significantly. In 2006, a trade surplus of 154 billion baht was recorded.

Fisheries production in Thailand has demonstrated remarkable growth over the last three decades. Total production exceeded two million tonnes for the first time in 1977. However, a setback occurred then. Production recovered again to over two million tonnes from 1982. In 2004, a record figure of 4.1 million tonnes was attained, of which 64.3 percent came from marine capture fisheries. Coastal aquaculture, freshwater aquaculture and inland capture fisheries contributed the balance – at 18.0 percent, 12.8 percent and 4.9 percent, respectively.

The most recent figures (2004) show a marine catch of 2.6 million tonnes, valued at 61 800 million Baht. Marine capture fisheries are divided into fishing within and outside Thai waters. Fishing grounds that fall within Thailand's EEZ lie partly in the Gulf of Thailand and partly in the Andaman Sea. It is estimated that, of the total marine catch, 60 percent is caught in Thai waters (44 percent from the Gulf and 16 percent from the Andaman Sea), the rest is from outside Thai waters.

Marine catch in Thai waters, both from commercial fishing and small-scale fishing, has shown a decreasing trend. During 2000-2004 in particular, total catch decreased by 5 percent per year. Commercial fishing vessels contribute about 90 percent of the marine catch; small-scale/ artisanal fishing makes up the balance. Catch composition from marine fisheries: food fish, trash fish, cephalopods, shrimp, and crabs and mollusks account for about 58 percent, 30 percent, 6 percent, 3 percent, and 3 percent, respectively.

¹ This chapter was compiled by Dr Pongpat Boonchuwong, Director, Fisheries Economics Division, Department of Fisheries on behalf of the participants.

² 1 US\$ is equivalent to 35 Baht approximately.



The number of fishing vessels registered by gear types in 2004 was 16 432. This number is broken down into gear types as follows: trawlers 39 percent, falling-netters 26 percent, gill-netters 19 percent, purse seiners 10 percent, and others 6 percent. It was observed that the number of registered vessels in 2004 was 5 percent lower than the number registered in 2000 – mainly because of reduction in registered vessels operating trawls, gillnets and pushnets.

On the other hand, catch from outside Thai waters has shown an increasing trend in the past 10 years at an annual growth rate of approximately 3 percent. At present, some 3 000 fishing vessels have operated overseas in many neighbouring coastal States. However, most of the catch is caught in Indonesian waters.

Thai waters are today overfished. This will lead to fisheries resource deterioration, followed by user conflicts among groups that exploit the resources. The problem is amplified by high production costs, particularly the fuel cost, and the low prices of some species. Shortage of labour supply in commercial fisheries is an ongoing problem.

As regards fishing outside Thai waters: in addition to the high cost of production and labour shortage, fishing contracts with neighbouring countries may be unclear or even invalid, because those who prepare the contracts are not experts.

3.2 Current Management Practices

3.2.1 Institutional Arrangements

(i) Government Agency

At present, the principal government organization responsible directly for fisheries, marine resources and their habitat management is the Department of Fisheries (DoF) under the Ministry of Agriculture and Cooperatives. The other government organizations, the Department of Marine and Coastal Resources (DMCR) and the Office of Environment Policy and Planning under the Ministry of Natural Resources and Environment, also have very important roles to play in conserving marine resources and their environment.

Research relevant to marine fisheries and resource management is conducted by the Marine Fisheries Research and Development Bureau and its Marine Fisheries Research and Development Center, established in four regions of the Gulf of Thailand and in the Andaman seacoast. Research on marine and coastal resources and their environment has been primarily conducted by the newly formed DMCR and its regional research centers.

A number of other government organizations have also contributed research on various aspects of marine resources and environment. They can be regarded as supporting research agencies for the DoF. There are many organizations under the Department of Pollution Control, the Department of National Park Conservation and Management, the Department of Marine Transportation and Commerce, Universities, etc.

Monitoring, control and surveillance (MCS) are essential for ensuring fisheries management and resource management in the Gulf of Thailand. The Fisheries Administration and Resource Management Bureau of the DoF is a leading organization responsible for MCS. It is supported by various Provincial Fisheries Offices and other organizations that are empowered by the Fisheries Act and by Ministerial Notifications of the Ministry of Agriculture and Cooperatives.

When the Government agencies reform programme took place in October 2002, the DMCR was established under the Ministry of Natural Resources and Environment. The DMCR was given the mandate to develop relevant regulations to achieve effective managerial action on vulnerable resources – including resources preservation, and conservation for sustainable use. MCS activities for conservation of marine and coastal



resources and habitats are under the mandate of the office of Marine and Coastal Conservation and Enforcement. Besides, some authorities have been transferred to ensure enforcement of the Fisheries Act and empowerment of the DMCR as an enforcement body.

(ii) Fishers Organization

There are three kinds of fisher's organizations. 1) Fisheries association, 2) Fisheries cooperatives and 3) Fisher groups.

The Fisheries Association of Thailand consists of 37 local fisheries associations located along coastal provinces. The fisheries association is concerned with the following fisheries management functions:

- promote fishing and the standard of living of fishermen
- promote unity among fishermen associations in Thailand
- promote fishing extension and technologies
- train fishermen
- promote public activities
- engage in non-political activities

However, the participation of fisheries cooperatives and fisher groups in fisheries management is low.

(iii) Stakeholders Involvement in Fisheries Management

The importance of peoples' participation in natural resource and environmental management has been increasingly recognized – particularly since the 10th National Economic and Social Development Plan (1997-2001). Creating opportunities and an enabling environment to support the participation of all sectors in the development process is one of the main strategies of the National Plan. The following guidelines have been framed for this purpose at the national policy level:

- The government should facilitate continual public discussion at every stage of projects – such as initiation, preparation and implementation. This will help communities to participate in decision-making, monitoring and evaluation of public development projects likely to have an impact on natural resources and the environment.
- Local communities and small fishermen should be given legal sanction to participate in coastal resource management, as well as in the conservation, rehabilitation and maintenance of mangrove forests, sea grass and coral reefs. This will ensure sustainable use of coastal resources, especially those related to the fishing industry.

Upgrading the capacities of rural communities for economic and social development and for conservation of natural resources and environment has become a key to sustainable utilization of natural resources.

3.2.2 Fisheries Policy

The DoF is the main body for fisheries policy formulation and implementation. The National Fishery Development Policy (2002-2006) was formulated under the administration of the DoF, Ministry of Agriculture and Co-operatives. The policy formulation approach was based primarily on the SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis. There are five main policies as follows

- Policy 1: Policy on Development of Fishers and Related Organizations
- Policy 2: Policy on Fishery Resources and Environmental Management
- Policy 3: Policy on Aquaculture Development

Policy 4: Fishery Policy outside the Thai waters

Policy 5: Policy on Fishery Industry and Business Development

The five policies listed above form a central core to formulate detailed strategies and action plans. The components (targets, goals and plans) of the above four policies are discussed below.

Policy 1: Policy on Fishers and Related Organizations

This policy covers capture fisheries in both natural marine and freshwater sources. Goal: to effectively manage natural fisheries resources for their sustainable use, leading to better quality of life for all fishers. This policy focuses on human resources development and institutional arrangements.

