

National Marine Fisheries Service/Institute of Marine Research, Norway, Scientific Cooperation

Basic Instrument

The basic instrument establishing scientific cooperation between the National Marine Fisheries Service (NMFS) and Norway's Institute of Marine Research (IMR) is the *First Addendum to the Memorandum of Understanding [MOU] Between NOAA's National Marine Fisheries Service, USA, and the Institute of Marine Research, Norway, on Cooperation in Marine Ecosystems Research and Assessment* [the "Addendum"]. The Addendum became effective on February 16, 2012. It is an addendum to the *Memorandum of Understanding (MOU) on Cooperation on Fisheries Issues Between the National Oceanic and Atmospheric Administration of the United States of America and the Ministry of Fisheries and Coastal Affairs of Norway* (discussed earlier in this publication).

Members

The United States and Norway.

Meetings

The Parties agreed that their designated representatives will meet as needed.

U.S. Representation

United States

Dr. Richard Merrick
Director of Scientific Programs and
Chief Science Advisor
National Marine Fisheries Service

Norway

Dr. Tore Nepstad
Director
Institute of Marine Research

Pursuant to Article 5 of the Addendum, each Party agreed to appoint a coordinator for the joint program of cooperation. The coordinators will meet every two years to evaluate the joint program and to draft a cooperative work plan for the next two years. Following approval by the directors of the signatory institutions, the work plan will become the framework for cooperative activities for the next two years. The coordinator for NMFS has not yet been identified.

Description

The Addendum replaces separate scientific cooperation agreements between the IMR and the NMFS Alaska Fisheries Science Center and the NMFS Northeast Fisheries Science Center. The Addendum serves to encourage and support cooperation in four areas: (1) joint sponsorship of workshops or symposia on the assessment and management of living marine resources of the northern hemisphere and aquaculture; (2) exchange of scientific expertise and information; (3) extended visits of scientists; and (4) cooperative research on common scientific issues and methodological problems.

Recent Activities

Representatives from NMFS, NOAA, and IMR met in Seattle, Washington, June 19-20, 2014 to continue dialog on collaborative research activities. This meeting was held in conjunction with the meeting of the NMFS Science Board. The gathering offered the opportunity to have in-depth discussions on climate and fisheries, integrated ecosystem assessments (IEAs), advanced technologies, and assessments of oil spill impacts on living marine resources (LMRs).

The following issues were discussed in detail:

- Integrated Ecosystem Assessments:
 - Compare NOAA and IMR framework models for EA and IEA in a joint paper.
 - Follow-up workshop on IEA with focus on the use of indicators, models and data analysis.
 - Possible second workshop for 2016/17 following-up on the use of IEA in relation to management advice.
 - Continue cooperation on the development of the scientific basis for discussions on Arctic fish stocks (Central Arctic Ocean; Monitoring, development of research plan, status reports).

- Climate and Fisheries:
 - Convene a 4-day workshop in response to ICES/PICES Strategic Initiative on Effects of Climate Change on Marine Ecosystems (SICCME) effort to deliver quantitative projections of climate change impacts on major commercially important fish stocks. The workshop would focus on commercially important species and their prey. Specific activities would be:
 - a) resolve which physical global climate or earth system models should be used for the projections;
 - b) comparison of attributes and performance of regional ocean circulation models; and
 - c) identify suites of projection models for key species (e.g., single species climate enhanced projections, individual based projections, full end to end models) and compare their attributes and performance.
 - Convene a small interdisciplinary work group to develop an international proposal for the North Pacific Research Board (NPRB) to research climate change impacts on Arctic marine ecosystems.
 - Possible additional projects:
 - Retrospective analysis – improving our ability to map ecoregions with a specific emphasis on pelagic habitats and their influence on density dependent species interactions.
 - Retrospective analysis of ability to map fluxes with Barents and Bering Sea as variables in vital rate models (recruitment, growth, etc.).
 - Look at tagging and behavioral response to shifting ocean conditions

- Advanced Technologies:
 - Follow-up the discussions on joint technology development for acoustics and digital video sampling through a small work group of scientists within technology and modeling. Work by correspondence to establish areas of cooperation and corresponding priorities. Focus on larger issue of how to start operationalizing technology on ships and other platforms.

 - Utilize the 2016 Antarctic joint efforts by US and Norwegian vessels as a platform for cooperation for testing and further development of technology, methods and operational survey assessment models.

- Oil spill toxicity:
 - Establish joint NOAA-IMR Arctic oil toxicity work team.
 - Seek funding for scientific exchanges, joint projects and joint post-docs and students
 - Continue 1-2 targeted scientific workshops a year

Additional topics of discussion included:

- Scientist Exchange:
 - Facilitate short and long-term exchanges of scientists between IMR and NOAA – Foster information exchange on:
 - Climate – promote exchange of core analysis methods for use in stock assessments (e.g., eco-regions and pelagic habitats)
 - Oiling/contaminants
- Transatlantic Science Week 2015
 - Identify 1-2 themes. Focus will be on oceans/blue futures and will be held in Boston.
- Stock Assessment:
 - IMR to consider participating in NOAA’s National Stock Assessment Workshop on developing Terms of Reference for Fish Stock Assessments
 - IMR to consider participating in NOAA’s Workshop on applying MSEs to design appropriate sampling regimes for age/growth and food habits studies (Rick Methot and Erik Olsen to lead)
- Horizon 2020 (EU Program)
 - Identify funding opportunities within the Horizon 2020 program.

Next meeting

The next science meeting is scheduled for May 2015, in the U.S.

Contacts

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