SUSTAINABLE FISHING TECHNOLOGY IN ASIA TOWARDS THE 21st CENTURY

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The International Seminar on Sustainable Fishing Technology in Asia towards the 21st Century was the first challenge as the big international gathering opportunity for the fishing technologists between Indonesia and Japan, as well as in the Asian Pacific region. This was the 3rd JSPS International Seminar on Fisheries Science in Tropical Area as the follow-up to the 1st Seminar on Food Processing in 1995, and the 2nd Seminar on Aquaculture in 1997 under the support from the Japan Society for Promotion of Science and the Directorate General of Higher Education as the counterpart organization in Indonesia.

The first idea for holding the workshop to discuss the common tasks and goals in the field of fishing technology was begun since 1992, when we had the half-day workshop of International Trends and Perspectives in Fishing Technology, in the Japanese Society of Scientific Fisheries, by the steering energy given from Dr.F.S.M.Chopin from the Marine Institute, Canada. This enthusiasm was firstly realized in the 4th Asian Fisheries Forum held at Beijing in 1995 as the 1st workshop of Cooperative Research in Asia for Fishing Technology (CRAFT). This new wind encouraged the key-persons for organizing the fishing technologists in each country in corresponding with the international perspectives on Responsible Fisheries, which was later steered by the Training Department of the Southeast Asian Fisheries Development Center.

In 1996, the steering committee of the Colloquium of the Fishing Technology, Japanese Society of Scientific Fisheries, held the International Workshop on Responsible Fishing Operation in Asian Pacific, by inviting the international experts as the lecturers and commentators such as Prof.D.Monintja and Dr.B. Murdiyanto from Indonesia, Mr.B.Chokesanguan from the SEAFDEC/TD, Dr.S.Kennelly from Australia, and Dr.C.Glass from USA. The fruitful discussion during the workshop actually set the goal to go to the next step-up for holding the International Seminar in Indonesia as the landmark meeting for fishing technologists in Asian pacific through the intensive contact between Prof.K. Satoh and Prof.D.Monintja.

The Indonesian Fishing Technology Research Networks (IFTERN) steered by Prof.D.Monintja from the Bogor Agricultural University can be the core-group for organizing the Indonesian side, while the Tokyo University of Fisheries can organize the participants from Japan and other ASEAN countries in the Core University Program for Fisheries Science under the Japan Society for the Promotion of Science.

As the preliminary challenge for the preparatory activities, the Onboard Workshop on the Education and Training Program in Fishing Technology was held at Jakarta in 1997, when the representatives from all the member Universities of JSPS Core University Program were invited to get the 1st announcement of call for papers towards the main Seminar in 1999. This event was the official opening of the preparatory activities followed by the action program to organize the hierarchy of several committees and to distribute the 1st announcement by mail and by Internet Homepage from the Tokyo University of Fisheries for calling the papers.

The Seminar was finally held at Sahid Raya Bali Hotel in Bali Island on 19-21 August 1999, after the long discussion among the organizing committee members for the success to attract the big number of participants from all over the archipelagos of Indonesia and Japan, as well as from other ASEAN countries covering the Asian Pacific region. These continuous efforts resulted into the successful gathering of the big number of fishing technologists for 74 from Indonesia, 24 from Japan, 2 from Thailand and Malaysia, and 1 each from Philippines and Australia as in total of 104 participants. The presentations were counted as 7 keynote and country reports, 60 for oral and 24 for poster, together with 6 supporting papers in the scientific sessions.

After the registration, the plenary opening ceremony was held with the progress report from the operation committee by Dr.J.Haluan, the welcoming address from the seminar organizer by Prof.K.Satoh, and the honourable guests, Prof.M.Ahmad from UNRI, Dr.Darnas Dana from IPB and Dr.Sapto J. Poerwowidagdo FADM from Indonesian Navy, and with the official opening call of the Seminar by Dr.Subiyanto from UNDIP as the acting coordinator of JSPS Core University program in Indonseian side. The keynote presentation by Dr.G.Jusuf from the Bureau of Agriculture and Forestry National

Development Planning Agency Bappenas was then given to have encouraged the participants for concentrating the solution seeking during the Seminar toward the sustainable development of Indonesian Fisheries. This was followed by the main session of the Country and Regional Report on Research and Education of Fishing Technology in Asia, chaired by Dr.J.Haluan and Prof.T.Matsuoka. Prof.T.Arimoto from Japan, Prof.D.Monintja from Indonesia, Dr.Z.A.bin Shahardin from Malaysia, Prof.G.D.Aguilar from Philippines and Prof.C.Mahasawasde from Thailand presented each country report for giving the detailed information of the present situation and for sharing the common tasks and goals in the research and education of fishing technology. As the regional report, Mr.Bundit Chokesanguan from the SEAFDEC/Training Department presented the latest information on the regionalization of the Code of Conduct for Responsible Fisheries in Asia.