Policy 2: Policy on Fishery Resources and Environmental Management

Changing environmental conditions, economic liberalization and social behavior put pressure on fishery resources and environment. This is reflected in the frequent incidence of natural calamities, scarcity of resources through over-exploitation and loss of species, and water pollution and contamination. These changes have led to degradation of both marine and freshwater fishery resources.

These problems can be solved not by the government's institutions on their own, but by a participatory process with multi-stakeholders. Efficient management of fishery resources and environment is essential because of the demands of a growing population. Strategies for efficient management would have to rely on a participatory approach that promotes awareness, knowledge, capacity and action to solve problems. The government, the private sector and the NGO sector should strengthen the approach.

Policy 3: Policy on Aquaculture Development

This policy covers both coastal and freshwater aquaculture. Goal: to sustain production sufficient for domestic consumption (mainly freshwater) and export (mainly coastal). This policy also aims at increasing production by a minimum 5 percent per year with a total production of 555 000 tonnes per year – 250 000 tonnes from freshwater, 305 000 tonnes from coastal aquaculture. The targeted production should have minimal impacts on the environment.

Major problems facing aquaculture development: a) environmental impacts around aquaculture sites that are a source of conflict and unrest; b) insufficient development of aquaculture technology; c) a lack of market and infrastructure facilities to promote quality products and reduce costs; and d) problems with technology transfer to farmers.

Policy 4: Policy on Fisheries outside the Thai Waters

This policy relates to marine capture fisheries outside the Thai waters, in neighboring coastal states and in the high seas. The goal: to promote and develop sustainable fishing co-operation with other coastal states and improve fishing technology for fishing in distant international waters. The target: at least 3 500 large fishing vessels (more than 18 meters) should be available for fishing co-operation with other states. Target fish production: more than 1.8 million tonne per year.

Major problems with fishing outside Thai waters are illegal passage – leading to capture of fishers and confiscation of vessels, lack of confidence in fishing investment, lack of basic fishing infrastructure such as ports, and insufficient dialogue among fishers, coastal states and joint ventures.

Fishing outside the Thai waters can be a reliable source of raw material for the Thai fish processing industry.

Policy 5: Policy on Fishery Industry and Business Development

The goal: to solve marketing problems and promote the export of Thai fishery products. Product quality should be improved in line with market demand and product consistency required by processing industries.

The target is to export products amounting to at least 1 million tonne per year, valued at 75 000 million baht. Value addition of fishery products is to be 10 percent per year. Fishery products should be distributed to rural households such that consumption per capita is 30 kg per year.

Major problems facing the fishery industry are insufficiency of fishery raw materials, sub-standard products, stiff competition in the world market, inadequate market information and environmental issues.

However, the DoF is preparing to develop a master plan for Marine Fisheries Management (for 2008-2011) that includes community-based fisheries management.

3.2.3 Legal Framework

(i) Constitution, B.E. 2550 (2007)

The Constitution clearly stipulates an accelerated process of administrative decentralization to empower people; this would necessitate many new Acts. It also obliges the Government to pay sufficient attention to social welfare and environmental conservation.

The Constitution stipulates the rights and freedom of Thai people to participate in environmental protection programmes with government agencies in line with sustainable development. It also ensures the right of Thai people to choose their occupation provided they do not harm the environment. The government is obliged to support and promote public participation in natural resources conservation and environmental protection. According to the Principal Policy of the State, 'the State shall promote and maintain public participation in conserving, maintaining and utilizing the environmental resources in a balanced and sustainable way, including controlling and eliminating pollutants, which can cause damage to the health, or social well-being of its citizens'.

(ii) Fisheries Act, B.E. 2490 (1947)

In the past, before the Fisheries Act was formulated in B.E. 2490 (1947), Thai fisheries resources were managed and conserved under the Water Duty Act of R.E. 120.³ In the Act, the fishing area was defined as a sanctuary. Fishing in areas close to monasteries or places for worship, and in sanctuary area was prohibited. The law also prohibited fishing during the spawning season. Furthermore, fish poisoning was definitely prohibited.

Even though the Water Duty Act was revised several times – in B.E. 2472 (1929), B.E. 2477 (1934), B.E. 2479 (1936), and B.E. 2481 (1938) – it could not stem the deterioration of fisheries resources as a result of recent developments in the fishing industry. As a consequence, the Fisheries Act of B.E. 2490 (1947) was drawn up, and the Water Duty Act abolished. In the Fisheries Act, 'aquatic animals' are defined as all aquatic flora and fauna. Moreover, the fishing area is divided into four types⁴ – a sanctuary area, a leasable area, a reserved area, and a public area.

³ R. E. moons Ratanagos in Era which is equivalent to B. E. 2405 or 1962.

⁴ Fishing area is defined as seas, rivers, canals, swamps, ponds, reservoirs with water, beaches and public resources including forests and land areas during floods.



The sanctuary area included areas nearby or in monasteries or places of worship, in navigation locks, weirs, and dams, or in a place suitable for conservation of aquatic animals. Fishing of aquatic animals in such areas is prohibited unless permission is obtained from the Director-General of Fisheries.

The leasable area is the fishing area where an individual can take a lease through bidding. Only the assigned bidder has the right to fish in such an area. But those who fish for household consumption alone by using an approved fishing gear are also allowed to fish.

The reserved area is the area arranged for an individual fishing license. Fishing in this area is subject to compliance with conditions imposed by the Director-General of the DoF or by competent officials.

The public area is an open-access fishing ground which is free for anyone to fish, but he/ she must comply with conditions laid out by the Director-General.

The law empowers the Minister of Agriculture and Cooperatives to issue notices concerning subjects specified in the articles⁵. Generally, the Minister insists on the following requirements:

- a) Anyone pursuing fishing as occupation must register with the DoF,
- b) Owners or users of fishing gear must register the gear with competent officials,
- c) Fishing licenses or any leasing licenses ⁶ may be withdrawn at the discretion of the Minister,
- d) To exempt fishing gear licenses in a specified location,
- e) To determine types, numbers, and sizes of fishing gear and their equipment,
- f) To prohibit the use of fishing gear in fishing areas; to determine the location and distance of stationary gear,
- g) To determine the spawning season, the fishing area, the fishing gear and the method used, and
- h) To determine the types, sizes, and numbers of fish that are allowed to be caught, and to prohibit any species of fish from being over-fished.

Generally, three different types of licenses are issued to fishermen: a fishing license, a fishing gear license and a leasing area license. The owner of these licenses has to pay duty at rates specified in the Fisheries Act.

Transfer of license is allowed through endorsement by competent officials. An endorsement fee is collected on registration. If a person offends the Act or conditions specified in the licenses, competent officials can authorize withdrawal of licenses. Normally, the license is valid for only one year. It is subject to renewal from April 1 of the following year.

The Act specifies penalties for offences. These are severe when offences relate to fishing in a sanctuary or a reserved area or violate the Minister's proclamation on regulatory schemes.

