Training Visit on Fisheries Resource Management and Fishing Ground Improvement/Creation in Japan

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Introduction

In October 2014, I got the training visit scholarship in Japan by SEAFDEC human resource development program under the agreement signed between SEAFDEC and MF21 in year 2014. The training title is "Fisheries Resource Management and Fishing Ground Improvement/Creation" with 20 days training period from 13 October to 1 November 2014. The training program was included lecture, research method practice, filed visit and discuss with fisheries expertise.

Objectives

1. Improved and gained new knowledge in the present situation of fisheries in Japan
2. Improved and gained new knowledge in critical fishing ground management and management tools such as MPAs or fishery *refugia* management
3. Improved the knowledge in fisheries resource re-stocking and community based on resource management for the coastal small-scale fisheries
4. Improved and gained new knowledge in advance technology and methods of coastal resource enhancement and artificial reefs management

Outline of the training schedule

The training period was 20 days from 13 October to 1 November 2014. The training program was provided many places to visited to learn various concepts of fisheries management and resource enhancement by various organization as; Fishery Agency, Fishery department of prefectural government, Fishery Research Agency, prefectural fisheries research station, university professor, university researchers, private sector, fisherman, NGO,

I could visit to 5 prefectures, 16 places in Japan as;

1. Tsukiji Market Observation and Distribute of fisheries Product in Japan
2. MPA and related issues
3. Fisheries Agency of Japan
4. Research Center for Sub Tropical Fisheries, Seikai National Fisheries research Institute, Fisheries Research Agency, Ishigaki Island
5. Local fish market at Ishigaki Island (field observation) and local fishermen for Interviewing
6. National Research Institute of Fisheries and Environment of Inland Sea, Japan Fisheries Research Agency, Hiroshima
7. NPO Satoumi Research Institute
8. Ocean Construction Co. Ltd
9. National Fisheries University of Japan
10. Nishimo Co., Ltd
11. Yamaguchi Prefectural Government
12. Yamaguchi fishing port (Fisheries Cooperative Association)
13. Yamaguchi Prefecture Fisheries Research Center (Japan Sea)
14. Yamaguchi Prefecture Fisheries Cooperative Association (Shimonoseki)
15. Yamaguchi Prefecture Fisheries Research Center (Inland sea)
16. Marine Civil Engineering Co., Ltd

Interesting Topics

1. Research Center for Sub Tropical Fisheries, Seikai National Fisheries research Institute, Fisheries Research Agency, Ishigaki Island

Instructor: Dr. Atsushi Nanami

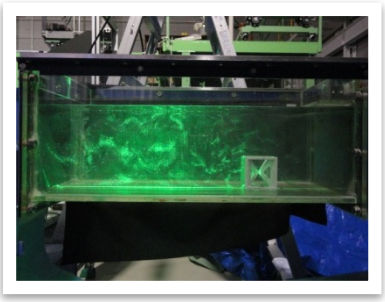
Management rules for sustainable coastal fisheries in Okinawa coral reefs: The fisheries management rules here could divide by 2 groups as; legal rule that control by Okinawa Prefectural government and Voluntary rule that control by local fishermen themselves. The legal rules were gear restrictions, catch restrictions, size restrictions, closing seasons and no-take zones. The voluntary rules were no-take zone, size restrictions and spawning ground protection.

A case study of voluntary management by local fishermen: Grouper, 2nd ranking important species in Okinawa, was catch by spear fishing. Spear fisherman, about 80 fishermen, found that groupers had aggregating behavior for breeding during last-quarter moon of April and/or May. Then spear fishermen agreed to established closing- period to stop fishing for 7 days during spawning of grouper, 3days before and after the last-quarter moon of April and/or May, by voluntary rule.

Importance of habitat conservation for effective fisheries management: The fisheries habitat management was used stomach contents analysis of fishes to study and understand the relationships of pray and predator of target species. Then, the manager could design important habitat such as; spawning ground, nursery ground and feeding ground of target species.

2. Artificial reef research in National Fisheries University of Japan

Instructor: Dr. Akira Hamano, Dr. Kimiaki Nagamatsu and Dr. Junji Kawasaki



Dr. Kimiaki Nagamatsu was presented the experimental research for artificial reef in circulate flume tank. His research topic was focus on the effect of artificial reef design to water current. The objective of research was aim to understand how artificial reef can make up-welling (current turbulences). Up-welling can make sea water around artificial reefs to rich of nutrients. Various designs of artificial reefs were used for this experiment. Video recorder and camera also were used to record of the results.

3. Marine Civil Engineering Co., Ltd

Instructor: Mr. Osamu Taniuchi, Mr. Hiroshi Kimiya

Mr. Osamu Taniuchi introduced about Japan Artificial Fish Reef Association. JAFRA is the private association organized by 9 companies. They are exchange information to each other to promote artificial reef that can make a good fisheries. The materials used are high quality like concrete or steel or combination between concrete and steel. They developed artificial reef in various types of blocks it depends on type of target species based on the objectives of the project. They used Remotely Operated Vehicles (ROVs) to monitor and evaluate artificial reef. The evaluation method were used

by calculated to the total number of fishes in artificial reef. First step was counted the number of fish that appeared in the capture area of ROV camera. Then second step was calculated the total number of fishes in a big schools appeared in echo-sounder, which equipped on the research vessel, by the first step result. This method was need to understand the behavior and schooling performance of those fish species in artificial reef .

Conclusions

This study trip is very nice and useful for me to learned more on fisheries resource management from various sectors in Japan such as; professor from university, central government, researchers, private company, fisherman, prefectural government and artificial reef company. There are form different sectors but there had the same aim that make fishery resource sustained, healthy environment with happiness of fishermen and fishery product consumers. They had shown me good cooperatives between concern sectors that came out with a good data collection and resource management system in Japan that should apply the same system to Southeast Asia Region. Finally, I got a very good key point that only government or one sector cannot get a goal of sustainable fisheries resource management. Sustainable fisheries resource management will success by cooperation and strongly participation among stakeholder encouraging by good support from government and good data from scientists.

Acknowledgement

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