

INTRODUCTION AND OVERVIEW OF WORKSHOP OBJECTIVES

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The Census of Marine Life (CoML) is an ambitious program that seeks to answer the question of what did live, what does live, and what will live in the oceans. Although broad in overall scope, the program is moving forward through a series of focused pilot projects and international activities. Also, as one approach, CoML is forming partnerships with and supporting other organizations with compatible interests, and which can contribute to the goals. To this end, the Alfred P. Sloan Foundation, through the CoML, is co-sponsoring this workshop on the North Pacific.

The CoML goal coincides with the efforts of the North Pacific Marine Science Organization (PICES), which seeks to understand and predict changes in marine ecosystems of the North Pacific induced both by changes in environment and by human activities. PICES has developed, as its major research effort, a program called "Climate Change and Carrying Capacity". This fits well into the CoML framework, and the two organizations have much to gain from interaction.

The main focus of this workshop is to review the goals and strategies for observing North Pacific marine ecosystems and their biodiversity, and to improve our ability to predict ecosystem changes. This will be accomplished by: (i) defining existing observation and prediction system (regional and basin-scales); (ii) identifying needed improvements to the existing system for increasing our understanding of biodiversity and climate-linked changes in biodiversity; and (iii) nominating existing time-series and predictions for inclusion into a PICES Ecosystem Status Report.

Time-series are especially important for evaluating climate change impacts, and drawing conclusions on effects on biodiversity. At this workshop, the participants will examine the available information for the North Pacific Ocean with a strong

emphasis on time-series of data. Prepared during the workshop will be the compilation of existing time-series on: physical and chemical oceanography and climate; phytoplankton, zooplankton, and micronekton; fish and crustaceans; and marine mammals and birds from the eastern, western, and open North Pacific. Information will be contributed on the state of knowledge and the major information gaps will be identified. Although the primary emphasis of the workshop will be on the time-series information, candidate predictive models (from purely physical to coupled biophysical models) that could be used to forecast future climate changes and their effects on biota, will also be identified.

Integrating national monitoring efforts for assessing the present state of North Pacific ecosystems has long been a focus of PICES. PICES is proposing the creation of a periodic North Pacific-wide status report, and the output of this workshop will be a critical stepping-stone in determining the feasibility and needs for such a report, as well as identifying the approach.

The workshop structure will be a combination of plenary and breakout sessions. The first plenary session will focus on the goals and objectives of the three main workshop sponsors: Census of Marine Life, International Pacific Research Center and PICES, along with an overview of the objectives of programs, which are closely related to those of this workshop. Breakout sessions will place participants into broad disciplinary groups, to review the available time-series and predictive models, and to suggest improvements in terms of sampling and modeling strategy, and the addition of new time-series observations that are not yet part of the monitoring system. The final session will consist of reports from the breakout session leaders and plenary discussion of workshop recommendations.