Working Group 24: Environmental Interactions of Marine Aquaculture

Inter-Sessional FUTURE-AP Meeting Aug. 16-18, 2010

Toyomitsu HORII

Parent Committees:

- Fishery Science Committee (FIS)
- Marine Environmental Quality Committee (MEQ)

Co-Chairs:

- Ms. Ingrid Burgetz (Canada)
- Dr. Katsuyuki Abo (Japan)
- Dr. Brett Dumbauld (USA)

Members:

Canada (6), China (4), Japan (3), Korea (4), Russia (3), USA (4)

Duration

- Approved at 2008 PICES Annual Meeting (2008 - 2011)

Mission

To develop standard methods and tools to assess and compare the environmental interactions and characteristics of existing and planned marine aquaculture activities in PICES member countries.

Terms of Reference

1. Evaluate approaches currently being used in the different PICES countries to assess and **model** the interactions of aquaculture operations with surrounding environments.
   Dr. K. Abo to lead

2. Review and assess current **risk assessment** methods used to assess environmental interactions of aquaculture and determine what, if anything, should be changed for application in PICES countries to reflect ecosystem-specific aspects.
   Dr. E. Black to lead

3. Assess methods to detect, identify, evaluate and report on infectious **disease** events and potential interactions between wild and farmed marine animals.
   (LEAD: Dr. K. Amos retired, Dr. Brett Dumbauld acting since June 2010)

2009 PICES Annual Meeting WG-24 Activities

Workshop

Interactions between Aquaculture and Marine Eco-systems

12 oral and 7 poster presentations were given
These covered most areas of interest to the working group

First WG Meeting

Prior to 2009 AM, member countries were asked to provide information in the following areas as they relate to aquaculture in their respective country:

1) Species of interest and production methods
2) Risk assessment methods and applications
3) Pathogens and diseases of concern in aquaculture

Responses received from member countries were reviewed during the 2009 WG meeting.

Relationships to FUTURE

The terms of reference and activities within WG24 are closely linked to many of the questions posed by FUTURE, particularly:

Research Theme 2: How do ecosystems respond to natural and anthropogenic forcing and how might they change in the future?

Research Theme 3: How do human activities affect coastal ecosystems and how are societies affected?

We have selected only a few points for discussion.

2. How do ecosystems respond to natural and anthropogenic forcing, and how might they change in the future?

Due to the importance of marine aquaculture to many PICES countries it seems likely that FUTURE research programs could use aquaculture as a means to address this question. Aquaculture is clearly one of the anthropogenic forcing functions, but aquaculture is also greatly influenced by climate. The identification, standardization and development of tools for aquaculture interaction assessment by WG-24 will benefit such studies.

Research Theme 2 questions that are most relevant to WG-24 are 2.4, 2.5, 2.6 and 2.7.

3. How do human activities affect coastal ecosystems and how are societies affected by changes in these ecosystems?

In most PICES countries aquaculture is very important because it supports local and national economies and provides a major source of dietary protein. In some countries aquaculture is also viewed to have significant negative impacts on the environment and wild fisheries. For these reasons aquaculture is likely to figure predominantly in FUTURE's research activities and programs designed to address this question.

The identification and standardization of tools (e.g. risk assessment, predictive modeling and technical developments) used in the assessment of aquaculture impacts on the marine environment is a major goal of WG24. Research Theme 3 questions that are most relevant to WG-24 are 3.1, 3.2, 3.3 and 3.5.