Status report of WP4

1)
- No much progress has been reported from the Vistula Lagoon. In the Gulf of Finland, preliminary tests with GETM and ERGOM have been conducted. This means that changes in the model selection have been made. The reason was that Hiromb model for the NE Baltic is not validated yet. Still we do not exclude Hiromb+Scobi completely because of ice is not implemented in GETM.
- Compilation report on plans and methodology from pilot areas has been delayed (the Gulf of Finland part is briefly described)
- Socio-economic task is progressing according to the plan. The first results will be reported by the end of the first year of the project
- **The question about what data (model output) and when is needed from the other WPs was sent out to the partners of WP4 who should perform case studies. No reply from the Vistula Lagoon and Polish waters so far. The Gulf of Finland is addressed in this report. The problem might be that delivery time from the other WPs is too late for WP4 to start their work.**

2) MSI has had contacts with Estonian partner in IBAM project. We have discussed what they can provide for us and how we can help them to achieve their project aims. They will provide us biochemical data for validation of the past situation. We took their suggestions into account when selecting 10-year time slice of the past. IBAM project is interested in having physical and chemical fields of some parameters from the Gulf of Finland model that can be related to biological parameters.

3) Meeting room is organized for Ecosupport at the BSSC.

Status about the Gulf of Finland case

Model description: biogeochemical model ERGOM coupled to 3D hydrodynamical model GETM will be applied to model the Gulf of Finland (GoF) with 0.5 nm horizontal grid-step.

GETM is fully baroclinic model with transport of active and passive tracers, calculation of density, internal pressure gradients and stratification, surface heat and momentum fluxes and high-order advection schemes (getm.eu). Biogeochemical model ERGOM (Neumann, 2000) linked to the GETM implements nine state variables and describes nitrogen cycle in the ecosystem.

Preliminary test runs with GETM coupled to biogeochemical model ERGOM have been conducted. More test runs will be performed in July.

In order to perform 10-year simulation (1997-2006) describing past situation in the Gulf of Finland output from the other WPs is needed.

Forcing data (WP2: T2.1, T2.2?):
1. Atmospheric forcing fields (wind, solar radiation, air temperature, precipitation, cloudiness).

2. River loads (including diffusive and point sources) and diatoms, flagellates, cyanobacteria, zooplankton, nutrients (ammonium, nitrate, phosphate), oxygen, detritus river loads.
3. Airborne nutrient loads
4. Initial temperature, salinity, diatoms, flagellates, cyanobacteria, zooplankton, nutrients (ammonium, nitrate, phosphate), oxygen, detritus fields
5. Lateral boundary conditions at the entrance to the Gulf of Finland: temperature, salinity, sea level, diatoms, flagellates, cyanobacteria, zooplankton, nutrients (ammonium, nitrate, phosphate), oxygen, detritus fields

In order to get the model results of past 10 years, the data should be available by 1 September 2009.
In addition local data on small rivers not included in the long-run BS models will be incorporated.

First slice: 1997-2006
Grid step and time interval of the all data as output from the other WPs?
Forcing data from T2.1 (delivery time 9 month) or T2.2 (delivery time 24 month)?

Status report by IOPAS as of 17th June 2009

Our plan is to complete:
a) the basic environmental data (bathymetry, temperature, salinity, light regime, sediments) for the Gdańsk Bay. Data are going to be provided as GIS maps (shapefiles, literature and archives survey)
b) basic data on pelagic and benthic biota occurrence, habitats and key species occurrence (literature and archives survey)
c) biological and socioeconomic valorization on biota and species (based on methodology published by Weslawski et al. 2009)
d) basic assumptions for the methodology of socio- cultural valorization
e) list functional and structural links between analysed factors and processes

most of the above shall be completed until the end of 2009.

output needed from other WPs – we need the list of environmental variables that will be used in the modeling. Variables in relation to expected climate change scenario (e.g. precipitation, ice cover, temperature etc…)

above is needed before the end of 2009