

EXECUTIVE SUMMARY

This volume summarizes the results of the activities in 2000 by the four Task Teams of the PICES-GLOBEC Climate Change and Carrying Capacity Program. The activities reported here include the BASS, MODEL, MONITOR and REX Workshops at the PICES Ninth Annual Meeting in Hakodate, Japan (October 2000), and the joint BASS/MODEL Workshop in Honolulu, U.S.A. (March 2001).

The BASS Workshop on “The development of a conceptual model of the Subarctic Pacific basin ecosystems” discussed the possibility of applying ECOPATH/ECOSIM to the modeling of subarctic gyre ecosystems, based on presentations, the extended abstracts of which appear in the report. The workshop participants recognized that the Program has now entered its synthesis phase and the role of modeling has become more important. They have recommended convening a joint BASS/MODEL Workshop to examine the feasibility of using ECOPATH/ECOSIM as a tool to model higher trophic level components of the subarctic gyre ecosystems. This joint workshop on “Higher trophic level modeling” was held March 2001, in Honolulu. The initial eastern- and western- subarctic gyre ecosystem models were reviewed and existing data used for each model were noted. The workshop found considerable room for improving the estimates that can be accomplished by improvement of input data quality.

The MODEL Workshop on “Strategies for coupling higher and lower trophic level marine ecosystem models” discussed the strategic considerations necessary in coupling higher and lower trophic level marine ecosystem models and the extension and improvement of the prototype lower trophic level PICES NEMURO Model. The workshop reported these strategies in the form of workshop recommendations, which can be re-organized and re-stated in the future workplan of the CCCC Program for integration. The workshop report also contains abstracts, extended abstracts, and fully prepared reports presented at the workshop.

The MONITOR Workshop on “Progress in monitoring the North Pacific” reviewed ongoing and/or planned monitoring programs in North Pacific and made a number of pertinent recommendations. The summary of the workshop is followed by extended abstracts of papers given at the meeting.

The REX Workshop on “Trends in herring populations and trophodynamics” summarized generalizations, observations and hypotheses on herring populations and identified the need to add F (fish) into the current crop of NPZ (Nutrients - Phytoplankton - Zooplankton) models that are now available.

The four Task Teams are coordinating their activities in order to reach their goal, namely to answer the scientific questions addressed to the Program and to develop the ecosystem-monitoring program as an output of the Program. The final recommendations from each of these Task Teams can be found in the PICES Annual Report 2000.

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