

PREFACE

The Second PICES Workshop on the Okhotsk Sea and Adjacent Areas was held in Nemuro, Japan, November 9-12, 1998. The workshop was coordinated by the Physical Oceanography and Climate Committee (POC) of PICES, and co-convened by Drs. Yutaka Nagata, Vyacheslav B. Lobanov and Lynne D. Talley (absent at the meeting). POC recognized the importance of the Okhotsk Sea, where sea ice is formed at the lowest latitudes in the world, and also as the formation area of North Pacific Intermediate Water (NPIW). POC previously formed PICES Working Group 1 on the Okhotsk Sea, and published a review volume "The Okhotsk Sea and Oyashio Region" in 1995 (*PICES Scientific Report No. 2*). Following this, PICES held the first Workshop on the Okhotsk Sea and Adjacent Areas in Vladivostok, Russia, in June 1995, the proceedings of which were published as *PICES Scientific Report No. 6* in 1996. In addition, POC published the "Multilingual Nomenclature of Place and Oceanographic Names in the Region of the Okhotsk Sea" as *PICES Scientific Report No. 8* in 1998. There has been a great deal of recent research activities in the Okhotsk Sea and adjacent areas, and many new findings and new knowledge have been generated since the first workshop in Vladivostok. The purpose of this Second Workshop is to exchange new findings and recent research results, and to review on-going and in-planning international and domestic projects in order to improve cooperative research.

The workshop was opened by the Mayor of Nemuro City, Mr. Hiroshi Fujiwara, and Dr. Vyacheslav B. Lobanov explained the aims and the expected products of the workshop. The workshop discussion focussed mainly on physical oceanography, and talks covered a wide range of research: sea-ice characteristics and its movements; the relation between ice-cover and atmospheric conditions; sea-ice and dense water (NPIW) formation; ventilation and modification of water masses; tides and their effects on water mixing and on water exchanges through straits; meso-scale eddies, yearly to decadal temporal variations, oceanographic databases and atlases; and the relation of the oceanic state to spawning grounds and to the nutrient and chlorophyll-*a* distributions. Relations of these to local environments such as the northern Okhotsk Sea Shelf, on the Sakhalin and west Kamchatka shelves, in the Kuril Islands region, and in the Soya (La Perouse) Strait and northern coast of Hokkaido, were discussed. There were 42 participants and 38 presentations including 10 posters (22 papers and 10 posters by Russian scientists, 15 papers by Japanese scientists, and 1 paper by a US scientist).

Most of the on-going and in-planning international programs were discussed: such as the Soya/La Perouse program conducted by Sakhalin Research Institute of Fisheries and Oceanography (SakhNIRO) and the Hokkaido Central Fisheries Experimental Station, the Joint Japanese-Russian-US Study of the Sea of Okhotsk, and the joint studies between Pacific Research Institute of Fisheries and Oceanography (TINRO) and the Hokkaido National Fisheries Research Institute. Several research activities in Japan and Russia, for example, the Japanese Hydrographic Department, the Hokkaido University group, the Pacific Oceanological Institute (POI), TINRO, the Far Eastern Regional Hydrometeorological Research Institute (FERHRI), were also introduced. Additional information was presented on the future activities relating to these projects during the plenary session by participating institutes and scientists. The participants of the workshop appreciated these efforts, and were impressed by the recent progress of the many Okhotsk Sea studies. However, there are still many problems to be solved, and many logistic and other kinds of difficulties in expanding our research activities and in organizing further international cooperative studies on the Okhotsk Sea area.

The workshop recommends that PICES endorse and support the international cooperative projects mentioned above and that are to be developed in the near future. The activities should be extended not

only to the Okhotsk Sea, but also to the Kuril Islands region and the Western Subarctic Gyre. PICES member countries bordering the Okhotsk Sea should facilitate access to investigators to cooperate on scientific research in the region. The workshop participants greatly appreciate the publication of the proceedings of this workshop in the PICES Scientific Report Series, and agreed that Drs. Vyacheslav B. Lobanov, Stephen C. Riser and Yutaka Nagata will serve as co-editors of the publication. The workshop also recommends that POC/PICES continue to overview and support the Okhotsk Sea research activities, and consider holding another workshop in the near future, if warranted. Although the subjects of workshop talks were focussed on physical oceanography, many of the projects introduced are carried out in cooperation with other disciplines. The workshop recommends that the PICES Implementation Panel on Climate Change and Carrying Capacity takes the initiative to organize a GLOBEC-like study for the Okhotsk Sea area.

The workshop was closed following farewell addresses by the Vice-Chairman of the Nemuro Workshop Supporting Committee, Mr. Nobuyuki Fukui (Chairman of the Nemuro Junior Chamber) and the former PICES Science Board Chairman, Dr. Makoto Kashiwai. As mentioned by the PICES Executive Secretary, Dr. W. Doug McKone, at the Welcome Reception held by Nemuro City on the evening of November 10, this workshop is already the fifth PICES meeting in Nemuro. All of the participants thanked the people of Nemuro for the support and hard work in providing facilities for PICES meetings, and expressed their thanks for the financial support given by Nemuro City, Hokkaido University and other institutions. Without this support the outcome of the workshop would be substantially limited.

The proceedings of the Second PICES Workshop on the Okhotsk Sea and Adjacent Areas are published according to a POC/Science Board recommendation at the Seventh Annual Meeting in Fairbanks, Alaska. I would like to thank the PICES Secretariat for its support in various phases of editing.

Yutaka Nagata