Workshops relevant to the BEST-BSIERP vertical modeling effort will be held at the GLOBEC (http://www.globec.org/) 3rd Open Science Meeting in Victoria, BC during 22-26 June 2009 and an ESSAS Annual Science Meeting in Seattle, WA during 15-19 June 2009.

GLOBEC Workshop 1. Modeling ecosystems and ocean processes: the GLOBEC perspective of the past, present and future)

Chairs: Enrique Curchitser (USA), Alejandro Gallego (UK), Michio Kishi (Japan), Emanuelle Di Lorenzo (USA)
format: Open and invited papers, discussion
Duration: 2 days (Monday 22 - Tuesday 23 June 2009)
Abstract: One of the salient features of GLOBEC research has been the use of dynamical, statistical and conceptual modeling techniques to investigate ecosystem processes and their link to ocean climate. A wide array of models have been developed and implemented, including coupled physical-biological models, community and individual based biological models and regional to basin-scale physical models.
The goal of this workshop is to describe and compare different modeling approaches and their success in elucidating physical/ biological dynamics. We invite papers that discuss past results from GLOBEC as well as future modeling directions. We also encourage papers that present modeling strategies to investigate climate change and resource management.
Outcome: Synthesis paper for the OSM special issue plus recommendations for future modeling activities.

GLOBEC Workshop 2. Comparison of processes and climate impacts in sub-Arctic and Antarctic marine ecosystems: observations and modeling approaches

Chairs: Eileen Hofmann (USA), George Hunt (USA), Bernard A. Megrey (USA), Eugene Murphy (UK), Sei-ichi Saitoh (Japan), Hyoung-Chul Shin (Korea)
Format: Open papers, discussion
Duration: 2 days (Monday 22 - Tuesday 23 June 2009)
Abstract: This two-day workshop will compare observations and modeling of processes and climate impacts in the maritime Antarctic with those in the sub-arctic seas. We seek presentations that will compare or facilitate comparisons of ecosystem processes from the impacts of climate through all trophic levels to fish, seabirds, marine mammals and fisheries. The focus will be on mechanisms and expected changes, with identification of non-linearities (thresholds) an important component. If contributions permit, it would be valuable to focus on a series of themes for both physics and biota, such as: climate effects on stratification/mixing/ frontal structures with implications for biota. Case studies involving various trophic levels could be presented as examples of effects of physical processes on both lower and higher trophic levels and the interactions among trophic levels. The workshop will provide an opportunity for the modeling communities in the Antarctic and the sub-arctic to compare approaches and progress toward functional end-to-end models of the effects of climate change on marine ecosystems and their ability to support upper trophic level organisms including sustainable fisheries. Uses of model

outputs to compare fundamental aspects of subarctic regions and the Southern Ocean or Antarctic systems are sought. The first level of comparisons will help establish practical marine ecosystem topologies useful to GLOBEC and future (IMBER?) studies. The workshop will explore the similarities and differences in ecosystem structure and function and what are the processes that lead to these differences. As well, comparisons between the impacts of physical forcing such as sea ice, winds, and advection will be investigated. The anticipated responses of each ecosystem to climate change and global warming will be compared.
Outcome: Paper synthesizing the results of the workshop for the OSM special issue plus a white paper or blueprint for moving forward end-to-end modelling comparisons.

ESSAS Workshop. Modeling ecosystem response to climate change

Contact: Bernard A. Megrey (USA)
Format: Open papers, discussion, closed working group
Duration: 1/2 day
Abstract: ESSAS Working Group 3 will hold a workshop which will compare end-to-end modeling efforts. Current plans include: (1) preparing a data inventory with which to compare Ecopath models between ESSAS ecosystems; (2) discussing an end-to-end modeling effort linking a ROMS-based model, NEMURO and an individual-based spatially-explicit (IBM) and multi-species fish model; and (3) tentatively, a Bering Sea (BEST-BSIERP) vertically-integrated model.