Since B.E. 2490 (1947), the Fisheries Act was revised twice. The first revision was done in B. E. 2496 (1953). The major revisions were (a) to prohibit encroachment on fishing grounds by any construction (b) to prohibit the use of fishing grounds for planting lotus, rice, kenaf, and other aquatic plants,⁷ (c) to prohibit capture of aquatic animals or eggs of aquatic animals specified in the Decree Ordinance.

⁵ The Fisheries Act contains 73 articles and four sections.

⁶ In practice, the provincial governor can withdraw a fishing license or fishing permission with the approval of the Minister.

⁷ Its purpose was to protect fresh water fishing grounds.



The second revision was done in B.E. 2528 (1985). Its main purposes were: (a) increase penalties for offences, (b) stipulate that fishing boat owners would be responsible for any damage or expense resulting from vessels violating the sovereignty of foreign fishing waters, and (c) strengthen the definition of 'aquatic animals' in the previous Act.

Although the Fisheries Act provides laws to manage fisheries resources, the laws become valid when the Minister issues a notice concerning conservation and management.

(iii) *The Act Governing the Right to Fish in Thai Waters, B.E. 2482 (1939)*

Under the Act, Thai fishing waters are defined as Thai territorial waters, with 12 nautical miles being the off-shore limit. But after the proclamation of an EEZ in B.E. 2524 (1981), the territorial jurisdiction has been extended to 200 nautical miles. According to the Act, all fisheries resources in Thai territorial waters belong to the nation. The country commands the exclusive right to fisheries resources in the 200-mile zone.

Only Thai nationals are allowed the right to fish in Thai waters. Aliens or partnerships/companies with non-Thai partners/ stakeholders are not eligible to obtain fishing rights.

Fishing rights can be issued to limited partnerships of Thais with other nationals provided all the Thais have unlimited liabilities and at least 70 percent of the capital is owned by the Thai national partners. Such partnerships or companies need to be registered in Thailand and the head office should be located in Thailand.

The Act prohibits foreign vessels, alien vessels or Thai vessels with alien crew from fishing in Thai waters, unless agreements have been arrived at with other countries that permit such practices.

(iv) *Thai Vessel Act, B.E. 2481 (1938)*

Under the Act, the owner of a fishing vessel with engine, or a fishing vessel of 6 gross tonnage and over, is required to register with the Harbor Department, Ministry of Communication. Boat owners have to be Thai nationals. All partners or shareholders of a company must be Thai. As regards limited partnerships, at least 70 percent of the capital must be owned by Thai partners with unlimited liabilities. Limited companies - a majority of share holders must be Thai nationals, at least 70 percent of the capital must be owned by Thais.

Fishing boat licenses are issued by the Harbour Department and the law does not require non-mechanically propelling boats of less than 6 gross tonnage to be registered. Statistics concerning fishing boats statistics are therefore underestimates.

(v) *Wildlife Reservation and Protection Act, B.E. 2535 (1992)*

The Wildlife Reservation and Protection Act, B.E. 2535 (1992) replaced the old Wildlife Reservation and Protection Act, B.E. 2503 (1960). Only the Royal Forestry Department (RFD) was responsible for the old Wildlife Law, but the current Wildlife Reservation and Protection Act comes under the mandate of both the Royal Forestry Department (RFD) and the DoF. This is because the definition of wildlife in the new Act has been widened to include



aquatic animals. The DoF is hence responsible for aquatic animals and crocodiles, while the Royal Forest Department is responsible for terrestrial animals and birds.

(vi) National Environmental Quality Promotion and Preservation Act, B.E. 2535 (1992)

This Act is a revised version of the previous 1975 Act. This law is under the responsibility of the Ministry of Science, Technology and Environment (MOSTE). Upon the enactment of this law in 1992, the MOSTE was reorganised. It was divided into three agencies: (i) Office of Environmental Policy and Planning (OEPP) (ii) Department of Pollution Control (DPC) and (iii) Department of Environmental Quality Promotion (DEQP).

The Ministerial Regulation of Article 55 of this Act sets quality standards for industrial waste water but it does not include waste water discharged from aquaculture. This Act requires Environmental Impact Assessments (EIA) for large-scale projects. Furthermore, Articles 43, 44 and 45 of this Act empower the Minister of MOSTE to proclaim the Ministerial Regulation determining 'environmentally protected areas' and 'pollution control areas' besides regulating the activities in these areas. However, enforcement is lacking because MOSTE does not have enough staff in the provinces. Normally, enforcement is carried out by provincial police and various provincial government offices.

3.2.4 Management programme

Under the Thai Fisheries Act, many fishery management measures have been implemented. The main measures are as follows:

(i) Area and Seasonal Closures

This measure is mainly aimed at recovery of the Indo-Pacific mackerel (*Rastrelliger brachysome* Bleeker), which is an important economic species of Thailand. During the early 1980s, the total catch of this species showed a declining trend. Various regulations on area and seasonal closures were introduced in 1984 to increase the resource abundance of this species and other pelagic and demersal stocks. From 1 February to 31 March and 1 April to 15 May, the trawlers and purse seiners with mesh sizes smaller than 4.7 cm have been prohibited from fishing in the upper southern area of the Gulf of Thailand. During 15 April to 15 June, all trawlers, purse seiners and gill netters with mesh size not less than 4.7 cm are prohibited from fishing in the Phang-nga Bay and the Andaman Sea.

(ii) Gear Restrictions

In order to preserve coastal fisheries resources, trawlers and push netters are not allowed to operate within 3 000 m from shore. These gear are considered destructive - they capture large amounts of trash fish, more than half of which are juveniles of economic species. Further, these gear disturb the sea bed, leading to a decline of fisheries resources.

(iii) Limited Entry

In 1980, the DoF made an announcement regarding registration of trawlers and push netters in an attempt to control the number of these gear and conserve resources. No additional licenses were issued to fishing vessels. Only fishermen who already had licenses could apply for an annual extension of licenses. Licenses were not granted for change of fishing gear. The licenses were non-transferable - except for transfer by fishers to their children.

3.3 Issues in Management

In the past, fisheries management was centralized. All management measures were formulated by the DoF. The measures were based on scientific evidence of fisheries biology. Stakeholders were not consulted.

Although Thailand had implemented fishery management measures for more than half a century now, the fishery resources have yet to recover to a satisfactory level. Reasons:

- 1) Collaboration by fishers is limited. Fishery resources are treated as common property, and the fishery operates in an open-access regime. Fishers are not willing to collaborate with the DoF for the fishery management programme. They want to catch as much as they can each day; they believe that if they follow the DoF fishery management programme, they will be the losers.
- 2) The cost of law enforcement is very high. The construction and operational cost of patrol boats needed for enforcement are substantial. It is doubtful whether the benefits from recovery of fishery resources are proportional to the cost of law enforcement.
- 3) Low efficiency of enforcement. The coastline is long, the patrol boats are few, and the staffs are less. They can't adequately monitor the large number of fishing boats operating various types of fishing gear.
- 4) Pressure from political interests colours management decisions.
- 5) The statistical and factual base for fishery management objectives and decisions is weak.
- 6) Inefficient administration, including lack of understanding of fishery economics and sociology. This leads to misunderstanding and misinterpretation of causes and effects.
- 7) Inappropriate or inadequate policies and objectives, and conflicts in objectives.
- 8) Failure to implement management decisions in time to prevent overfishing.
- 9) Conflicts between the government's management objectives and the fishermen's profit motive.

