

JSPS Core University Program for Fisheries Science in Southeast Asia

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SUMMARY: For the purpose of promoting the academic cooperation in Asia, the Japan Society for the Promotion of Science (JSPS) offers the Core University Program in fisheries science. This program was initiated by Indonesia in 1995, and followed by Philippines in 1998, Thailand in 2000, and Korea in 2001. Each Core University designated in Japan and its counter-part country provide the program for scientist exchange, cooperative research and international seminars, by organizing the member universities in each side. The number of exchanges can be 10-25 every year for hosting and visiting respectively in each Core University Program. Seminars were held periodically on specific topics such as Food Processing (1995), Aquaculture(1997), Fishing Technology(1999) and Joint Seminar(2000) with Indonesia, and Social Science(1998) and Capture Fisheries(2001) with Philippines, and Shrimp Farming (2001) with Thailand to identify the seeds and needs of the cooperative research activities, as well as to distribute its fruits of cooperative research activities. The Multi-lateral approach will be the next phase through establishing the strong linkage among bilaterals. Here in this paper, the past achievement of this program and our future tasks will be described, for each Core University Program with Indonesia, Thailand and Philippines.

KEY WORDS: JSPS, cooperative research, core university program, southeast Asia

INTRODUCTION

For the purpose of promoting a framework for international cooperative research in specifically designed fields and topics, the Japan Society for the Promotion of Science (JSPS) provides the Core University Program by centering around universities designated as core universities in Japan and in the counterpart Asian countries since 1976. This program can be established through the Memorandum of Understanding between the JSPS and the counterpart institutions in each Asian country. Under this program, universities and individual scientists in the affiliated countries carry out cooperative research projects with sharply focused topics and explicitly delineated goals, covering 27 fields with 8 countries. The Marine Science programs were implemented through the bilateral linkages with Indonesia in 1988, and with Thailand in 1989, with Malaysia in 1991, by the Ocean Research Institute, the University of Tokyo. After having achieved fruitful results under the Bilateral program, a Multilateral Cooperative Research Program has been launched in the field of the Marine Science since 2001.

The Fisheries Science Program was initiated by Indonesia in 1995 between Tokyo University of Fisheries and Diponegoro University under the Directorate General of Higher Education (DGHE), and followed by Philippines in 1998 between

Kagoshima University and University of the Philippines in the Visayas under the Department of Science and Technology (DOST), and then by Thailand in 2000 between Tokyo University of Fisheries and Kasetsart University under the National Research Council of Thailand (NRCT). The latest program was established with Korea in 2001 between Hokkaido University and Pukyong University under the Korea Science and Engineering Foundation (KOSEF). Each Core University designated in Japan and its counter-part country provide the program for scientist exchange, cooperative research and international seminars, by organizing the member universities in each side.

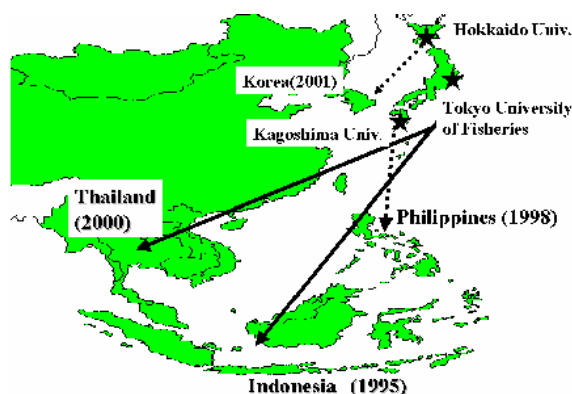


Fig.1 Four Core University Programs in Fisheries Science.

The number of exchanges can be 10-25 every year for hosting and visiting respectively in each Core University Program. Seminars were held periodically on specific topics such as Food Processing (1995), Aquaculture (1997), Fishing Technology (1999) and Joint Seminar (2000) with Indonesia; Social Science (1998) and Capture Fisheries (2001) with Philippines; Shrimp Farming (2001) with Thailand to identify the seeds and needs of the cooperative research activities, as well as to disseminate the output from the cooperative research activities. The Multilateral approach will be the next phase for the Fisheries Science Programs in Southeast Asia, through establishing the fruitful achievements among each Bilateral program. Here in this paper, the achievements of this program in the past and our future tasks will be described, for each Core University Program in Indonesia, Thailand and Philippines.

