

The Fourth PICES Workshop on Okhotsk Sea and Adjacent Areas

Tokyo University of Agriculture, Abashiri, Hokkaido, Japan

27-29 August, 2008

Scientific Program (under revision by WS SSC)

The Workshop Sessions will be composed Topics including but not restricted to followings;

Session 1: Basin Oceanography and Climate of the Sea of Okhotsk;

1. Atmospheric Forcing (trends of pressure centers movement, evidences from ice/sediment core studies)
2. Hydrology & Hydrochemistry (dicho-thermal layer, ventilation, seasonal change of sea level, impact to/from the adjacent waters, standard monitor lines, Oxygen)
3. Circulation & Water Exchange with adjacent areas (basin circulation, transport through straits, impact to/from adjacent waters, drift buoys, current measurements, modeling);
4. Ice Processes (including inter-annual winter ice cover dynamics);
5. Fresh and brackish water contribution to the Sea of Okhotsk Water (Amur River run-off, rivers, lagoons, precipitation, evaporation, ice melting);

Session 2: Low-Trophic Response to the Variability of the Sea of Okhotsk Climate

1. Phytoplankton Studies (remote sensing, field sampling, life-cycle and ecology);
2. Zooplankton Dynamics
3. Benthos Spatial Diversity
4. Harmful Micro-Algae Blooms Events
5. NEMURO as a tool for modeling lower-trophic level of the Sea of Okhotsk ecosystem

Session 3: Responses of Nekton, Macro-benthos, Mammals, Seabirds to the Sea of Okhotsk Climate Variability;

1. Seasonal change of environmental conditions and life cycle of Resident species and Migrant species;
2. Genetic diversity of major commercial species and oceanographic/geographic settings;
3. Feeding windows for highly migratory species and seasonal cycle of oceanographic/climatic conditions of the Sea of Okhotsk;
4. Role of meso-pelagic populations in the ecosystem of the Sea of Okhotsk; NEMURO.FISH as a tool for modeling higher trophic level of the Sea of Okhotsk ecosystem;

Session 4: Impacts of Anthropogenic Challenges by Oil/Gas Industries, Fisheries and Other Human Activities to the Sea of Okhotsk Ecosystem and Impacts of Violent Climate Disasters to Human Activities

1. Anticipated impacts by development of Oil/Gas industries and modulation by climate changes (oil spills, bilge water);
2. Current impacts of fisheries exploitation to the Sea of Okhotsk ecosystem and development/maintenance of sustainable fisheries;
3. Human impacts through Amur River water from drainage area; Historical and anticipated impacts of violent climate disasters around the Sea of Okhotsk associated with climate changes;
4. Development of resilience in human marine uses against impacts from climate disasters;

Session 5: Potential Use of and Evidences by New Technology, Methods and Tools for Sea of Okhotsk Research in FUTURE

1. Methods for monitoring, especially through winter ;
2. Stable isotope analyses of sea water and biological samples;
3. Bio-diversity study by DNA analyses;
4. State of art in development of remote sensing technology;
5. Tools and methods for biological process studies;