

REPORT OF REX TASK TEAM



On the morning of October 12, 2003, the four CCCC Task Teams first met in a plenary session to discuss the report from the Study Group on *PICES Capacity Building* and the NEXT (Nemuro EXperimental Planning Team) report. The group discussion was led by the CCCC Co-Chairman, Dr. Harold P. Batchelder.

Upon adjournment of the plenary, the REX (Regional EXperiment) Task Team Meeting was convened from 09:30-12:30 hours. The REX Co-Chairman, Dr. William T. Peterson, welcomed participants (*REX Endnote 1*) and outlined the objectives of the meeting. The agenda was reviewed and accepted (*REX Endnote 2*).

Review accomplishments in 2003 (Agenda Item 2)

REX Topic Session at PICES XII

The program for the REX Topic Session (S3) on “Influence of fishing and/or invasive species on ecosystem structure in coastal regions around the Pacific Rim” at PICES XII was discussed. It was noted that Task Team members are pleased with the response: 6 oral papers and 5 posters will be presented. Summary of the session is included elsewhere in this Annual Report.

March 2003 MODEL Workshop

Dr. Douglas E. Hay reported on his involvement with the MODEL Workshop to “Embed NEMURO and NEMURO.FISH into a 3-D circulation model” that was held March 3-6, 2003, in Yokohama, Japan. He felt that the workshop made advances in terms of adding fish to the NEMURO plankton model. Parameterization of growth of herring and saury was completed, thus producing a generic model of fish growth. The next steps are to apply NEMURO.FISH to study sardine and anchovy fluctuations and to develop an individual-based model.

Discuss plans for 2004 (Agenda Item 3)

REX Workshop at PICES XIII

Topics for a potential REX workshop in 2004 were considered. It was suggested and approved that REX organize a workshop that would discuss the seasonal cycle of plankton production in continental shelf waters at many sites around the Pacific Rim, with the long-term goal of linking such observations with the NEMURO model (*REX Endnote 3*).

Such an activity would contribute to the desire of the CCCC Program that various components of the Program work more closely together. REX felt that collaborations between modellers and observationalists would be further strengthened if at least one modeler and one observationalist working at the same laboratory could jointly carry out model verification studies of the NEMURO code. Model-data comparisons will require that NEMURO be adapted for a given region or site and this is best done by those working at each site.

REX Topic Session at PICES XIII

Dr. Richard D. Brodeur proposed that REX co-convene (with BIO) a 1-day Topic Session on “Sardine in the North Pacific: What we know after a century of variability and where do we go from here?”. This proposal generated much discussion with the overall recommendation that the idea is interesting but the topic needed a more climate-related focus if REX were to endorse the proposal. It was also suggested that the session should consider sardines in the Humboldt and Benguela currents as well.

BASS/REX/MODEL Workshop at PICES XIII

A proposal from Drs. Kerim Aydin and Gordon A. McFarlane for a joint BASS/REX/MODEL Workshop on “Linking open ocean and coastal systems II” (*BASS Endnote 4*) was discussed. The idea met with approval although further

discussion between REX and BASS Co-Chairmen was recommended.

Inter-sessional symposium on CCCC synthesis

Discussion on REX involvement in the inter-sessional symposium on PICES CCCC Program synthesis was postponed until next year, as the meeting has been re-scheduled for April 2006 rather than April 2005.

North Pacific Ecosystem Status Report (Agenda Item 5)

REX members discussed the Synthesis chapter of the North Pacific Ecosystem Status Report. Overall everyone was impressed with the product. Dr. Peterson asked that any editorial and scientific comments be directed to Dr. Skip McKinnell at the PICES Secretariat.

Discussion of report from Study Group on *PICES Capacity Building* (Agenda Item 6)

This topic resulted in a spirited discussion of the need for more monetary support from member nations to support the travel of Task Team members. Apparently there exists a perception that PICES is of greater interest to government-supported scientists and that academic/university scientists frequently must find their own travel funds to be able to attend PICES meetings. Clearly, unless the level of national support is increased for travel expenses, it will be difficult for PICES to engage in capacity building.

