

Fisheries Panel formed under the Korea (MLTM/MIFAFF) - NOAA Joint Project Agreement

The Fisheries Panel is formed under a Republic of Korea – United States Joint Project Agreement (JPA). The principal agencies involved in this JPA are NOAA, MLTM, and MIFAFF. NOAA is the U.S. National Oceanic and Atmospheric Administration (NOAA). MLTM is the Korean Ministry of Land, Transportation, and Maritime Affairs. MIFAFF is the Korean Ministry of Food, Agriculture, Forestry, and Fisheries. The Panel is formed to foster cooperation and communication of ocean and fishery sciences between scientists of the two countries for conservation and management of fisheries resources.



JOINT PROJECT AGREEMENT Fisheries Panel

Project Leads

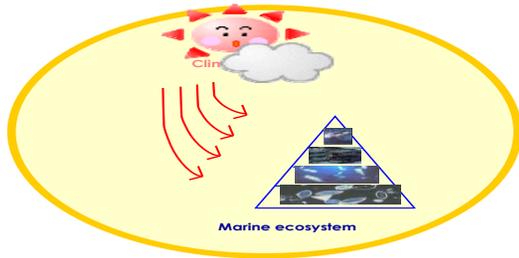
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**Republic of Korea – United States
Fisheries Science and Research
Cooperation**

Fisheries Panel Projects for 2013



Eleven Years of Cooperation

The Fisheries Panel has completed eleven years of cooperation. The main partners of the Panel research are the Korean Ministry of Food, Agriculture, Forestry and Fisheries and the U.S. National Marine Fisheries Service (NOAA Fisheries). For 2013, the Panel will engage in seven projects. The projects are: (1) Climate induced changes on fisheries and ecosystems; (2) applications of JPA research to Korean fisheries management, including fisheries resources rebuilding; (3) Improvement of survey gear technology; (4) Fisheries monitoring through science observers; (5) Otolith research; (6) Fishing impacts on corals and other vulnerable marine ecosystems; and (7) Fisheries panel conference.

Climate Induced Change on Fisheries and Ecosystems

This project has 5 subtasks. (1) Develop a stock projection model for Pacific or jack mackerel that incorporates the bio-physical forcing mechanisms identified by previous work; (2) Develop an IFRAME (integrated fisheries risk analysis method for ecosystems) model to assess the impact of climate change on marine ecosystems in the Bering Sea; and (3) Develop “nowcasts” for recruitment of common squid and other fishery species in US and Korean waters; (4) Compare snow crab management strategy between ROK and the US; and (5) develop a low cost ocean monitoring network through oceanographic and fisheries data collection by cooperating commercial fishing vessels.

Applications of JPA research to Korean Fisheries Management

There are 2 components in this project. (1) A technical training program for Korean fisheries staff. Korean

technical experts will travel to NMFS headquarters in Silver Spring to participate in a lecture/training course of the US fisheries management process that includes ethics and laws of responsible fisheries management. (2) Bring a team of NOAA-Council fisheries management experts to Korea to conduct lectures on the U.S. fishery management council decision making process. The U.S. fisheries management system is designed to engage the application of science, conservation, ecosystem considerations, climate change impacts on fishery resources, bycatch mitigation, impact on corals and other vulnerable marine ecosystems, fisheries monitoring through use of observers and electronic data systems, economics, social implications of fisheries management, and enforcement of regulations. The U.S. Team will also have an expert for Korean staff to consult on international fisheries issues that MIFAFF and NOAA encounter at bilateral forums (such as fisheries issues at Free Trade Agreement meetings) and international commission meetings .

Improvements of Survey Gear Technology

This project is designed to help NFRDI improve its survey gear technology. The task in 2013 is to help develop the technical capabilities to analyze the multi-frequency, split-beam, acoustic data now routinely collected by the NFRDI fisheries research vessel, *Tamgu 20*. This capability will allow NFRDI to produce indices of sea bottom characteristics, including slope, roughness and hardness that are important determinants of fish habitat as well as influential on the performance of bottom trawls. A US survey technology expert (Michael Martin) will participate on a NFRDI research survey cruise to install and test software capable of estimating indices of slope, hardness and roughness of the bottom from the five frequencies of acoustic data now routinely collected by the Korean fisheries research vessel.

Fisheries monitoring through science observers

This is a collaborative research project to provide training for Korean trainers who will, in turn, train Korean fisheries observers to estimate and monitor the catches of the Korean fishing fleet. Fisheries monitoring using scientific observers will be needed to collect data at sea, at shoreside landing stations, and at fish processing facilities. The Hawaii observer program will provide the training for the Korean observer trainers on longline,

purse seine, and near-shore fisheries. The U.S. experts will also advise on data management and statistical issues surrounding the expected high volume of data that would be collected by fisheries observers.

Otolith Research

The objectives and tasks are (1) Develop statistical models to estimate growth parameters accounting for age reading uncertainty; (2) develop age validation methods to assess accuracy of ageing; and (3) initiate an exchange of Pacific cod otoliths. This project continues work on age determination of small yellow croaker. An initial sample of 150 otoliths was exchanged between NFRDI and AFSC for age determination criteria development and preliminary age validation using stable oxygen isotopes.

Fishing impacts on corals and other VME (new project for 2013)

The North Pacific Fisheries Commission (NPFC) has been formed to regulate all deep sea fisheries in the North Pacific Ocean. Both the Republic of Korea and the United States are founding members of this Commission. The Commission has designated regulating impacts of seamount fisheries on corals and other vulnerable marine ecosystems (VMEs) as a primary task for the national parties. Both Korean and U.S. scientists have been tasked by the Commission to develop observer programs, data collection systems and, eventually, to develop encounter protocols for fisheries that would have significant adverse impact on VMEs. This project has 4 subtasks. (1) Develop sampling protocols for fisheries observers placed on Korean research and fishing vessels that operate over seamounts, particularly over the Emperor seamounts, (2) Develop a data collection and reporting system for fishing activities in the NPFC Convention areas of the North Pacific Ocean, (3) Develop a Google Earth application to display coral-VME encounter data from a 2010 observer cruise, and (4) Collaborate to formulate encounter protocols for avoiding adverse significant impacts of fishing on VMEs.

Fisheries Panel Conference

A conference will be held in Seattle/Honolulu in May 2013 to bring together key research personnel to report on research accomplishments performed under the JPA. The conference will also address future directions of research and collaboration for 2014.