During the last two decades, a big change has occurred in coastal fishery management. Fishery co-management (FCM) and community-based fishery resource management (CBFRM) have been introduced and implemented as pilot projects in Thailand, on the basis of Japanese models. Under this new management regime, fishers and other stakeholders have a chance to participate in the coastal fishery management process.

However, the Japanese model needs to be appropriately modified and adapted for Thai conditions and circumstances. FCM and CBFM require hard work, a legal framework, financial support and patience on the part of all stakeholders.

3.4 Observations on Japanese Management Practices

3.4.1 Strong political will from national to prefectural level

To ensure and strengthen food security, Japan has engaged in various marine resources protection and recovery programmes to be practiced at all levels - from the national government right down to local administrative authorities.



3.4.2 Clear legal framework for supporting FCM and CBFRM

Japan has a strong legal framework to enforce fisheries resources management – such as a Fisheries Law, a Fishery Cooperative Law, a Fishing Port Law. These laws clearly stipulate fishing rights and exclusive rights, and facilitate management of fishery resources. Besides, the Fisheries Cooperative Law strengthens fisheries cooperatives in Japan.

3.4.3 Strong institutional arrangements

The enabling legal frameworks have led to a strong institutional arrangement. Furthermore, all members of FCAs participate in all activities of FCAs. Networking amongst FCAs has been established both vertically and horizontally.

3.4.4 Strong financial support from local and national governments

National and prefectural governments provide sufficient financial support for fishing infrastructures under the National Fishing Port and Community Development Programme as well as credit and insurance programme.

3.4.5 High efficiency in law enforcement

Under a fishing rights scheme, FCAs have full authority to protect fishery resources in particular areas. All members of FCAs take regular part in law enforcement and self-regulation.

3.4.6 High participation of fishers in CBFRM

All FCAs follow a voluntary guidance programme for Fishery Resources Management – relating to stock enhancement, fishery protection, reforestation and MCS programmes.

3.4.7 High capability of human resources and technology

Institutional arrangements have enabled technology transfer and programme of Human Resource Management among FCA members – relating for example to fishery products development (post-harvest and processing techniques).

3.4.8 High efficiency in fishing port management and marketing channels

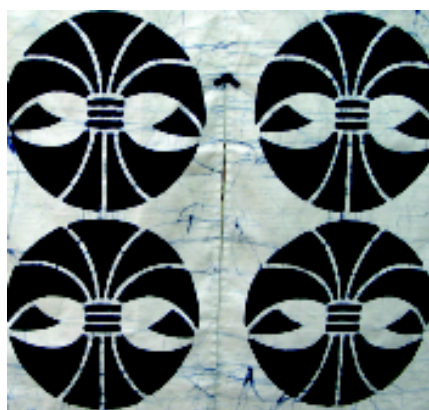
In Japan, fishing ports play a major role in controlling fish quality, also in fish marketing and distribution. Currently, Japan has some 3 000 fishing ports – one every 10 kilometers of coastline on an average. Fishers can



sell their products through fishing ports under the existing marketing system. This ensures stable incomes for coastal fishers. There is strong interaction and coordination between production and marketing centers.

3.5 Application of Relevant Japanese Management Practices to the Thai Situation

- 3.5.1 CBFRM, which prevails widely in Japan, is a practice that Thailand could emulate. But it should be borne in mind that social, economic and political circumstances in the two countries differ. Capacity-building in Thai fisheries industries is constrained by the low level of education of fishermen and their rather limited vision concerning marine resources management.
- 3.5.2 The Fishery Law and the Fishery Cooperatives Law of Japan can serve as guidelines for similar model bills in Thailand. But poor collaboration among the agencies concerned in Thailand has been an impediment.
- 3.5.3 The Japanese concept of fishing rights could be applied in Thailand. It will lead to better conservation of fishing resources and consequently higher income for fishers. Awareness-building among Thai fishers is needed about the benefits they could derive from a fishing rights regime.
- 3.5.4 Self-regulation: Some fishing communities in Thailand already practice self-regulation to limited extent - in matters such as mesh sizes and capture of juveniles or small-sized fish. But measures to rotate fishing grounds have not yet been implemented in Thailand. This should be done.
- 3.5.5 Devolution of power: In Thailand this has been done since 1997. In addition, the central government has fixed an annual budget for local authorities for managing local natural resources and environment. The Japanese experience could be applied in Thailand to strengthen the hands of local authorities.





4.0 Preparations for Phase Three

The Training Project on 'Promotion of Community-based Fishery Resource Management by Coastal Small-scale Fishers in Thailand' has been implemented by the International Cooperative Fisheries Organization of the International Co-operative Alliance in association with the Cooperative League of Thailand. The purpose of the Training Project in Thailand is to promote community-based fisheries resource management by small-scale fishers engaged in coastal fisheries and by their organizations (fisheries cooperatives), strengthen their activities, and help contribute to ensuring sustainable production, creation of employment opportunities, and poverty alleviation.

The Phase One and Phase Two of the Project were implemented in July 2007 and September 2007 in Thailand and Japan respectively. The purpose of Phase Three is to hold a seminar on 'Promotion of Community-based Fishery Resource Management by Coastal Small-scale Fishers in Thailand', to study possible approaches for promotion of community-based fishery resource management, including considerations on appropriate legal and/ or institutional systems and measures. It is aimed at helping build fishers' and their cooperatives' capacity for the purpose in cooperation with the government, or in other words, promotion of co-management. The Phase Three will also take stock of the information and experiences of first two Phases of the Project.

International Cooperative Fisheries Organization is the organizer and/ or sponsor of the seminar. The host organization of the seminar is the Cooperative League of Thailand. The seminar shall receive logistic advice and cooperation from the Department of Fisheries, Government of Thailand.

The seminar will be held from 24-26 February 2008 in the Conference Hall of the Cooperative League of Thailand, 13, Pichai Road, Dusit, Bangkok 10300, Thailand (Tel: +66-2-6693254; +66-2-2411013; Website: www.clt.or.th).

About 40 Participants shall be invited to attend the seminar and shall include directors, managers and employees of fisheries cooperative societies; member fishers of fisheries cooperative societies; people involved in production, processing and distribution/ marketing of fishery products, and representatives of national/ local governments, research institutes, universities, etc who are interested in fisheries resource management and/ or management of fisheries cooperatives. The draft program of the seminar is given in Annexure 6.











The Participants in front of the Ministry of Agriculture, Forestry and Fisheries, Tokyo.

