WP3 activities during October – December 2010

BNI – Thorsten, Maciej, Susa, Baerbel, et al.

- the Ecopath model calibration and validation is finished and we are working on the manuscript for Ecological Modelling

- working on methods how to link between the biogeochemical models and the Ecopath with Ecosim model. The link will be made through primary production from the biogeochemical models as a forcing factor for the food-web model besides salinity and temperature. The first tests with the Baltsem model results are promising

- Skype meeting with Jon where we decided to test the effect o acidification on macrozoobenthos and zooplankton groups in the food-web model. This will done by reading in other mortalities (caused by acidification) into the model and test the potential effects on the food-web

- The fish reconstruction work included in the Ecosupport project has been presented at the OCEAN-PAST meeting in Ireland. Based on finished food-web model, Margit work on sprat biomass hindcast and primary production (biomass of phytoplankton) reconstruction by biogeochemical models working on father improvement of reconstructed food-web.

DTU Aqua

Margit Eero (postdoc):

-analyses to extend the time-series of sprat dynamics, to be incorporated to Ecopath model.

For presentations, a talk in Oceans Past III Conference, Dublin, Nov. 2010 by

Tomczak M, T. Eero, M., MacKenzie, B. R., Niiranen, S., Blenckner, T.

Changes in the Central Baltic Sea Ecosystem During the 20th  Century. Preliminary results of a holistic reconstruction of the Baltic food web

Brian:

-discussion and preparation of revised data request tables for hindcast data in collaboration with wp participants

-continued development of approaches for ensemble-average analyses of hindcasts and forecasts of fish biomass

-statistical analyses of environmental effects on cod recruitment in past 30-40 years; development of new stock-recruitment-environmental model for application in forecasts

GU, Jon Havenhand:

- met with Alf Norkko to discuss access to benthic macrofauna data from Finnish institutes.  We have a meeting arranged for January to go through the issues more closely.  Alf obviously has strong thoughts about the usefulness of EwE models, and while he and I may not agree I think this interaction could be good.

- I have been investigating methods for applying CART models to environmental data in order to assess possible impacts of pH on species distributions.  For the reasons I outlined in Norrköping I think these models will have limited applicability in ocean acidification studies because these models are correlative and based on existing (or historical) environmental parameter values and species distributions.  The T° - ‰  combinations that will exist are currently present in environmental parameter space, however the T° - ‰ - pH combinations most probably are not.  Consequently any attempt to use these models will necessarily be extrapolatory, and this as you know involves many uncertainties.  Nonetheless, if the data are (relatively) easy to get hold of then I think it's worth doing, if only to make this point!

What I'm planning to do in the next two months is:

- visit Thorsten/Susa to get a better understanding of precisely what's required to parameterise their EwE models for future pH scenarios. I realise Thorsten thinks this might be hard, however I'm hoping (perhaps naively) that we'll be able to use knowledge of acidification impacts on different components of the model to modify some of the input parameters (easy) and perhaps even transfer coefficients (harder) to *begin* to understand the effects of pH.  I see this as a sensitivity analysis exercise rather than an estimation.

- meet Alf Norkko and get the relevant data so that I can begin to evaluate the utility of species distribution models for an acidifying Baltic.