REPORT OF ADVISORY PANEL ON MICRONEKTON SAMPLING INTER-CALIBRATION EXPERIMENT

The Advisory Panel on *Micronekton sampling inter-calibration experiment* (MIE-AP) has been focusing on fieldwork and did not convene meetings or workshops in 2005.

Membership changes

Since PICES XIII, several changes in membership have occurred to the Advisory Panel. New members include Drs. Alexei Baitalyuk and Oleg Ivanov of the Pacific Fisheries Research Center (TINRO-Center) representing Russia, and Dr. Orio Yamamura of the Hokkaido National Fisheries Research Institute representing Japan. Dr. Yamamura has also been appointed to co-chair MIE-AP replacing Dr. Michael Seki, who stepped down as Co-Chairman but remains as a member of the Panel.

Inter-sessional report, March 2005

Dr. Michael Seki summarized the activities and plans of MIE-AP in March 2005, prior to the inter-sessional Science Board/Governing Council meeting After the successful completion of the initial MIE-1 in Hawaiian waters just prior to PICES XIII, the Panel began plans to conduct the experiment (MIE-2) in waters of the Bering Sea (possibly in conjunction with a BASIS cruise), Gulf of Alaska, or the temperate waters of the western Pacific. A second attempt to obtain funding from the North Pacific Research Board through the 2004-05 request for proposals was not successful. Nevertheless, Dr. Yamamura offered two cruises in 2005 (July 5-11 and September 27-October 3) aboard the Hokkaido University research ship, *Hokko Maru*, to conduct MIE-2 in waters of the western Pacific off Kushiro, Japan. The R/V *Hokko Maru* is a state-of-the art 200' stern trawler (905t) equipped with a MOCNESS-10 (enabling discrete depth sampling) and capabilities to deploy other mid-water sampling gear including stern trawls equipped with a MULTI-SAMPLER (an opening-closing multiple codend system). Transit time to sampling sites would be minimal at just 30 minutes after departure from Kushiro. At that time (March 2005), no firm decisions have been made with regard to proceeding with MIE-2. As for MIE-1, processing of samples collected on the cruise continues.

Status Report at PICES XIV

Drs. Evgeny Pakhomov and Orio Yamamura (MIE-AP Co-Chairmen) provided an update of activities and plans for the period from the inter-sessional report until PICES XIV.

MIE-1 cruise

In 2005, samples collected during the MIE-1 cruise in Hawaiian waters have been transported to the University of British Columbia, where detailed analysis of the sample size-structure has been carried out. Presently, the catch size-structure analysis is in its final stage, and Dr. Pakhomov is going to present the findings at the BIO Committee meeting in Vladivostok.

MIE-2 cruise

Just prior to PICES XIV, the second MIE cruise (MIE-2) took place. The cruise, provisionally scheduled for September 27 to October 3, on board R/V *Hokko Maru* was extended by 2 days and was conducted between September 25 and October 3, 2005. Dr. Yamamura served as the Chief Scientist. The cruise started and ended at Kushiro. The experiment was conducted in the Doto area where the cold Oyashio current prevails. This area represents a relatively simple and stable species composition of micronekton, which makes it fairly easy to compare sampling efficiency of different gears. Since the areas where nets have to be deployed are just 1-2 h

sail from the port of Kushiro, it was possible to split the cruise into two legs to accommodate those who can participate in either the first or second half of the cruise only.

The nets deployed in the experiment include MOCNESS-10, 10 ft IKMT, HUFT (Hokkaido University Frame Trawl), MOHT, and mid-water otter trawling net with a mouth opening of ca. 30 × 30 m and opening/closing multiple codends. The RV *Hokko Maru* is equipped with a Simrad EK-60 echosounder that can monitor and record backscattering from micronekton.

MIE-3 cruise

Plans for the 2006 (MIE-3) cruise in the Bering Sea are proposed to coincide with the 2006 NPAFC BASIS program activities in this area. A formal letter has been sent to NPAFC representatives to determine if there is any interest in doing a joint cruise to the Bering Sea in 2006 using one of the BASIS project vessels. The initial response is promising. Dr. Richard Brodeur is planning to meet with NPAFC representatives at the joint NPAFC/PICES Symposium in November 2005 to discuss the MIE-3 cruise proposal. Attempts will be made to obtain financial support for MIE-3 from the North Pacific Research Board during 2006. So far, no financial support has been obtained for these experiments.

MIE Workshop and Topic Session at PICES XV

As the dates of the MIE-2 cruise overlap, in part, with PICES XIV, there will be no MIE workshop and business meeting this year. At the next PICES Annual Meeting in Yokohama, MIE-AP would like to convene a 1-day BIO Workshop on "*Synthesis of MIE-AP sampling inter-calibration experiments*" (*MIE-AP Endnote 1*) and a 1-day BIO Topic Session on "*Micronekton biology: Advances in epi- and meso-pelagic ecosystem research*" (*MIE-AP Endnote 2*).

MIE-AP Endnote 1

Proposal for a 1-day BIO (MIE-AP) Workshop at PICES XV on
"Synthesis of MIE-AP sampling inter-calibration experiments"

The Advisory Panel on *Micronekton sampling inter-calibration experiment* (MIE-AP) was established to evaluate efficiency of a variety of sampling gears and procedures employed by different investigators to sample micronekton in the North Pacific and other parts of the world ocean. Two MIE-AP gear inter-calibration experiments were conducted in 2004 (MIE-1 cruise on board of R/V *Oscar Elton Sette*, in Hawaiian waters) and in 2005 (MIE-2 on board of R/V *Hokko Maru*, in the Oyashio region). The proposed workshop will review and synthesize findings from these two successful sampling experiments.

Recommended convenors: Evgeny Pakhomov (Canada) and Orio Yamamura (Japan).

MIE-AP Endnote 2

Proposal for a 1-day BIO (MIE-AP) Topic Session at PICES XV on
"Micronekton biology: Advances in epi- and meso-pelagic ecosystem research"

Micronekton is an important component of epi- and meso-pelagic ecosystems linking mesozooplankton and higher trophic levels. Due to their intermediacy and mobility, quantitative sampling of micronekton has long been regarded as virtually impossible. Recent advances in acoustic devices and efforts in standardizing sampling gear have made the sampling of micronekton more precise. In the PICES area, various ongoing projects such as BASIS (NPAFC), US-GLOBEC and DEEP (Japan FRA) are studying micronekton. The session will synthesize new knowledge on micronekton biology including distribution, life history and

vertical migrations, relationships with commercial species and its functional role in the North Pacific boundary current and open ocean ecosystems. Presentations on quantitative sampling are also welcome.

Recommended convenors: Evgeny Pakhomov (Canada) and Orio Yamamura (Japan).