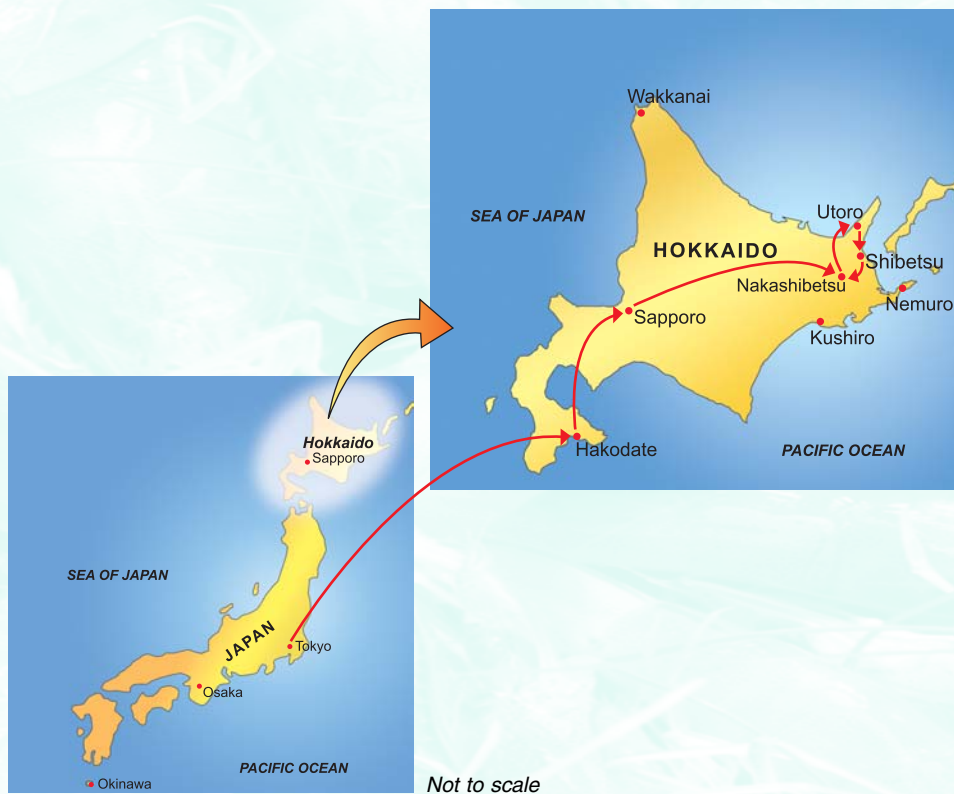
Annexure 1

List of Participants and Advisors

No.	Name	Position/ Organization	Tel/ Fax/ Mobile/ E-Mail
1	Mongkalut Pukanut 	Chairman The Cooperative League of Thailand (CLT) 13 Pichai Road, Dusit Bangkok 10300 Thailand	T: +66-2-669 3254 Ext. 1040 F: +66-2-241 1013 M: +66-81-341 8814 E: green_coop@hotmail.com
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3	Pinyo Kiatpinyo 	Chairman Tacheen Basin Shrimp Farmer Cooperative Ltd. & Network of Thai Shrimp Farmer Cooperatives 196/58-59 Banpeaw-Prapatone Road Moo1 Tambon Banpeaw Amphur Banpeaw Samutsakorn Province 74210 Thailand	T: +66-34-48 0727 F: +66-34-48 0727 M: +66-89-789 7885 E: net_coop@hotmail.com
4	Boonsiri Chueliang 	Manager Maeklong Fishery Cooperative Ltd. 200-201 Moo 5 Tambon Lamyai Amphur Muang Samutsongkhram Province 7500 Thailand	T: +66-34-771 480 & 481 F: +66-34-771 480 & 481 M: +66-81-944 0945 E: bchueliang@yahoo.com
5	Mongkol Vacharangkul 	Consultant Samutsongkram Fishery Association 207/7 Laemyai Road Tambon Maeklong Amphur Muang Samutsongkhram Province 75000 Thailand	T: +66-34-736 700 F: +66-34-736 701 M: +66-86-511 3299 E: mongvac@hotmail.com
6	Udom Nuanhnuplong 	Senior Cooperative Technical Officer Cooperative Promotion Department (CPD) Ministry of Agriculture and Cooperatives 12 Krung Ka-sem Road Phranakorn Bangkok 10200 Thailand	T: +66-2-281 0032 F: +66-2-281 0032 M: +66-89-780 3557 E: Udom_nu@cpd.go.th
7	Pongpat Boonchuwong 	Director Fisheries Economics Division Department of Fisheries Kasetsart Campus 50 Paholyothin Road Chatuchak, Bangkok 10900 Thailand	T: +66-2-558 0195 & +66-85-070 6484 F: +66-2-558 0212 E: pongpatb@fisheries.go.th



8	Pramuan Rugjai 	Director Cluster of Fishing Port Operation (Lower South and Andaman) Phuket Fishing Port Fish Marketing Organization Srisuthat Road, Tambon Rassada Amphur Muang Phuket 83000 Thailand	T: +66-76-215 489 F: +66-76-211 699 M: +66-81-737 2174 E: rugpra@hotmail.com
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10	Yugraj Singh Yadava 	Director Bay of Bengal Programme Inter-Governmental Organisation 91, St. Mary's Road Abhiramapuram Chennai 600 018 India	T: +91-44-2493 6188 F: +91-44-2493 6102 E: yugraj.yadava@bobbigo.org
11	Kungwan Juntarashote 	Director Coastal Development Centre Faculty of Fisheries, Kasetsart University 50 Phaholyothin Road, Chatuchak Bangkok 10900 Thailand	T: +66-2-579 1697 F: +66-2-579 1698 M: +66-89-455 8541 E: ffiskwi@ku.ac.th
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Annexure 2