REVIEW OF CORE UNIVERSITY PROGRAM WITH INDONESIA

The Core University Program in Fisheries Science was established in 1995 under the support of JSPS with Indonesian-side counterpart, DGHE, Ministry of National Education, for promoting scientific cooperation between Indonesia and Japan. Tokyo University of Fisheries in Japan and Diponegoro University in Indonesia are designated as the Core Universities for providing the program of cooperative research activities in the fields of Fisheries Science with 4 specialized topics such as aquaculture, food processing, fisheries economics and fishing technology. The Core University Program includes the following 3 activities: scientist exchanges, cooperative research and scientific seminars. Through all these exchange programs, the total number of scholars were 30-40 every year both for invited from Indonesia, and dispatched from Japan to Indonesia as shown in Fig.2.

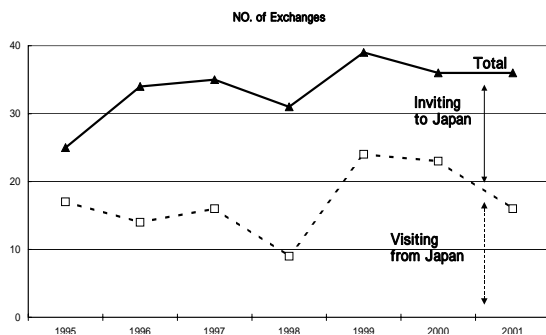


Fig.2 Yearly trend in number of visitors and dispatches for the exchange program in Indonesia

The yearly trend of invited and dispatched numbers according to the special topics of food processing, aquaculture, fisheries economics and fishing technology is shown in Fig.3 during the period from 1995 to 2001.

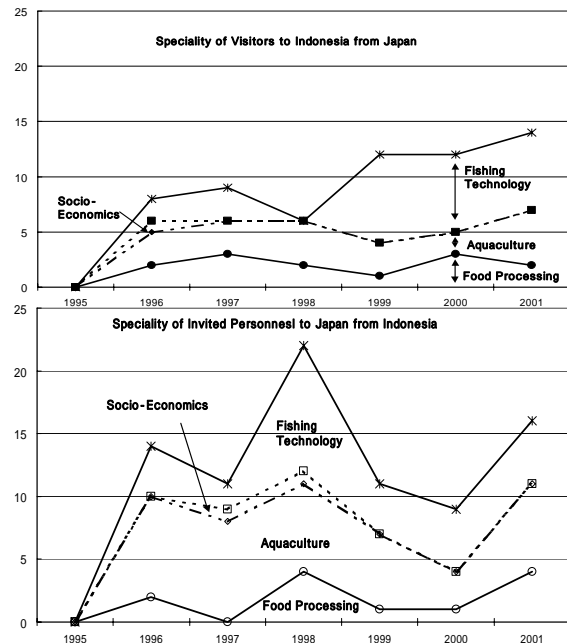


Fig.3 Yearly trends of number of exchanges in each special topic.



Fig.4 Member Universities in Indonesian Program

Six member universities establish the network for planning and implementation of the program through a close linkage with the core of Diponegoro University. They are Riau University (UNRI), Bogor Agricultural University (IPB), Mulawarman University (UNMUL), Hasanuddin University (UNHAS), Sam Ratulangi University (UNSRAT) and Pattimura University (UNPATTI). They can be the hosts for the workshops, seminars and symposia by organizing the committee for these events.

The scientific seminars and workshops are intended to provide the best opportunities for exchanging the information on current research topics from both countries. Seminars have been held every two years focussing on one specific field of Fisheries Science.

