



PICES Contracting Parties:
Canada, People's Republic of China
Japan, Republic of Korea, Russian
Federation, United States of America



PICES Capacity Building

Hal Batchelder (PICES; hbatch@pices.int)

PICES Capacity Building

In 2003 PICES convened a study group on Capacity Building, with a goal of promoting and coordinating marine scientific research. Capacity building is a process intended to make it possible for all PICES member countries, their scientists and institutions to participate and fully benefit from the cooperative programs developed by PICES. The center of capacity building is education and training, for example in data management, modeling, and environmental monitoring. The scientific activities of PICES, including its scientific sessions and the work of its scientific committees and other subsidiary bodies, are important contributions to capacity building.

PICES focuses on the development of young scientists, helping to increase their exposure to the exchange of scientific information at international scientific meetings and involving them in other activities of the organization. Training and education, sharing of methods, information and data, and enhanced participation in PICES expert group activities are objectives of capacity building.

PICES with the assistance of national member hosts sponsor Summer Schools, with ICES we cosponsor Early Career Scientist Conferences (3 so far) at five year intervals, and the Secretariat provides one intern per year the experience of working in an international intergovernmental organization at PICES. PICES has provided ad-hoc training and education upon request to member nations during the annual PICES meetings. In addition to PICES led capacity enhancement, we contribute funds to other organizations that also do capacity building, such as IMBER, SOLAS and SCOR, and support PICES early career scientists to attend those opportunities.

Summer Schools

Including one to occur in July 2018 in Victoria, there have been six PICES Summer Schools on a diversity of subjects ranging from ocean and ecosystem modeling, satellite approaches, and ocean observing systems.



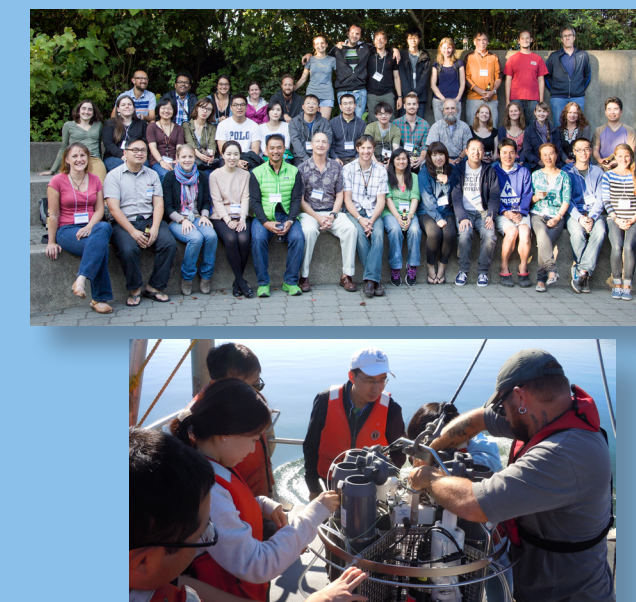
SS-1: 2006, Aug 23-25, Busan, Korea
1st PICES/CREANS Summer School
Ocean circulation and ecosystem modeling
[37 students and ECS]



SS-2: 2008, Aug 23-26, Hakodate, Japan
2nd PICES Summer School
Biomass-based management
[50 students and ECS]



SS-3: 2009, Aug 25-28, Seoul, Korea
3rd PICES Summer School
Satellite oceanography for the earth environment
[35 students and ECS]



SS-4: 2013, Aug 19-23, Newport, USA
4th PICES Summer School
Ocean observing systems and ecosystem monitoring
[33 ECS]



SS-5: 2014, Aug 26-29, Gangneung, Korea
5th PICES Summer School
End-to-end models for marine resources
management and research [~28 ECS]



SS-6: 2018, July 9-13, Victoria, Canada
6th PICES Summer School
Coastal Ocean Observatory Science [~30 ECS]

Early Career Scientists

PICES and ICES (International Council for the Exploration of the Sea) have partnered to cosponsor three P/ICES Early Career Scientist Conferences. The first titled "New Frontiers in Marine Science" was held in Baltimore, Maryland, USA in June 2007 and included 98 ECS from 20 nations. The second titled "Oceans of Change" was held in La Palma, Majorca, Spain in April 2012 and gathered 130 early career scientists. The most recent titled "Climate, Oceans and Society: Challenges and Opportunities" was held in Busan, Korea in June 2017 and attracted 102 students from 30 countries. Each ECS was 4 days in duration, and included both science and social activities, including a conference banquet.



