

FISHING TECHNOLOGY FOR THE RESOURCE CONSERVATION AND MANAGEMENT IN THE TROPICAL AREA

Oleh:

Takafumi Arimoto¹⁾

ABSTRACT

The world population expansion in the 21st Century will require the further sustainable development of marine capture fisheries with the best global awareness on the environmental conservation. The Southeast Asian countries in the tropical area should be well recognized as the biggest seafood producing area in the world, and the biggest suppliers to the East Asia of Japan, Korea, China and Taiwan, as well as to the EU and USA. In this point of view, the future of the global fisheries is just depending upon the future of this region.

The perspective of global fisheries and the future goal of Fisheries Sciences is shown below. Three big issues should be well recognized as the key words for the 21st Century. At first, if the *world population increase* of the past tendency in the 20th Century would be continued, it will reach to 10 billions in the mid-21st Century. This will require the further *food security* mainly from the marine fisheries to prevent the unbalanced regional supplies. At the same time, the global awareness of the *environmental conservation* should be emphasized through the past actions in the United Nations Conference on Environment and Development (UNCED) such as the whaling ban in 1972, the high-seas gill net ban in 1991, and the Rio Declaration of Agenda 21 on the Bio-diversity in 1992. FAO also started their action to solve the problem by introducing the Code of Conduct on Responsible Fisheries, as well as the technical guidelines for several aspects since 1995.

The key solution towards the 21st Century is the Sustainable Development as being appealed in the Agenda 21. Then, the question arises how to achieve it in the fisheries, especially in the field of fishing technology. The fisheries can not excuse the over-fishing any more even for the global task of food security. In order to harvest the wild lives, the new paradigm will be required; how to establish the environmentally friendly technology in Fisheries Industry. The answers are, at first, the continuous efforts to increase the energy and labour saving. Then, reducing the fishing impacts on the environment, biodiversity and ecosystem including the target and un-target resources are the important tasks. Finally, the establishment of the conservation harvesting technology will be the industrial goal, so that the research and development in the fishing technology must seek the future tasks to minimize the effect of fishing.

Here, the cooperative research activities of fishing technology in the Southeast Asia will be reviewed with some emphasis how to establish the global research network for the fisheries resource conservation and management in the tropical area, not only for increasing the catch amount as the traditional goal, but also for improving the capture process to minimize the fishing impact both to the environment and the bio-diversity. ¹

¹ Tokyo University of Marine Science and Technology, Tokyo, Japan

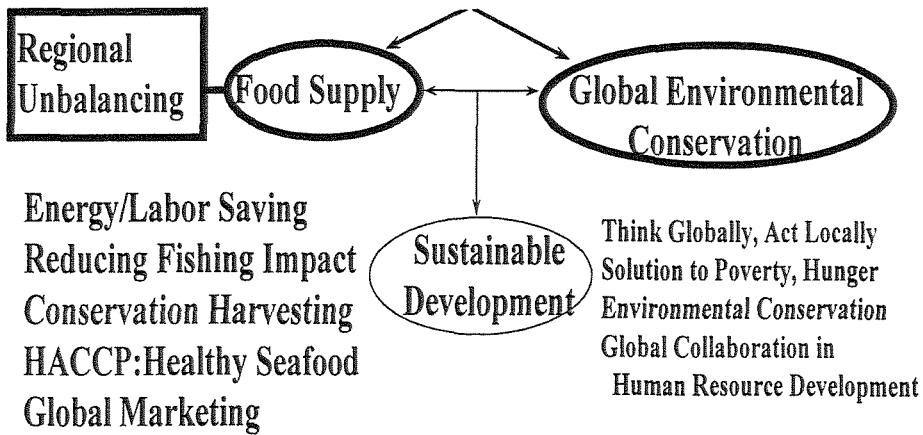
Perspectives in Fisheries & Fisheries Sciences