Actually Followed Itinerary

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09:30 – 12:00	Visit to International Cooperation Division, International Affairs Department, Minister's Secretariate, Ministry of Agriculture, Forestry and Fisheries (MAFF) <i>Lectures:</i> 1) Fisheries Resource Management System in Japan by Mr Kentaro Watnabe, Deputy Director, Resource Management Promotion Office, Fishery Agency, MAFF 2) Japan's New Development Institute for Trade by Mr Kosei Banura, Section Chief, International Cooperation Division, MAFF 3) Video presentation on Japan's fisheries and a presentation of Japan's position on international trade of agriculture and fishery products by staff of International Cooperation Division, MAFF
17:15	Leave Tokyo (Haneda Airport) by NH 863
18:35	Arrive at Hakodate, Hokkaido Hotel: Aqua Garden Hotel, Hakodate
September 20 (Thursday)	
06:30-07:30	Visit to Hakodate Market (Observation of 'Morning Market')
09:20-16:00	Visit Faculty of Fisheries Sciences, Hokkaido University Seminar on Fisheries Resource Management in Asia
09:30-09:50	1) Group Photo
09:30-09:45	2) Opening ceremony: a) Speech by Dr Akihiko Hara, Dean of the Faculty of Fisheries Sciences, Hokkaido University b) Speech by Mr Masaaki Sato, Secretary, ICFO
09:45-12:30	3) Presentations:
09:45-10:30	i) Status of Fisheries and Fisheries Resource Management in SE Asia and Higher Fisheries Education in Thailand by Dr Kungwan Juntarashote, Director, Coastal Development Centre, Faculty of Fisheries, Kasetsart University, Bangkok, Thailand
10:30-11:15	ii) Status of Fisheries and Fisheries Resource Management in South Asia by Dr Yugraj S Yadava, Director, Bay of Bengal Programme Inter-Governmental Organization (BOBP IGO), Chennai, India
11:15-12:00	iii) The Role of Rights in Fisheries Resource Management in Asia by Dr Kenneth Ruddle, Professor, Kwansei Gakuin University, Sanda, Japan
12:00-12:30	iv) Case Study Report on Fisheries Resource Management in Hokkaido by Mr Masahiro Morita, Director, Hokkaido Fisheries Coordination Office, Sapporo, Hokkaido, Japan
13:00-14:00	Luncheon/ Party
14:00-16:00	Discussion (only among the participants) - Applicability of Japanese system of fisheries resource management to Thailand - What is lacking, and what must be done (by whom and how) ?
16:00-18:00	Observation of Hakodate city area from Mount Hakodate Hotel: Aqua Garden Hotel, Hakodate
September 21 (Friday)	
08:30	Leave Hakodate by 'Hokuto No. 3'
11:47	Arrive at Sapporo
14:00-15:30	Visit Hokkaido Prefectural Government (Fisheries Department) 1) Lecture on 'Fisheries of Hokkaido, Present state of business management of FCAs and issues including resource recovery efforts' by fishers by Mr Teruo Hatamiya, Deputy Director and his colleagues, Hokkaido Prefectural Government

15:40-17:30	<p>Visit Hokkaido Prefectural Federation of FCAs ('Do-Gyoren')</p> <p><i>Lectures:</i></p> <ol style="list-style-type: none"> 1) Organization and activities of Do-Gyoren, particularly in relation to promotion of community-based fisheries resource management by Mr Yasushi Oyama, Manager, Guidance and Education Department of the Do-Gyoren 2) Voluntary Agreement on Management of Fish Stocks by Mr Isao Watabe, Deputy General Manager, Fisheries Policy Department of the Do-Gyoren <p>Hotel: Hotel Paco Junior Susukino, Sapporo</p>
<p>September 22 (Saturday) 08:00-09:00</p> <p>11:30</p> <p>12:20</p> <p>PM</p>	<p>Visit 'Nijo Ichiba Retail Fish Market'</p> <ul style="list-style-type: none"> - Observation of fish and fishery products sold to general consumers <p>Leave Sapporo Okadama Airport by NH 4833</p> <p>Arrive at Nemuro-Nakashibetsu Airport</p> <p>Free</p> <p>Hotel: New Akan Hotel Shangrila, Akan-Cho</p>
<p>September 23 (Sunday)</p> <p>09:00</p> <p>17:00</p>	<p>Sightseeing</p> <p>Leave hotel for sightseeing (Lake Akan, etc)</p> <p>Arrive back to the hotel</p> <p>Hotel: Shiretoko Noble Hotel, Utoro</p>
<p>September 24 (Monday)</p> <p>09:00</p> <p>17:00</p>	<p>(National Holiday: Autumnal Equinox day)</p> <p>Sightseeing</p> <p>Leave hotel by chartered bus for sightseeing (Lake Akan, Lake Mashu and Shiretoko Peninsula, a World Hheritance National Park, etc)</p> <p>Arrive at the hotel in Shibetsu</p> <p>Hotel: Odaitou Onsen Seaside Hotel, Odaitou</p>
<p>September 25 (Tuesday)</p> <p>06:00-07:00</p> <p>09:00-09:30</p> <p>09:30-11:30</p> <p>14:00-17:00</p>	<p>Visit Notsuke FCA Fish Market</p> <ul style="list-style-type: none"> - Observation of unloading of chum salmon caught by set net <p>Visit Notsuke FCA Fish Market</p> <ul style="list-style-type: none"> - Observation of auction of chum salmon <p>Visit Notsuke FCA</p> <ol style="list-style-type: none"> 1) Lecture on 'Community-based Fish/ Shellfish Resource Management' implemented by Notsuke FCA by a staff of Notsuke FCA <p>Visit Shibetsu Salmon Museum</p> <p>Visit Notsuke Peninsula Nature Center</p> <p>Hotel: Odaitou Onsen Seaside Hotel, Odaitou</p>
<p>September 26 (Wednesday)</p> <p>05:00-06:00</p> <p>07:00-07:30</p> <p>07:30-09:00</p> <p>10:00</p> <p>13:45</p> <p>15:30</p>	<p>Visit Shibetsu FCA Fish Market</p> <ul style="list-style-type: none"> - Observation of unloading of chum salmon caught by set net <p>Visit Shibetsu FCA Fish Market</p> <ul style="list-style-type: none"> - Observation of auction of chum salmon <p>Visit Shibetsu FCA</p> <ul style="list-style-type: none"> - Lecture on 'Organization and Activities of Shibetsu FCA', and on Shibetsu Town District HACCP by a staff of Shibetsu FCA <p>Check out and leave the Hotel</p> <p>Leave Nemuro-Nakashibetsu Airport by NH 840</p> <p>Arrive at Haneda Airport, Tokyo</p> <p>Hotel: Kanda City Hotel, Tokyo</p>



September 27 (Thursday) 09:00-17:00	Group discussion and report preparation Venue: <i>Chu-kaigishitsu</i> (medium-size meeting room), JF-ZENGYOREN Hotel: Kanda City Hotel, Tokyo
September 28 (Friday) 09:00-12:00 13:00-17:30 18:00-20:00	Group discussion and report preparation – continued Venue: <i>Chu-kaigishitsu</i> (medium-size meeting room), JF-ZENGYOREN Evaluation Meeting of the Phase Two of the Training Project 1) Overall evaluation 2) Points of notice for Phase Three of the Training Project 3) Finalization of the Phase Two Report Farewell Party Venue: Floor 'B 1', Canteen of Co-op. Bldg., Chiyoda-Ku, Tokyo Hotel: Kanda City Hotel, Tokyo
September 29 (Saturday) 12:00 16:10	Leave Narita International Airport by AI 309 Arrive at Bangkok

Hotels

Place	Hotel
Tokyo	Kanda City Hotel 3-24-5 Uchikanda, Chiyoda-Ku, Tokyo, Japan Phone: + 81 (3) 5296-2200 Fax: + 81 (3) 5296-2525 http://kandacityhotel.jp
Hakodate	Aqua Garden Hotel Hakodate 19-13 Otemachi, Hakodate-Shi, Hokkaido, Japan Phone: + 81 (138) 23-2200 Fax: + 81 (138) 23-4757 http://aquagardenhotel.jp/index.html
Sapporo	Hotel Paco Junior Susukino 5-2, Nishi 7 Chome, Minami 5 Jou, Chuo-Ku, Sapporo-Shi, Hokkaido, Japan Phone: + 81 (11) 512-8512 Fax: + 81 (11) 530-0012 http://www.paco.co.jp
Akan-cho	New Akan Hotel Shangrila Akanko Onsen Akan-cho, Kuhiro-Shi, Hokkaido, Japan - 085-0467 Phone: + 81 (154) 67-2121 Fax: + 81 (154) 67-2339 http://www.newakanhotel.co.jp/english/index.html
Utoro	Shiretoko Noble Hotel Higashi 3, Utoro, Shari-Cho, Shari-Gun, Hokkaido, Japan Phone: + 81 (152) 22-5211 Fax: + 81 (152) 24-3535 http://www.shiretoko-noblehotel.com/index.html
Odaitou	Odaitou Onsen Seaside Hotel 29 Misaki-Machi, Odaitou, Bekkai-Cho, Notsuke-Gun, Hokkaido, Japan Phone: + 81 (153) 86-2316 Fax: + 81 (153) 86-2003 http://www.nikkanren.or.jp/Cg/ASP/Y



Presentation of a memento to Mr Ikuhiro Hattori by Mr Mongkalut Pukanut.