ECS-1-2007-Baltimore



ECS-2-2012-Majorca



ECS-3-2017-Busan

MarWeb Project: Marine Ecosystem Health and Human Well-Being

Progress is being made internationally on an ecosystem approach to the management of marine systems, in particular as applied to ecosystem-based fisheries management. Recent initiatives have expanded the concept of ecosystem approaches to include people in what have been called coupled marine social-ecological systems. The concept of human well-being within marine social-ecological systems has become recognized as an important step forward. Well-being shifts the perspective from objective measures of sustainable livelihoods (comprised of the physical, social, human, natural, and financial resources available to a community or country) to include the subjective and relational well-being of individuals and communities. Under this social-ecological systems approach, therefore, people are indispensable parts of the system. The Japanese concept of Sato-umi represents one version of this humans-in-nature approach, in which a healthy ecosystem is seen to nourish human well-being, but human activities are seen as necessary for sustaining ecosystem health. Considering that global changes are affecting both climate and human social and economic conditions, the key questions of the project were: (a) how do marine ecosystems support human well-being? and (b) how do human communities support sustainable and productive marine ecosystems? Two major efforts were undertaken: (1) moving towards more sustainable shrimp and tilapia aquaculture in Karawang, Indonesia, and (2) conducting a community needs assessment for coastal Guatemala that balances ocean and human health.



Guatemala Project - Photos, top, left to right:
Fishermen of Monterrico; Children of Monterrico;
Local children of Las Lisas selling shell necklaces;
A child reading the booklet provided by PICES to
Las Lisas community members.

Background photo: Fishing with small nets in the estuary

Additional Education, Training and Outreach



Seafood safety training was provided to the Philippines (2009), Guatemala (2010), and Indonesia (2012) through a "learning by participation" approach.



2005-2013--WG-21 on Non-indigenous Aquatic Species with financial support from PICES and the Japanese Ministry of Agriculture, Forestry and Fisheries conducted training courses on the identification and survey of non-indigenous species (NIS) as part of a project entitled "Development of prevention systems for harmful organisms' expansion in the Pacific Rim".

