

## Two major prizes awarded to PICES/NEMURO family of ecosystem modelers

by Shin-ichi Ito

Two major awards were presented this year to two members of the PICES community. Professor Michio J. Kishi of Hokkaido University received this year's JOS Prize, the Prize of the Oceanographic Society of Japan (JOS), for his contributions to marine ecosystem modeling, education and outreach activities, and for his work on the NEMURO (North Pacific Ecosystem Model for Understanding Regional Oceanography) and NEMURO.FISH (NEMURO For Including Saury and Herring) models. This award is the Society's highest prize in oceanography in Japan, and only one award is given annually to a scientist who has made outstanding contributions to the progress of oceanography. The first winner of the JOS Prize was Dr. Michitaka Uda, the principal founder and the first president of the Japanese Society of Fisheries Oceanography.

Professor Kishi's modeling work has contributed significantly to the efforts of PICES, and much of his recent scientific research was done in collaboration with members of PICES' CCCC MODEL Task Team. He is a member and former Chairman of this Task Team, and now serves as the Co-Chairman of the CCCC (Climate Change and Carrying Capacity) Program. The MODEL Task Team and PICES are both pleased to be acknowledged in this honor.

The Prize presentation ceremony took place on March 25, 2007, during the spring meeting of JOS in Tokyo. Dr. Satoru Taguchi, Chairman of the JOS Award Committee, conducted the ceremony. Dr. Taguchi announced that Dr. Michio J. Kishi was the recipient of the 2007 JOS Prize, and read the following JOS Award Committee citation:

*“Dr. Michio J. Kishi has been one of the leaders in the modeling of marine ecosystems and has had a great influence on a world-wide research trend. His early success was in the reproduction, for the first time, of the chlorophyll distribution in Mikawa Bay, using carefully selected parameters to run a physical–biological coupled model. At that time ecosystem modeling was still at the earliest stage, and his success in ecosystem simulations with a state-of-the-art model greatly encouraged domestic and foreign researchers. His posture in evaluating model uncertainties with careful parameter sensitivity analysis is the exemplary style of younger generation of ecosystem modelers. Dr. Kishi extended his modeling skills to offshore ecosystems and showed the importance of the upwelling caused by the interaction of mesoscale eddies. He also became absorbed with the issue of plankton species composition on material recycling or ecosystem structure. As a member of PICES' MODEL Task Team,*

*Dr. Kishi played a central role in developing the ecosystem model NEMURO, which is composed of several functioning planktonic species. NEMURO is now widely distributed in the world, and a lot of scientific contributions based on NEMURO are expected in the future not only domestically but also from abroad. Besides these modeling activities, he has also been engaged in the education of young scientists and outreach to promote oceanography to the public. These past and ongoing contributions make him a deserving candidate for the JOS Prize.”*



Professor Michio Kishi gives remarks at the JOS Prize presentation ceremony (March 25, 2007). Photo courtesy of JOS.



Professor Kishi presents a special issue of *Ecological Modelling* dedicated to the NEMURO and NEMURO.FISH model to the mayor of Nemuro-city.

Last year, Professor Kishi was also awarded the Uda Prize from the Japanese Society of Fisheries Oceanography. He is the first scientist to have been awarded both prizes.

The Uda Prize, established in 1995 by the Japanese Society of Fisheries Oceanography (JSFO), in honor of Dr. Michitaka Uda, a pioneer of fisheries oceanography in Japan, is given annually to an individual who has made significant scientific contributions to fisheries oceanography. Many scientists who have been active in PICES are among the winners of this prize (see *PICES Press*, Vol. 14(2) for a list of previous Uda Prize recipients).

The 2006 Uda Prize was awarded to Dr. Yoshioki Oozeki of the Fisheries Research Agency in recognition of his research on early life stages of small pelagic fishes and for his contribution that led to the parameterization of a Pacific saury version of NEMURO.FISH. The Prize presentation ceremony took place on March 26, 2007, in Tokyo, during the spring symposium of JSFO. Dr. Yoshiro Watanabe, President of JSFO, and Dr. Yoh Yamashita, Chairman of the JSFO Award Committee, conducted the ceremony. Dr. Yamashita announced that Dr. Yoshioki Oozeki was the recipient of the 2006 Uda Prize, and read the following JSFO Award Committee citation:

*“Dr. Yoshioki Oozeki was responsible for introducing an experimental method to the early stage ecological study of fish at a time when field research was dominant in Japan. Dr. Oozeki is credited for leading achievements on larval growth and survival of pelagic fish. In the field, he established a method of quantitative collection of a target species (e.g., MOHT net). Dr. Oozeki estimated various biological parameters of pelagic fish larvae and juveniles, and that research has greatly contributed to the elucidation of pelagic fish responses to climate change through the application of NEMURO.FISH. Moreover, his interests have extended to various fields, including the establishment of the Japan Fisheries Oceanography Database and the realization of marine high-speed internet communication using satellite communication technology, among other endeavors. Dr. Oozeki has taken a leading role in fisheries oceanography in Japan. Besides these research activities, he has also been engaged in the administration of JSFO activities as the Chairman of the Business Committee and the Chief Editor of Suisan Kaiyo Kenkyu. These past and ongoing contributions make him a deserving candidate for the Uda Prize.”*

PICES extends sincere congratulations to both these top scientists.

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The participants discussed the development of an invasive species database similar to DAISIE or the Pacific Coast Estuarine Information System to collate information on alien invasive species (AIS) from PICES member countries. The database would be similar to the U.S. NISBASE (Non-indigenous Species Database) and would contribute to the development of a global invasive species network. Database formats will be developed and tested on bivalve molluscs and reviewed at PICES XVI.

The group also discussed the importance of ballast water and biofouling as potential vectors for the introduction of invasive species. WGBOSV has nearly completed their ballast water sampling guidelines, and these will be distributed. The group proposed the presentation of member country reviews of ballast water issues and

discussion of critical issues related to ballast water for a joint ICES/PICES meeting during PICES XVI. Several other topics included hull fouling and its role in introducing new species, identifying what is being done to prevent hull fouling, examining the ornamental fish trade as a potential source of introductions, and documenting the socio-economic impacts of non-indigenous species.

The final item of discussion was the role of ICES and PICES in advancing Early Detection and Rapid Response (EDRR) by governments, agencies and organizations to implement eradication or control measures for AIS. The group suggested documenting impacts, costs, successes and failures from world-wide examples, with the intent of providing evidence that success is possible, and examining the roles of governments and citizens in EDRR.



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