Annexure 3



Speech of Mr Ikuhiro Hattori, President JF-ZENGYOREN and Vice-Chairman, International Cooperative Fisheries Organization.

Mr Takashi Ono, Director, International Cooperation Division, Ministry of Agriculture Forestry and Fisheries; Participants in the Phase Two of the Project for Promotion of Community-based Fishery Resource Management by Coastal Small-scale Fishers in Thailand; Advisors; Ladies and Gentleman.

Sawadee Krap! !

Welcome to ZENGYOREN.



Mr Ikuhiro Hattori

As President of ZENGYOREN and Vice-Chairman of the International Cooperative Fisheries Organization (ICFO), I would like to extend my warmest welcome to all of you.

This Training Project started in 2006 for a period of five years - *i.e.* up to 2010. Funds are provided by the Ministry of Agriculture, Forestry and Fisheries of the Government of Japan. Under the Project, ICFO selects one country each year from Asia. The Project is implemented in three phases.

Under Phase One, experts visit the selected country and plan Phase Two and Phase Three. Phase Two consists of a study visit to Japan by officials from the selected country. Under Phase Three, a seminar on fishery resource management is organised in the selected country.

In 2006-07, the Project was successfully implemented in the Philippines, with full strategic support from the Cooperative Union of the Philippines and the Bureau of Fisheries and Aquatic Resources of the Government of the Philippines. The agencies concerned in the Philippines are now translating the Palawan Declaration adopted by seminar participants into action.

The fishery sector, like any other, has many issues and problems that need to be addressed. It is important for us to deal with each issue step by step and with patience. One of the burning issues is fisheries resource management. I do hope that during the Phase Two, 'Visit to Japan', you will experience good exposure to fisheries management practices adopted by fisher groups in Japan. Please feel free to seek information, ask questions and exchange views on fisheries and other matters as well. I would indeed be happy if the knowledge and experiences gained in Japan help the process of sustainable development of fisheries and aquaculture in Thailand.

I know that after your interactions and meetings in Tokyo, you will make extensive field trips in Hokkaido. The weather is unpredictable at this time of the year and changes rapidly from hot to cold. Please take care of your health. I wish you a fruitful study visit.

Last but not the least, this trip gives you a good opportunity to get acquainted with Japan's history and culture. Please tap this opportunity to the extent possible, to strengthen the friendly relations between Japan and Thailand.

I wish you a very pleasant stay in Japan.

Thank you very much for your kind attention.



Annexure 4

Address by Mr Takashi Ono, Director, International Cooperation Division, International Affairs Department, Ministry of Agriculture, Forestry and Fisheries, Government of Japan.

Dr Yugraj Singh Yadava, Director, Bay of Bengal Programme Inter-Governmental Organisation; Mr Pukanut Mongkalut, Chairman, Cooperative League of Thailand; Mr Boonchueong Pongpat, Director, Fisheries Economics Division, Department of Fisheries, Government of Thailand; Mr Nuanhnuplong Udom, Technical Officer, Cooperative Promotion Department, Government of Thailand; Mr Ikuhiro Hattori, Vice-Chairman of the International Cooperative Fisheries Organization and President of JF-ZENGYOREN; distinguished guests; Participants and ladies and gentlemen.



Mr Takashi Ono

On behalf of the Ministry of Agriculture, Forestry and Fisheries, I am privileged to welcome all participants from Thailand.

Decline of fisheries resources in recent years has been a serious problem, particularly in Asia. These resources have been affected by various factors such as pollution of marine waters, environmental change and overfishing. In fact, overfishing is perhaps the main cause for decrease in fish stocks. Mounting demand for fish has added to fishing pressure.

It is essential to restore fishery stocks to level that can generate production to MSY levels. With this end in view, the Ministry of Agriculture, Forestry and Fisheries of the Government of Japan started to contribute funds to International Cooperative Fisheries Organization (ICFO) from 2006 to help implement fisheries resource management activities in Asian countries.

This Project on 'Promotion of Community-based Fishery Resource Management by Coastal Small-scale Fishers in Asia' is for a period of five years, from 2006 to 2010.

To carry out the Project, we select one country every year. The selected country should have potential to mobilize resources to implement community-based fishery resource management in its coastal waters.

This Project is implemented in three phases:

- (1) Japanese experts visit the selected country to study the current situation of fishery resource management in that country, and provide advice and suggestions to the people and stakeholders concerned.
- (2) A Fisheries Resource management study-visit to Japan is organized.
- (3) A seminar is held in the selected country for leaders of fishery cooperatives.

Our experience tells us that coordination between self-help activities of fishery cooperatives and administrative institutions is one of the keys to effective fishery resource management.

In the past too, our Ministry has supported the ICFO of the International Cooperative Alliance with funds. Seminars were held from 1987 to 2005, to help strengthen the world's fishery cooperatives through human resources development. The present



Project will further supplement our efforts to strengthen fisheries cooperatives and thereby promote sustainable fisheries development.

Thailand is a major player in the global fisheries. It has also played a leading role in the fishery sector among ASEAN countries. I think Thailand will be able to disseminate the know-how and knowledge acquired through this training course not only in Thailand but also in other ASEAN countries.

Finally, I would like to extend my cordial gratitude to ICFO, headed by Mr Shoji UEMURA, for implementation of this training course.

I'm sure the participants from Thailand will put the Project and its outcome to good use.

Thank you very much.



The Daily 2007.9.20

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Mr Ikuhiro Hattori, President of JF - ZENGYOREN (National Federation of Fisheries Cooperative Associations of Japan) welcomes study tour participants from Thailand.