The scientific session was divided into separate 2 groups for an respective intensive discussion. The 1st session on Fishing Gear and Practices was hosted by Mr.Ayodhyoa from IPB, Mr.Asriyanto from UNDIP and Prof.Nashimoto from Hokkaido University, with 13 presentations on fishing gear and methods chaired by Prof.D.Monintja from IPB and Prof.T.Arimoto from TUF, 7 on fishing gear selectivity chaired by Prof.T.Tokai from TUF and Dr.F.A.Sondita from IPB, 8 on fishing gear dynamics chaired by Dr.Z.A.Shahardin from UPMT and Prof.T.Fuwa from Kagoshima University. These presentation covered the wide variety of fishing gear with the wide variety of research approaches such as the comparative fishing operations, statistical and modeling, together with some new topics on the solar battery, marine bacteria and marine debris analysis.

The 2nd session on Fisheries Acoustics and Operation was hosted by Prof.B.Pasaribu from IPB and Prof. S.Takeuchi and Prof.M.Furusawa from TUF, with 10 presentations on fisheries acoustics and instrumentation chaired by Dr.I.Jaya from IPB and Prof.K.Iida from Hokkaido University, 8 on fishing boats and navigation system chaired by Prof.G.D.Aguilar from UP and Prof.S.Takeda from TUF, 14 on fishing grounds and operation/information system chaired by Dr.J.Haluan from IPB and Prof.M.Matsuyama from TUF. The discussion in each sub-session could be focused into the specialized research tools of hardware and software both for the development and utilization, while the final goals were targeted in the wide variety of topics such as the stock assessment, fish detection, sea-keeping performance of fishing boat, and the oceanographical analysis of the fishing ground. Mr.Rosidi bin Ali from the SEASDEC Marine Fisheries Resources Management presented the progress report of his on-going project on GIS as a tool for promoting the sustainable and responsible fishing practices in the Southeast Asia to conclude the 2nd session.

The poster session was also held during the main and scientific sessions by showing the display of 24 presentations on the wide variety of topics both in the fishing gear and fisheries acoustics. The questioning and discussion was arranged and encouraged during the coffee breaks by the attendant of each poster presentation.

On the last day of the Seminar, each session held the intensive group discussion at first for arranging the information exchange among participants and for summarizing the session by chairpersons of each sub-session. This was followed by the plenary wrap-up session chaired by Dr.Indra Jaya from IPB, with the presentation from each session and sub-session summarization, and then with the open-floor discussion toward the conclusion of the Seminar. The general discussion was arranged to focus the point how the fishing technology can contribute the global issue of food supply in the 21st Century. Even with the short time allocation of this big issue in the plenary wrap-up session, the following recommendations were raised towards the future tasks of our efforts.

1) Further intensive research activity will be required in each field of fishing technology, while the urgent tasks will be the comprehensive and integrated approach towards the sustainable food supply through the good collaboration among the different research field of fishing technology, and among the different countries and regions for seeking the solution on the global issue.
2) The globalization and internationalization will be also the urgent task on the training and education in fishing technology, as well as the intensive research toward the common goal through the good communication and collaboration beyond the country and regional barrier.
3) For this purpose, this kind of international meeting on the regular periodical basis will be really supportive for exchanging the latest information on the research situation which can minimize the individual difficulties and maximize the opportunities to share the successful tools and knowledge in the field of fishing technology.
4) The periodical international meetings can also give the opportunities to present the fruits of the cooperative research among countries and regions, and be linked to the further possibility to establish the new collaboration for solving the regional difficulties towards the sustainable and responsible fisheries.

After the difficult tasks for concluding the seminar, we moved to the plenary closing ceremony hosted by Dr.Wisnu Gunarso from IPB with his tri-lingual performance of Bahasa Indonesia, English and Japanese language. According to the nomination through the discussion meeting among members of Seminar Scientific Committee and the International Advisory Committee, the best presentation awards were presented by Prof.K.Satoh to the following young researchers for encouraging them to go forward on their scientific studies, and for inviting them to Japan through the JSPS scientists exchange program.

Zulkarnain	Bogor Agricultural University
Diniah	Bogor Agricultural University
Yopi Noivita R.	Bogor Agricultural University
Henry M.Manik	Bogor Agricultural University
Ridwan Sala	Cenderawasih University

The awards for the 2nd best presentations were also given to the following 5 young researchers.

Domu F. Simbolon	Bogor Agricultural University
M. Dahri Iskandar	Bogor Agricultural University
Deddy Bachtiar	University of Bengkulu
Fayakun Satria	Marine Fisheries Res. Institute
Wazir Mawardi	Bogor Agricultural University

Finally, after the big applause to the members of Operation Committee from all the participants, for their enormous effort before and during the seminar, Mr.Haji Ayodyhoa from IPB gave us the official closing gong with the impressing address for encouraging all the participants to see again in the near future for the further activities to promote the research and education of fishing technology in Asia.

All the papers submitted to the Seminar were arranged to the respective peer reviewing by the designated 2-3 referees through the Seminar Scientific Committee. The request of revision to each author was mailed attached with the collected reviewer's check sheets and comments, in order to asking the elaboration and up-grading of the manuscript. The Editors and the Technical Editing Team were then in charge of the tough tasks to format all the selected papers toward the publication of the Proceedings.

The launching of the Proceedings was just on time to start our next action plan. As the follow-up of these series of JSPS International Seminars on the Fisheries Science in Tropical Area, the Joint Seminar on the Sustainable Fisheries in Asia in the New Millennium will be held in Bogor on August 2000. We hope to see you again sooner for another fruitful and exciting collaboration among countries and regions.

Terima kasih atas segala-galanya.
Sampai jumpa lagi di Bogor !