

## REPORT OF WORKING GROUP 20 ON EVALUATIONS OF CLIMATE CHANGE PROJECTIONS

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The Working Group (WG 20) on *Evaluations of climate change projections* held its first meeting in the afternoon of October 14, 2006. The Co-Chairmen, Drs. Michael G. Foreman and Yasuhiro Yamanaka, called the meeting to order and welcomed the participants. The meeting was attended by 10 Working Group members and 28 observers representing all PICES member countries and several international organizations (WG 20 Endnote 1).

The meeting began with a brief presentation by Dr. Akihiko Yatsu, Co-Chairman of the CFAME Task Team, on the objectives and progress of that group. Dr. Foreman then led a discussion on how WG 20 might collaborate with CFAME in providing climate change scenario information that would be useful for the third component (*Scenarios*) of the CFAME workplan. Drs. Arthur Miller, Emanuele Di Lorenzo and Enrique Curchitser, all members of WG 20 who have already developed high-resolution models for the California Current system that have been, or are soon to be run with climate forcing, agreed to work with Dr. Vera Agostini of CFAME in providing physical information that would be useful for her ecosystem model of that region. Dr. Hiroyasu Hasumi agreed to work with Dr. Yamanaka in providing analogous data from his climate models in the Kuroshio/Oyashio region. Dr. Ig-Chan Pang volunteered to adapt his one-tenth of a degree circulation model for the Yellow and East China Seas so that it could accept boundary and atmospheric forcing from one, or an ensemble, of IPCC global climate model scenario runs. (In subsequent discussion with Dr. Foreman he also agreed to contact Dr. Jai-Ho Oh, another WG 20 member (not present), to see if it would be feasible to use high-resolution atmospheric forcing produced by Dr. Oh's models for some of these simulations.) In the absence of a high-resolution circulation model for the Sea of Okhotsk, it was decided that an

ensemble of climate model results could be provided to Dr. Victor Lapko for understanding possible changes to that ecosystem. It was not determined who would compute this ensemble, but Dr. Muyin Wang, on behalf of Dr. James E. Overland, proposed (see second paragraph below for more details) that calculations of this type be carried out for all sub-Arctic seas (including the Sea of Okhotsk) under the auspices of the GLOBEC regional program on Ecosystem Studies of Sub-Arctic Seas (ESSAS). So the ensemble might be computed in collaboration with that group.

It was also decided (subject to confirmation by CFAME and approval by Science Board) to convene a joint WG 20/CFAME workshop on "*Climate scenarios for ecosystem modeling*" at PICES XVI (CFAME Endnote 4). This was subsequently approved with Drs. Jacquelynne R. King and Michael G. Foreman to be the co-convenors. The suggested duration of the workshop is 1.5 days, with a format being 0.5 days with the groups separate, 0.5 days together and then 0.5 days apart again.

Dr. Kenneth Drinkwater (ESSAS SSC Co-Chairman) gave a presentation on the ESSAS goals and activities, with particular attention paid to a workshop they are organizing in June 2007, in Hakodate, Japan. Under Dr. Overland's leadership, this workshop is planning to initiate the evaluation of climate change projections for each of the ESSAS regions, and it was agreed to submit, through POC, a travel request for one WG 20 member to attend this meeting.

The issue of financial support for WG 20 members to carry out research relevant to the Terms of Reference was also briefly discussed. Dr. Foreman pointed out that although the North Pacific Research Board (NPRB) does have a request for proposals due December 1, 2006, these proposals must fall under the Board's

Science Plan. As that plan does not have provision for physical or climate modeling, it precludes NPRB as a potential funding source. The Bering Sea Integrated Ecosystem Research Program of NPRB is expected to release a request for proposals soon but it remains to be seen if WG 20 activities might be supported from that source. Though WG 20 is happy to provide letters of support and generally facilitate individual members in seeking out funding from their national sources, it does not appear that there are international vehicles to provide this support.

The issue of collaborations with international organizations/programs was briefly discussed. Dr. William R. Crawford, a Canadian member of the CLIVAR Pacific Panel, stated that

although this group seems primarily concerned with the tropical Pacific, it is indeed interested in the PICES region north of 30°N. It was suggested that an invitation should be extended to the CLIVAR Pacific Panel to attend the next WG 20 workshop.

The final item of discussion was a draft outline of the integrative science program, FUTURE, that PICES is hoping to initiate in the next couple of years. The latest version of the program outline was presented, and it was pointed out that the activities of WG 20 fit very well with the proposal. No specific suggestions for revisions were given but all were encouraged to attend either the POC meeting on October 18, or the Open Forum on October 19, where further discussions were planned.

## **WG 20 Endnote 1**

### **Participation list**

#### Members

Enrique Curchitser (U.S.A.)  
Emanuele Di Lorenzo (U.S.A.)  
Michael G. Foreman (Canada, Co-Chairman)  
Hiroyasu Hasumi (Japan)  
Arthur J. Miller (U.S.A.)  
Ig-Chan Pang (Korea)  
Elena Ustinova (Russia)  
Muyin Wang (U.S.A.)  
Yasuhiro Yamanaka (Japan, Co-Chairman)  
Sang-Wook Yeng (Korea)

#### Observers

Vera Agostini (U.S.A.)  
Kerim Y. Aydin (U.S.A.)  
Manuel Barange (GLOBEC, U.K.)  
Harold P. Batchelder (U.S.A.)  
Robin M. Brown (Canada)  
Rongshuo Cai (China)

Curtis Covey (U.S.A.)  
William R. Crawford (Canada)  
Kenneth Drinkwater (ESSAS, Norway)  
Lei Gao (China)  
Albert J. Hermann (U.S.A.)  
George L. Hunt (U.S.A.)  
Masao Ishii (Japan)  
Hee-Dong Jeong (Korea)  
Michi Kawamiya (Japan)  
Jacquelynne R. King (Canada)  
Dong-Young Lee (Korea)  
Dooji Li (China)  
Skip McKinnell (PICES)  
Phillip R. Mundy (U.S.A.)  
Keith Rodgers (U.S.A.)  
Ryan Rykaczewski (U.S.A.)  
Zhenya Song (China)  
Ping Wang (China)  
Francisco C. Werner (GLOBEC, U.S.A.)  
Ichiro Yasuda (Japan)  
Akihiko Yatsu (Japan)  
Yury I. Zuenko (Russia)