The 1st Seminar titled “*Fisheries Science in Tropical Area with special reference to Post-Harvest Subjects in 21st Century*” was held on Nov. 1995 attended by 60 participants at Semarang, jointly organized with Diponegoro University. The 2nd Seminar titled “*Fisheries Science in Tropical Area – Aquaculture in Asia*” was held on Aug. 1997 at Tokyo, jointly with several academic societies. The participants were around 100 including 50 overseas scholars and researchers.

The workshops were also held between the Seminar-years; in October 1996 titled “*Education System and Research Activities of Fisheries Science in Indonesia*” was carried out at Tokyo and Hakata, and in 1997 titled “*Education and Training Program in Fishing Technology*” at Jakarta, onboard the Research/ Training Vessel *Umitaka-Maru* of the Tokyo University of Fisheries.

The 3rd Seminar high-lighted the Fishing Technology as a follow-up of the onboard workshop, which was intended to produce the new solution for the *Sustainable Fishing Technology in Asia towards 21st Century*.

The International Symposium on *Sustainable Fisheries in Asia in the new Millennium* was the first challenge as the big international gathering opportunity for the Fisheries Science Project between Indonesia and Japan, as the 4th JSPS-DGHE International Seminar on Fisheries Science in Tropical Area. The Symposium was successfully held at the Darmaga Campus of Bogor Agriculture University on 21-25 August 2000, with a big number of participants totally 283 of which 259 from Indonesia, 21 from Japan, and 1 each from Thailand, Malaysia and Philippines. The presentations were counted as 3 keynote and 5 country reports, 97 for oral and 38 for poster.

In order to make a future planning of the JSPS Core-University program in the 3rd phase of 2002-2004, the submissions of the research proposal were strongly encouraged to the participants. For the screening process, the higher priority can be given to the best research proposal which may cover the regional common goal in Fisheries Science, as the group exchange program for solving the constraints towards the solution seeking in sustainable fisheries in Asia. In order to set the common goals in the region, the researcher from the JSPS Member

Universities can be encouraged, especially for establishing the financial supports for research and development activities, which can be linked to the international exchange program for information exchange. Another point to be noted here is the encouragement of the multi-lateral approach in the Southeast Asia, which will be the next goal of the JSPS Fisheries Program, in order to up-grade our activity as the regional approach to seek the common goal of Fisheries Sciences in the region.

The following is the publication list of Tokyo University of Fisheries International JSPS Project.

- Vol.1 Fisheries Science in Tropical Area with Special Reference to Post-Harvest Subjects in 21st Century (Ed. Subiyanto and E.Watanabe), Mar. 1996, Proceedings of the International Seminar in Nov-Dec.1995 at Semarang - Indonesia
- Vol.2 Education and Research in Fisheries Science (Ed. F.Takashima and Subiyanto), Mar. 1997, Proceedings of the International Workshop in Oct.1996 at Tokyo/Hakata - Japan
- Vol.3 Aquaculture in Asia (Ed. F.Takashima, T.Arimoto and C.Itosu), Dec.1997, Proceedings of the International Seminar in Aug.1997 at Tokyo - Japan (ISBN 4-925135-01-5)
- Vol.4 Education and Training Program in Fishing Technology - Past, Present and Future - (Ed.J.Haluan and K.Satoh), Mar.1998, International Workshop in Dec.1997 at Jakarta - Indonesia (ISBN 4-925135-00-7)
- Vol.5 A List of Participants in Exchanging Program under JSPS-DGHE Core University (Ed. F.Takashima), Sep.1998
- Vol.6 Research Reports in Fisheries Science under JSPS-DGHE Core University System (Ed. C.Koizumi *et al.*), Sep.1998 (ISBN 4-924135-02-3)
- Vol.7 Tentative Agenda and Abstract for the 3rd JSPS International Seminar on Fisheries Science in Tropical Area (Ed. K.Satoh), Aug. 1999
- Vol.8 Sustainable Fishing Technology in Asia towards the 21st Century (Ed.T.Arimoto and J.Haluan), Mar.2000, Proceedings of the International Seminar in Aug.1999 at Bali - Indonesia (ISBN 4-925135-08-2)
- Vol.9 Symposium Abstracts Book for the 4th JSPS International Seminar on Fisheries Science in Tropical Area – Sustainable Fisheries in Asia in the New Millennium, (Ed. O.Carman *et al.*), Aug. 2000 at Bogor, Indonesia (ISBN 4-925135-9-0)
- Vol.10 Sustainable Fisheries in Asia in the New Millennium (Ed. O.Carman *et al.*), Jan.2001, Proceedings of the 4th JSPS International Seminar on Fisheries Science in Tropical Area in Aug.2000 at Bogor - Indonesia (ISBN 4-925135-10-4)

