

Fisheries Resource Management and Fisheries Information Lesson learned from Japan

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Introduction

Regarding to the arrangement under the Business Consignment Agreement between SEAFDEC and Marino-Forum 21 signed since 2014, I was selected as one of the trainee to participate in Fisheries Resource Management and Fisheries Information program. Duration of my training course was from 13 October 2014 to 1 November 2014.

In this training course, I've gained knowledge of fisheries management in many kinds of different aspects. First of all I had an opportunity to learn about marine protected area and related issue from The University of Tokyo, current situation on fisheries and fisheries statistics from Fisheries Agency, fisheries management and fisheries activities from Ishikawa and Yamaguchi prefecture.

Furthermore, I've learned how to make use of information from catch and biological data including appropriate collection system for stock assessment from Research Institute of Fisheries Science that is very important to support the effectiveness of fisheries management in Japan.

Lastly, I have a chance to observe some lecture on project evaluation case study from Japan International Cooperation Agency (JICA) and Marine Blue Association. Introduction of various type of artificial reef and its effect from Marine Civil Engineering Co., Ltd.

Training Schedule

Date	Institution	Content
14 Oct 2014	Marino-Forum 21, Department of Overseas Fisheries Consultanting Activities (OFCA)	Observation Tsukiji Market and Lecture : Distribution of fisheries production
	Department of Global Agricultural Sciences ,The University of Tokyo	Laboratory introduction Lecture : MPA and Related Issues
15 Oct 2014	Fisheries Agency Administration Division	Structure and works of Fisheries Agency of Japan
	Policy Planning Division	Current situation of fisheries in Japan
	Fish Ranching and Aquaculture Division	Fish Ranching and Aquaculture in Japan
	Statistic Division	Fisheries production Statistic
16-17 Oct 2014	FRA, National Research Institute of Fisheries Science	<ul style="list-style-type: none"> • Stock assessment • Stock management • Fisheries biology • Monitoring system
20 Oct 2014	- Japan International Cooperation Agency (JICA)	<ul style="list-style-type: none"> • Outline of Japan's ODA and JICA Cooperation • JICA's Project Evaluation and Monitoring System
	- Japan Fisheries Information Service Center (JAFIC)	<ul style="list-style-type: none"> • Concept of TAC and TAE • Management system

Date	Institution	Content
21 Oct 2014	Marine Blue Association	Marine Blue Association and Method of Evaluation
23-24 Oct 2014	Ishikawa prefecture Government	<ul style="list-style-type: none"> • Fisheries Management in Ishikawa prefecture. • Activities introduction (TAC management, Boat registration, Resources recovery plan, Fish ranching, Fisheries infrastructure, Instruction of fisheries association) • Observe fisheries petro boat, Fish Farming Center and Fisheries Research Center
27-29 Oct 2014	Yamaguchi Prefectural Government	<ul style="list-style-type: none"> • Prefectural plan of fisheries promotion • Activities introduction (Resource Management Approach, Management of fishing ground and Fisheries Rule) • Study visit to Fisheries Cooperative Association • Observe Fishery Research Vessel, Fisheries Research Center (Japan Sea) and Fisheries Research Center (Inland sea)
31 Oct 2014	Fisheries Agency Administration Division	Evaluation meeting
	Marine Civil Engineering Co., Ltd	Introduction of various type of artificial reef and its effect.

According to lesson learned from Japan I've learned the importance of data collection as an effective tools for fisheries resource management. Stock assessment is an importance tools to archive fisheries resource management. Catch of an appropriate age and size of target is able to secure the reproductive capacity of the stock to ensure sustainable levels of future recruitment.

National Research Institute of Fisheries Science which is in charge of stock assessments, studies on stock management, prediction of fishing condition, and biological characteristics of commercially importance small pelagic fish resources to ensure sustainable yields on their 5 responsible species especially chub mackerel.

They provide the basic methodology to enforce resource management based on annual calculation of Allowable Biological Catch (ABC), different calculation rules should be selected depending on the variety and quantity of available information. The information which is incorporated into the stock assessment are (1) research survey by vessels are collected by scientists conducting resource surveys such as biological information of target species (ecology, distribution, growth and reproduction etc.) and environmental information of surrounding ecosystem and (2) commercial fishery information is collected directly from the commercial fisheries such as catch quantity, effort quantity, fishing method, fishing gear and fishery season. All data set was aggregated to the database FRESCO.

FRESCO (Fishery Resource Conservation) server has been installed in the Japan Fisheries Information Service Center (JAFIC) to collect fishing and oceanographic

information by obtained data from Prefectural Office and Fisheries Experimental Station located throughout the country.

The mathematical method to estimate stock they used Virtual Population Analysis (VPA) model to calculate relative abundances and use to estimate future abundance. After calculating the range of allowable catch for a species then they decide ABC.