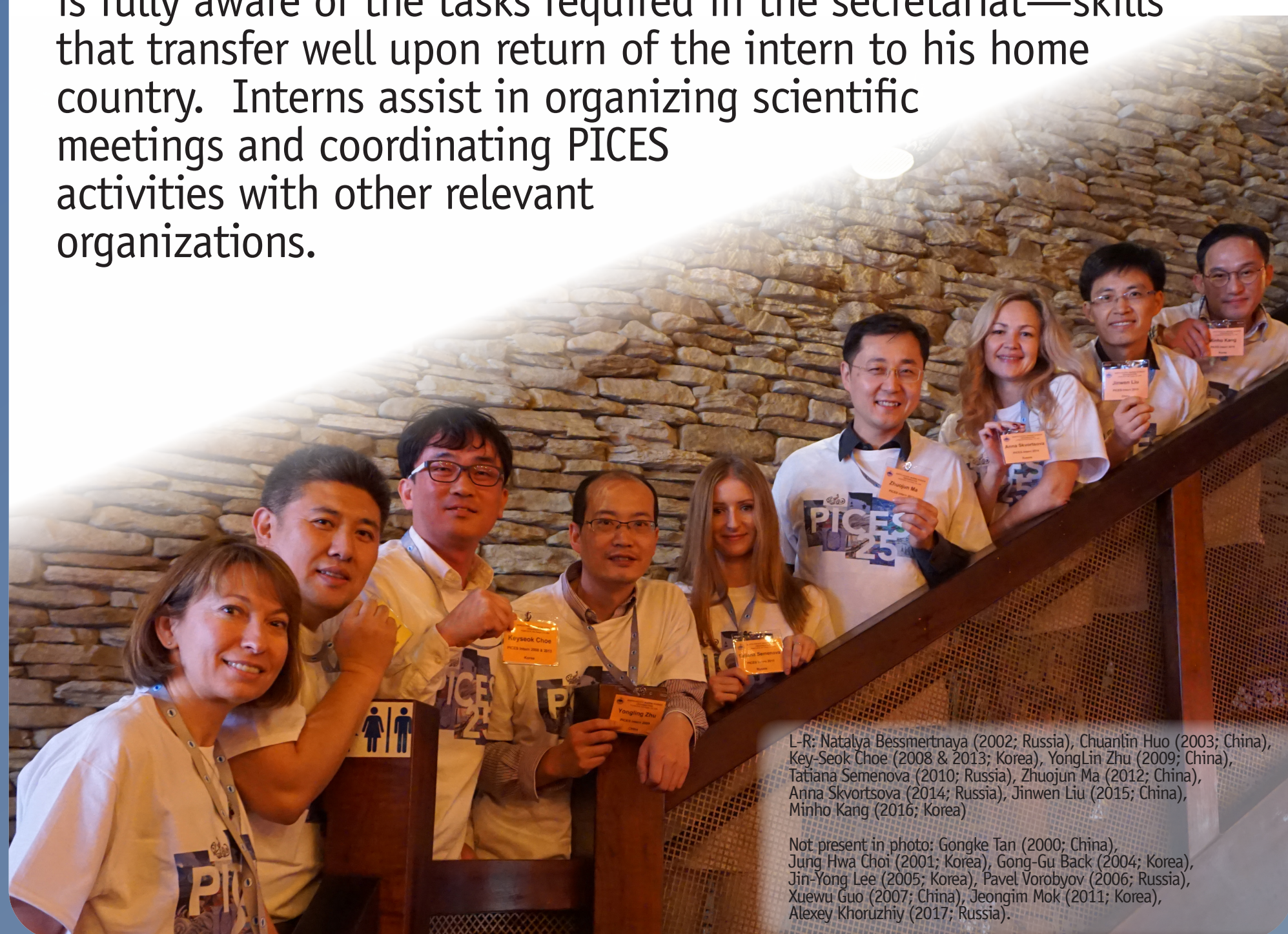
Three scientists, one from China and two from other PICES countries, accompanied by an English-Chinese translator/interpreter visited three schools in Qingdao, while the PICES meeting was being held. Overall, the visits of PICES scientists to the schools in China were extremely positive from the standpoint of the schools, the kids, and the PICES scientists. School visits by PICES scientists may become a regular activity at future annual meetings if there is early expressed interest by the host country, and commitment by a local coordinator to identify the schools and facilitate the visits.



Drs. Emanuele Di Lorenzo and Keith Criddle, and Thomas Theriault with some of the students of the International Linguistics School in Vladivostok. ILS Director, Dr. Olga Shevchenko, is in front far right, and Ms. Ekaterina Kurilova (TINRO-Center, Khabarovsk Branch), assisting with PICES logistics, is to the left of Dr. Di Lorenzo. Photo credits: International Linguistics School.



The PICES Intern Program allows early career individuals from PICES member countries to gain experience in operations of intergovernmental scientific organizations and coordination of multidisciplinary international ecosystem research programs by working in the PICES Secretariat for periods of up to one year. PICES benefits from the interns participation through the presence of an additional professional in the secretariat, and the home country benefits by having a professional who is fully aware of the tasks required in the secretariat—skills that transfer well upon return of the intern to his home country. Interns assist in organizing scientific meetings and coordinating PICES activities with other relevant organizations.



L-R: Natalya Besmertnyaya (2002; Russia), Chuanlin Hao (2003; China), Ray Seok Lee (2008 & 2013; Korea), Wang Lin Zhu (2009; China), Tatiana Semenov (2010; Russia), Zhaohui Ma (2012; China), Anna Savitskaya (2014; Russia), Jiwon Liu (2015; China), Minche Kang (2016; Korea)
Not present in photo: Gengjie Tan (2005; China), Jung Hwa Choi (2006; Korea), Gory-Gui Back (2006; Korea), Jun-Hyung Lee (2006; Korea), Pavel Vorobyev (2006; Russia), Xuewei Guo (2007; China), Jeongmin Mak (2011; Korea), Aleksey Khramov (2017; Russia)