REVIEW OF CORE UNIVERSITY PROGRAM WITH THAILAND

The core university program in Thailand was established in 2000. Before the implementation of this program, the special international program on fisheries science was set since 1995, as invitation fellowships for research in Japan. Tokyo University of Fisheries was designated as the coordinator for setting the topics for cooperative research and for screening the exchange program. This was the pre-stage until the establishment of the Core University Program, so that the smooth launching was carried out with the collaboration with the Thailand core university, Kasetsart University for setting the 10 years program since 2000. For initializing the program, the 6 visitors from Thailand and 8 dispatches from Japan were exchanged in 1999, so as to set the following six programs under the main title on Productivity Techniques and Effective Utilization of Aquatic Animal Resources into the New Century;

- 1) The study on infectious diseases of farmed fish and prawn using histopathological and molecular biological techniques.
- 2) Gene technology for improvement of fish and prawn
- 3) Renovation of deteriorated shrimp farming ponds and establishment of closed system for shrimp farming
- 4) Comparative studies on the fisheries biology related to the sustainable fishing technology
- 5) Improvement of seafood quality
- 6) High value utilization of fishery products and by-products

These six programs can be carried out with member institutions; 9 universities in Japan and 6 universities and 9 institutes in Thailand. The exchange program in 2000 was 1 visitor and 3 dispatches for scientists exchange, and 20 visitors and 19 dispatches for cooperative research. In the year 2001, the full activities were started with 4 scientists exchange and 45 exchanges in cooperative research, including the International Seminar on *Sustainable Shrimp Culture and Health Management*, held in Tokyo on 29-30, October 2001.

REVIEW OF CORE UNIVERSITY PROGRAM WITH PHILIPPINES

The Core University Program in Philippines was initiated with the special international program on fisheries science since 1995, as invitation fellowships for research in Japan with the coordinating role of Tokyo University of Fisheries. In 1998, the program

was launched by designating the core universities, Kagoshima University and University of Philippines in the Visayas, with the 1st International Seminar on *Development, Management and Conservation on Fisheries Resources and Aquatic Environment of the Philippines*, held in Kagoshima, on 23-25 November 1998. The Proceedings was published with the title of "Fisheries Today in the Philippines". The 2nd International Seminar was held in Iloilo with the highlight on fishing technology, titled "*Responsible Capture Fisheries in Coastal Waters of Asia: Case Studies and Researches for Sustainable Development and Management of Tropical Fisheries*", September 24 – 27, 2001, hosted by College of Fisheries and Ocean Sciences, University of the Philippines in the Visayas.

Coastal waters of Asia, particularly the Philippines, has provided fish for food, employment and livelihood for coastal communities and contributed significantly to the economics of the region. The pressures of high population growth, uneven distribution of wealth and an inability to properly manage resources has resulted in serious environmental degradation, depletion of fishery resources and socio-economic problems. This seminar seeks to contribute to the management and conservation of coastal aquatic environment and the sustainable utilization of resources. Research areas to be focused on include:

- 1) status of capture technology including fishing vessels
- 2) fishing efficiency, gear selectivity
- 3) negative impacts of technology
- 4) physiology and behavior of fish in multi-species fisheries
- 5) biological and ecological surveys
- 6) characteristics of the resources and environment in the coastal waters
- 7) resources management

The seminar will highlight results of research activities conducted by the JSPS Core University Program between Faculty of Fisheries, Kagoshima University and the University of the Philippines in the Visayas. Invited papers from Asian countries will cover a region-wide perspective and provide an opportunity to exchange ideas, invaluable experiences and information dissemination.

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