タイ国から研修生受入れ

JF全漁連 ODA支援事業で

「研修の成果を生かしてほしい」とあいさつする県部長

JF全漁連は18日、農林水産省担当の政府開発援助（ODA）助成事業である「タイ国における小規模・零細漁業者による資源管理推進支援事業」の開会式をJF全漁連本部で行った。タイ国からは、漁協関係者ら10人が参加。29日までの滞日期間中、農林水産省など関係者からの講義を受けるほか、築地市場の見学や北海道のJF野付漁協、JF津軽漁協の訪問などを行い、日本の水産資源を取り巻く現状などについて認識を深める。

18日は「日本における資源管理推進」と題し、JF全漁連本部で開会式が行われた。

全漁連の県部長会長は「ひとつ根気よく対応して資源管理について、漁業共同・養殖共同について」「漁業信用保証制度について」などの講義が行われた。

開会式では冒頭、JF全漁連の県部長会長は「ひとつ根気よく対応して資源管理について、漁業共同・養殖共同について」「漁業信用保証制度について」などの講義が行われた。

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Annexure 5

'Trainees from Thailand visit JF - ZENGYOREN under ODA Project'

---translation of news report from **Suisan - Keizai** (Fishery Industry Newspaper), 20 September, 2007

On 18 September, 2007, the International Cooperative Fisheries Organization of International Cooperative Alliance held an opening ceremony of the Training Project for Promotion of Community-based Fishery Resource Management by Coastal Small-scale Fishers in Thailand - Phase Two Study Visit in Japan - which is an ODA (Official Development Assistance) Project funded by the Ministry of Agriculture, Forestry and Fisheries (MAFF), Government of Japan, at JF-ZENGYOREN. This Project comprises three phases, namely, Phase One: dispatching of experts to Thailand for planning of Phase Two and Phase Three, Phase Two: study visit to Japan, and Phase Three: seminar in Japan.

The 10 participants from Thailand included representatives selected from fisheries cooperatives in Thailand. They are scheduled to visit MAFF and the Tokyo Central Wholesale Market at Tsukiji in Tokyo, as well as the JF Notsuke Fisheries Cooperative Association and the JF Shibetsu Fisheries Cooperative Association, etc in Hokkaido. They are to leave for home on 29 September, 2007. During the study visit, they will study the status of fisheries and fisheries resource management in Japan.

On 18 September, 2007, the participants listened to lectures on 'Coastal Fisheries Resources Management and Issues in Japan', 'Fisheries Cooperative Associations and Fisheries Resource Management in Japan', 'Fishery Mutual Insurance', and 'Fisheries Credit Guarantee Insurance System in Japan'.

At the opening ceremony, Mr Ikuhiro Hattori, President of JF-ZENGYOREN and Vice-Chairman of ICFO, said 'In JFY 2006, the Project was successfully implemented in the Philippines. In any country, the fishery sector has many issues and problems that need to be addressed and then solved, and one of the burning issues is fisheries resource management. I would be very happy if the knowledge and experiences gained in Japan could be used for furthering the sustainable development of fisheries and aquaculture of Thailand.'

Phase One of the Project (dispatching of experts to Thailand) in JFY 2007 was implemented in July, 2007.





Annexure 6

Programme of the Seminar on 'Promotion of Community-based Fisheries Resource Management by Coastal Small-scale Fishers in Thailand', 24-26 February 2008, Bangkok

Programme

Dates 24-26 February 2008	Venue: The Cooperative League of Thailand 13, Pichai Road, Dusit, Bangkok 10300 Thailand Tel: +66 2 669 3254, Fax: + 66 2 241 1013 Website: www.clt.or.th
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Date & Time	Programme
February 23 (Saturday) 13:00-18:00	Arrival and Registration/ Dinner
February 24 (Sunday) 08:00-09:00	Registration
09:00-10:00	Opening Ceremony
09:00-09:10	1) Welcome address by Mr Mongkalut Pukanut, Chairman, CLT
09:10-09:20	2) Speeches by:
09:20-09:30	- Mr Masaaki Sato, Secretary, ICFO
09:30-09:35	- Mr Fuminori Miyatake, Deputy Director, Ministry of Agriculture, Forestry & Fisheries, Government of Japan
09:35-09:45	- Representative of Ministry of Agriculture & Cooperatives, Government of Thailand
09:45-10:00	- Director General, Department of Fisheries, Government of Thailand
10:00-10:15	- Director General, Cooperative Promotion Department, Government of Thailand
10:00-10:15	Group Photo
10:15-10:30	Tea/ Coffee Break
10:30-17:00	Plenary Session
10:30-11:00	Lecture No 1 Results of Scoping Study for Promotion of Community-based Fishery Resource Management by Coastal Small-scale Fishers in Thailand - Dr Yugraj Singh Yadava Director, Bay of Bengal Inter-Governmental Organization, Chennai, India
11:00-11:30	Lecture No 2 Introduction to Fisheries Resource Management in Japan and Selected Case Study Reports - Dr Junichiro Okamoto Professor of Hokkaido University, Hakodate, Japan
11:30-12:00	Lecture No 3 Applicability of Japan's Fisheries Resource Management system to Thailand - Issues that have to be overcome - Dr Kunwan Juntarashote Professor of Kasetsart University, Bangkok, Thailand
12:00-12:30	Lecture No. 4 Points to be noted from the Phase Two Study implemented in Japan - Lecturer : To be identified by CLT
12:30-14:00	Lunch

Date & Time	Programme
14:00-14:30	Lecture No. 5 Possibilities of introducing Community-based Fisheries Resource Management in the Philippines – Lessons from the First Year Project in the Philippines - Dr Sandra Victoria R Arcamo Chief Aquaculturist, Fisheries Resources Management Division, Bureau of Fisheries and Aquatic Resources, Department of Agriculture, Manila, Philippines
14:30-15:00	Lecture No. 6 How fishermen's organizations should be strengthened to help promote fisheries resource management efforts - Lecturer: To be identified by CLT
15:00-15:30	Questions and Answers
15:30-15:45	Tea/ Coffee Break
15:45-17:00	Summing Up/ Formation of Groups for Discussions/ Directions for next day
18:00-21:00	Welcome Dinner
Feb. 25 (Monday)	
09:00-10:45	Group Discussion
10:45-11:00	Tea/ Coffee Break
11:00-12:30	Group Discussion Continued
12:30-14:00	Lunch
14:00-15:30	Preparation of Group Reports
15:30-15:45	Tea/ Coffee Break
15:45-16:15	Presentation on the Results of Discussion - Group A
16:15-16:45	Presentation on the Results of Discussion - Group B
16:45-17:15	Presentation on the Results of Discussion - Group C
17:15-17:45	Presentation on the Results of Discussion - Group D
17:45-18:00	Summing up by chair
Feb. 26 (Tuesday)	
07:30-12:00	Participation in the National Cooperative Day Celebration
12:00-14:00	Lunch
14:00-15:00	Preparation of Draft Recommendations by each Group
15:00-15:15	Tea/ Coffee Break
15:15-17:00	Concluding Session
15:15-16:40	1) Recommendations - Presentation of Recommendations by each Group and their Adoption
16:40-16:45	2) Closing Remarks: Mr Masaaki Sato, Secretary, ICFO
16:45-16:50	3) Closing Remarks: Representative of MAFF
16:50-16:55	4) Closing Remarks: Mr Wit Pratuckchai, Executive Director, CLT
16:55-17:00	5) Vote of Thanks: Mr P Wanraway, Chief of International Relations, CLT
February 27 (Wednesday)	Departure of outstation participants

