STATUS REPORT ECOSUPPORT WP2 AS OF APRIL 1ST, 2009

Status directly relevant to WP 2 deliverables sorted by Task and deliverable:

Task 2.1: Model validation of biogeochemical processes

Unified high quality initial, forcing and validation data sets (6)

On the kick-off as strategy plan was agreed and the status is here given for each point on that list

1. *Start with available downscaled ERA40 atmospheric forcing from SMHI.*

Done. New atmospheric forcing has delivered to the relevant partners and the downscaling is documented in a report (Höglund, 2009)

2. *Use atmospheric nutrient loads from the present version of the ERGOM model.*

An excel file from IOW with integrated loads to the Baltic Sea has been delivered. No common forcing produced yet.

3. *Use nutrient loads from land (rivers, diffuse and point sources) from the present version of the ERGOM model.*

An excel file from IOW with integrated loads to the Baltic Sea has been delivered. No common forcing produced yet. BNI had some questions about the data files that, due to lack of time, are not yet resolved

4. *Compare the river runoff and nutrient loading in the models.*

SMHI have compared the integrated loads to RCO and ERGOM and sent around the information for discussions. No information from Baltsem delivered yet. There are differences between the trends of the loads that need to be discussed. No reflections received yet from other partners

5. *Compare the in and outflows of nutrients in the models at the boundary between Kattegat and Skagerrak.*

Not performed yet

6. *Compare initial conditions of models.*

IOW has delivered ERGOM initial conditions to SMHI and SMHI produced initial conditions by spin up, the latter will be integrated to BALTSEM boundaries and compared to BALTSEM initial conditions.
A check in the BED database indicate that from observations one can construct initial fields of phosphorus for oxygen conditions similar to 1960, but for ammonia and nitrate one have to make some educated assumptions. The ERGOM and RCO initial conditions will be compared to the data set. This will be done before summer.

7. *Validation data and methods. Suggested variables to validate are: Concentrations of S, T, O2, NH4, NO23 (=NO3+NO2), PO4, pools of DIN and DIP and cod reproduction volumes.*

No common data set for validation available yet. However, annual pools calculated with DAS are available at BNI, will be delivered to partners. Extraction of data for standard stations from BED will be done in May.

Model data sets (6)

ERGOM progress: Carbon model was adjusted to last version of the ERGOM model. First spin up runs with ERGOM+carbon model for the years 1995 – 2005. First comparison of modeled pCO2 with observation data from literature Simulations with RCA-ERA40 forcing started (ERGOM without carbon).

BALTSEM progress: Recalibration of mixing parameters after implementation of new meteorological forcing almost complete. A new version is used in ECOSUPPORT, therefore some recalibration of biogeochemical cycles will be performed during summer. As soon as this is done model data sets will be available. Incorporation of CO2 sub-model will be done as soon as possible, but might be delayed until autumn.

Detailed assessment of model skills (9)

Has not started.

Task 2.2- 2.4: Have not started yet

Interaction with other WPs

A first draft of common objectives has been made with WP3. More details and data for validation will be delivered later spring.

Discussions started with WP4 about boundary conditions for local models. RCO-SCOBI will provide boundary conditions for open sea for scenarios.

As responsible for WP2, BNI will follow up the coupling to WP4.