1995 Kyoto Declaration - Sustainable contribution of fisheries to Food Security
 1996 2nd World Fisheries Congress in Australia
 1997 SEAFDEC- Regional Workshop on Responsible Fishing
 1998 Asian Fisheries Forum in Thailand
 2000 3rd World Fisheries Congress in China
 2001 International Symposium in Japan SEAFDEC Millennium Conference Asian Fisheries Forum in Taiwan
 2003 SEAFDEC Tokyo Seminar
 2004 4th World Fisheries Congress in Canada
 2008 5th World Fisheries Congress in Japan

1950
 4.4 Billion
 2000
 6.0 Billion
 2060
 10 Billion

Population Explosion

United Nations
 1972 Whaling Ban
 1991 High Sea Gillnet Ban
 1992 Rio Earth Summit - Agenda 21 for Bio-Diversity
 1995 FAO Responsible Fisheries
 1997 Kyoto Protocol for Global Warming Issue
 2002 Johannesburg Summit - Rio+10 - Global Challenge
 Global Opportunity
 - Trends in Sustainable Development



DEVELOPMENT OF COMMUNITY-BASED SET-NET FISHERIES IN SOUTHEAST ASIA FOR SUSTAINABILITY OF FISHERY RESOURCE AND COASTAL PEOPLE PROSPERITY

Oleh:

Aussanee Munprassit¹⁾

1 BACKGROUND

The coastal fishery resources in Southeast Asian region have been over exploited. Most of coastal fishermen in the region belong to small-scale fisheries and becomes vulnerable to competition and confliction on fishing operation along with decreasing resources. It becomes urgent for fishery management authority in the region to consider and develop various alternative approaches to existing fishery activities and fishery management, taking account reality of problems in fisheries. Follow up, the requirement of ASEAN-SEAFDEC Millennium Conference on "Sustainable Fisheries for Food Security in the Region" in Bangkok, November 2001. SEAFDEC/TD presented the pilot project on "Introduction of Set-Net Fishing to develop Sustainable Coastal Fisheries Management", that introduction of set-net will collective operation by fishermen transferred from existing fisheries is one of the alternative approaches to alleviate severe competition in the congested fishing ground and pressure on fishery resource to SEAFDEC Council meeting No.34 in 2002 in Myanmar. They agreed and approved for 2 Years project implementing. The project started 2003 until 2005.

2 PROJECT OBJECTIVES

1. To reduce fishing pressure on coastal fisheries resources through introduction of set-net as a passive fishing gear.
2. To alleviate fishing competition in the congested fishing ground by organizing collective fishing operation in set-net through the pilot project.
3. To develop common policy concept of fishery management for fishing gear occupying wide fishing ground such as set-net through the pilot project.
4. To enhance the coastal fishery resources by installation of large stationary fishing gear such as Set-Net and assess the feasibility and environmental impact.

Project's Site:

SEAFDEC/TD considered the project's site area in the coastal waters of Mae Ram Pheung Beach, Rayong Province. In this project, SEAFDEC/TD in collaboration with Eastern Marine Fisheries Research and Development Center (EMDEC), and Rayong Provincial Fisheries Office (RPFO), including 7 fishermen groups in this area.

3 PROJECT ACTIVITIES

Activity 1 Survey and Monitoring;

Working groups consist of 4 sub-teams. There are fishing gear, fisheries biology, fishing ground and fisheries socio-economic. Each team will response for survey, data collection and compile information that relate in their field to use for adjusting and designing the project implementation. Including, monitoring informative factors,

¹⁾ Training Department, Southeast Asian Fisheries Development Center, Samut Prakan, Thailand.

condition of the project implementation and analyze all information and data to evaluate the project.

Activity 2 Installation and Operation Management of Set- Net:

This activity was designed for an appropriate type of set-net gear that suit to the fishing ground. Surrounding condition was also taken into consideration. Monitoring on the efficiency of set-net gear designed, installation position, harvesting operation and its maintenance was conducted. Fishing gears operated around set-net area were also monitored.

Activity 3 Information Transfer Program of Set-Net:

This activity will provide the understanding on set net project implementation, gathering of local fishermen and their leaders to participated in set-net gear preparation, installation and operation. Include providing related information to fish product management and incentive allocation through fishing group establishment, restore collected data and result of experiment to local fishers. The activity has arranged a series of technical manual for set net, technical seminar and final report of the project.