REX Endnote 1

Members

Kenji Asano (Japan)
Elena Dulepova (Russia)
George L. Hunt (U.S.A.)
William T. Peterson (U.S.A., Co-Chairman)
Yukata Watanuki (Japan)
Chang-Ik Zhang (Korea)

Report from Study Group on *PICES Strategic Issues* (Agenda Item 7)

Due to lack of time this report received very little discussion.

Specific funding requests (Agenda Item 8)

REX requests support for two scientists to attend the workshop on “The seasonal cycle of plankton production in continental shelf waters around the Pacific Rim” proposed for PICES XIII in Honolulu.

Election of a new REX Co-Chairman (Agenda Item 10)

Dr. Hay (Canada) was recommended, and he kindly agreed, to serve as the new Co-Chairman to replace Dr. Peterson (U.S.A.). It was noted that Dr. Hay has not yet been nominated by Canada as a member of REX even though he has actively participated in REX activities over many years.

It was also recognized that REX may merge with BASS in the coming year, thus such a merger may result in two others serving as Co-Chairmen of the BASS/REX Task Team. Discussion of chairmanship for the integrated Task Team is deferred until the CCCC Implementation Panel and Science Board reach a decision on the proposed merger.

Participation List

Observers

Harold P. Batchelder (U.S.A.)
Richard D. Brodeur (U.S.A.)
Douglas E. Hay (Canada)
Makoto Kashiwai (Japan)

REX Endnote 2

REX Task Team Meeting Agenda

1. Welcome and introductions
2. Review accomplishments in 2003
 - a. Topic Session on “Influence of fishing and/or invasive species on ecosystem structure in coastal regions around the Pacific Rim” at PICES XII
 - b. REX involvement in March 2003 MODEL Workshop
 - c. Progress towards linking data sets on seasonal cycles of plankton abundance with NEMURO model
3. Discuss plans for 2004
 - a. Select topic(s) for REX Workshop(s) at PICES-XIII in 2004
 - b. Discuss potential for joint workshop(s) with MODEL, MONITOR and BASS
- c. Discuss role of REX in CCCC-proposed inter-sessional symposium, April 2005
- d. Discuss REX involvement in NEXT and REX role in application of NEMURO to modeling selected coastal ecosystems around the Pacific Rim
4. Discuss role of REX in implementation of a better-integrated CCCC Program
5. Discussion of North Pacific Ecosystem Status Report
6. Discussion of report from Study Group on *PICES Capacity Building*
7. Discussion of report from Study Group on *PICES Strategic Issues*
8. Specific funding requests for 2004 and 2005
9. Other business
10. Election of new REX Co-Chairman.

REX Endnote 3

Proposal for a 1-day REX Workshop at PICES XIII on “The seasonal cycle of plankton production in continental shelf waters around the Pacific Rim”

The REX Task Team has the responsibility of developing inter-comparisons among regional coastal marine ecosystems. Given that the long-term goal of the PICES CCCC Program being the application of models to understanding the influence of climate variability on plankton and fish production in the North Pacific, near-term goals are: (a) to learn more about the influence of climate variability on plankton production cycles, and (b) to determine if we can model the seasonal cycle of plankton production with the NEMURO at many sites around the Pacific Rim.

At this workshop, we hope to locate as many site-specific studies as possible, each with several years of observations for as many boxes in the NEMURO lower tropic level model as is possible, in order to facilitate model verification studies that must be conducted in the future. Since NEMURO is an NPZ model, successful model-data comparisons will require data sets on temporal changes in light, nutrients, phytoplankton and zooplankton over (ideally) several seasonal cycles. Although the long-term

goal of the workshop is to facilitate model-comparisons at many sites around the Pacific Rim (including the Bering Sea), the proximate goal is to discuss linkages and time lags between primary and secondary production cycles; and where possible, the potential match-mismatch between phytoplankton and zooplankton biomass cycles and the spawning and growth of important fish species. If long time series are available, we ask “How do interannual and decadal scales differences in the timing of the spring bloom and other blooms affect zooplankton production and fish spawning?”.

Recommended convenors: William T. Peterson (U.S.A.) and Yoshiro Watanabe (Japan).

Should this workshop be accepted, convenors will explore the possibility of publishing the results in the *Journal of Oceanography*.

Travel support is requested for two invited speakers.

