

The BAItic and North Sea marine environmental modelling Assessment Initiative (BANSAL)

Revised workplan year 2006

1 Objective

The main objective is: to develop an integrated model system to calculate the environmental status including source apportionment, transport, dispersion, transformation and removal in the coastal and open sea marine waters of nutrients inputs to the North and Baltic Sea.

This main goal is to be achieved through the following subgoals:

1. To integrate available marine observations of environmental and physical parameters together with ecological model simulations in an annual assessment of the North and Baltic Seas (Task I).
2. To establish a user group of national marine environmental policy makers in Nordic countries that can advise in the development of the project and in the definition of tasks and products; at the same time as project scientists will engage themselves as advisers as policy needs arise (Tasks II-III).

2 Background

BANSAL is a 3-year project (2005-2007). This is the workplan for year two. The workplan is based on the proposed 2006 workplan submitted June 2005. In the original workplan the total 2006 costs were estimated to the 570 kDKK. In the revised plan the activities are adjusted to meet the HLG support of 450 kDKK. In addition, a co-operation with another HLG project, EMAPS, is included in this revised plan.

3 Main tasks year 2

Task-I: Environmental status last year

The main task in BANSAL is to produce annual environmental status reports for the different waters. This assessment will be based on available data for biogeochemical effluents, an give estimates of e.g. transports (including nutrient transports), primary production numbers, oxygen depletion status etc., for the last year.

In the first year, all four partners were making one status report each. In year two, there will be two reports. One for the North Sea and one for the Baltic Sea. All partners will run their models, while two partners will be responsible for writing one report each based on inputs from the other partners. The form and content on the reports will be a joint responsibility to all partners.

Task-II: Ecological quality indicators

In recent years (especially within the OSPAR and HELCOM systems, and recently the Bergen Declaration from the 5th North Sea Conference 20-21 March, 2002) many efforts to define a selection of state variables which can be used as a representative description of the ecological status of the marine environment called Ecological Quality Indicators (EQI) have been made. Efforts will be made to define EQIs to be incorporated into BANSAI.

As a first step towards the EQIs a discussion between the partners of the appropriateness of the parameters used in the first set of BANSAI status reports will be discussed. A common set will be selected and used in the 2nd year status reports for a uniform quantification of the environmental status.

Task-III: Involvement of governmental agencies

To secure the relevance of the project outputs, with respect to management needs, an involvement of users are needed. Therefore the form and content of the reports should be discussed with representatives from management in a process to identify what kind of products and deliverables that is of main management needs. The project coordinator will have the overall responsibility for this dialogue.

4 BANSAI-EMAPS co-operation

On request from NMR H&L group, representatives from the two projects, BANSAI and EMAPS met in Bergen 13 September 2005, to discuss possible synergies between the two projects. The two projects have several similarities since they both use many models in their studies, and will produce status reports based on model simulations. The largest difference is that BANSAI will do nowcast (yearly status reports 2004-2006), while EMAPS will do hindcast simulations with the focus on the years 1995-2000. Also, BANSAI will report on both the Baltic and the North Sea, while EMAPS will focus on the Baltic only, and EMAPS will concentrate on physical modelling while BANSAI will cover both physical, chemical and biological modelling.

From this it was possible to define a first set of synergies between the two projects:

- two models (HIROMB at SMHI and MIKE at DHI) will participate in both projects. This means that both model validation and development done in one project automatically will be made available and become a benefit for the other project. As an example of this different new parameterizations of physical and biochemical processes found in one of the projects may be easily forwarded to the other one.
- to quantify the environmental status there is a need for a selection of state variables that can be used as a representative description of the ecological status. An attempt will be done to harmonise these variables (and the way to present them) between the two projects. This will make the results more available to e.g. management, and be a step towards a set of Ecological Quality Indicators (EQI).

In addition the project leaders Morten D. Skogen and Kai Myrberg will, at regular basis, exchange relevant information concerning the outcomes from their projects, like data sets, reports etc. Also the minutes of the project meetings will be exchanged.

Future NMR workshops will be a useful place for joint project meetings and a further dialogue between the projects when the latest results of the projects are presented and discussed, and when detailed plans for the forthcoming work will be outlined.

In the preparation of Final Reports of the BANSAI and EMAPS, the project leaders will co-ordinate the work and will refer to the corresponding results in the other project. Prior to this the project leaders will meet and discuss the results gained during the project periods.

5 Budget

The budget targeted for year two (2006) is detailed in Table 1 below.

The models need access to supercomputers to run. These expenses are supposed covered by each institutions themselves through their ordinary budgets. Travel costs is supposed to be covered through the salary.

The budgets in Task I will be adjusted with an increased part to those partners responsible for the reports.

Partner	Others	I	II	III	Sum
IMR	40	100	2.5		142.5
SMHI		100	2.5		102.5
FIMR		100	2.5		102.5
DHI		100	2.5		102.5
Total	40	400	10.0		450.0

Table 1: Proposed budget (2006) by partners and tasks (all numbers in 1000 DKK)

6 Deliverables

Based on the above budget, the following list of deliverables (2006) are given:

Task	Deliverable title	Nature	Date	Responsible
I	Environmental status	reports	31/12-06	IMR/SMHI/FIMR/DHI

Table 2: Deliverables list, year 2006