UNIVERSITY OF GOTHENBURG

VERSION: Baltic-C minutes No. 2.doc
DATE: 2009-05-26

Baltic-C First Scientific Study Workshop, 13-15 May, 2009.

Place: Sunnersta Herrgård, arranged by Anna Rutgersson University of Uppsala
Participants:

Matti Perttilä	FMI
Laura Joensuu	FMI
Ben Smith	LU
Guy Schurgers	LU
Anders Omstedt	GU
Karin Wesslander	GU
Erik Gustafsson	GU
Moa Edman	GU
Janusz Pempkowiak	IOPAS
Karol Kuliński	IOPAS
Aleksandra Szczepańska	IOPAS
Anna Maciejewska	IOPAS
Bernd Schneider	IOW
Anne Löffler	IOW
Christoph Humborg	SU
Teresia Wällstedt	SU
Magnus Mörth	SU
Anna Rutgersson	UU
Björn Carlsson	UU
Maria Norman	UU

List of action items from the meeting:

1. Send all presentations as pdf-files to Anders.
2. All data should be mailed to GU (Anders) who will organize the Baltic-C data base together with David Ryner. Add to the data a readme file with a short explanation of the data and 1-2 illustrative figures. The data will be freely available for the Baltic-C researchers and will not be submitted to others during the Baltic-C program, if not the Baltic-C Science Steering Group accept this. In the end of the program all data will be organized into a Baltic-C CD and will be made freely available.
3. Plot also total alkalinity from the Merian summer 2008 cruise and send the data to GU.
4. Save Aranda winter 2009 data in similar way as Merian and send the data to GU.
5. GU will investigate the new mineralization parameterization by Bernd. When manuscript is reasonable ready send a copy to Anders.
6. Matti will send the river runoff data to Magnus who will update the file and also include nutrients etc. He will then send this data to Matti and Anders. Note that the time resolution is month.

7. Matti will consider if it is possible to add some quality test on the river data.
8. Matti et al. need to analyze why Swedish and Finnish pH data give different trends? Are the trends significant? Are the same period analyzed? Accuracy? Other reasons?
9. Anders will try to get some Neva river data through BALTEX and BONUS contacts.
10. Bernd will contact some German institute for German river runoff data.
11. Consistent carbon budgets for the Baltic Sea should be developed within Baltic-C. We could dived the system into two major basins: the Baltic Proper and the Gulf of Bothnia. The same units should be used and the budgets should consider DIC and DOC or CT and AT? Karol and Janusz should start up this work and then send it around. The first Baltic-C budget should be discussed during the next meeting.
12. Anna will reconsider the GCM runs we will use. However we need transient runs from 1960-2100.
13. Anna/Björn will check up how we can get acid deposition data for climate scenarios from Markus Meier.
14. Björn and Magnus need to interact about mineral deposition data. Also Björn should add precipitation rates to the data.
15. The Lund and Stockholm groups need to interact about land surface modelling and they are planning to have a joint meeting after summer.
16. Next meetings:

    Autumn 2009 meetings with regard to modelling land-ocean exchange. Date to be determined by SU and LU.

    Baltic-C Second Scientific Study Workshop, 9-10 November, 2009 in Warnemuende. One extra day 2009-11-11 related to marine observations.

    Baltic-C Third Scientific Study Workshop, prel. 18-19 June, 2010 in connection to the BALTEX conference in Polen.
17. The BONUS consortium agreement needs to be signed as soon as possible.
18. Our deliverables for 2009 are listed as a reminder below:

Deliverables

- Month 6= 2009-06
  - WP2. Compilation of existing CO2/carbon data
  - WP3. River inflow of alkalinity, pH, total organic carbon, total
  - WP4. Calculated remineralisation rates of organic matter based on existing data
  - WP7. Data set on A_T, C_T, Ca and C_{org} inputs to the Baltic Sea
- Month 8= 2009-08
  - WP5. Acidic deposition for the Baltic Sea drainage basin
- Month 12=2009-12
  - WP1. Lecture and notes on the Baltic Sea CO2 system
  - WP1. Set up Baltic-C web-page
  - WP2. Seasonally resolved pCO2 fields for the entire Baltic Sea
  - WP2. Improved process parametrizations (biomass production, nitrogen fixation)
  - WP2. Concentrations of inorganic/organic carbon species in the major model sub-basins
  - WP2. Trend analysis for Co2/carbon variables
  - WP4. New stratified sediment samples collected covering Arcona Deep, Bornholm Deep, Gotland Deep, coastal areas.
  - WP4. Mineralization rates at the sediment water interface and in the deep water
  - WP5. Compiled present and future scenario land use data for the Baltic Sea drainage basin
  - WP7. Model describing A_T, C_T, Ca and C_{org} inputs from 83 major watersheds during present climate
- Month 13=2010-01
  - WP1. Baltic-C Y1 report

Program: See Attachment 1.

13 May 2009, 1300-2100

§1 Welcome and practical information
Anna Rutgersson welcomed us all to the Sunnersta Herrgård and gave some practical information.

§2 Short about the Baltic-C
Anders Omstedt started up the workshop and acted as the chairmen.

§3 Measuring the Baltic Sea CO2 system and carbon inventories
Anne Löffler: Part I.The first CO2 cruise in the Baltic Sea that cover the Kattegat-Bothnian Bay.
Laura Joensuu: Part II. The Aranda 2009 cruise
Bernd Schneider: Part III. Organic matter mineralization and nitrogen transformations during stagnation in the Gotland Sea deep water.

§4 Inventory of river runoff data

Matti Pertillä. Part I. Inventory the present state of art.
Matti Pertillä. Part II. pH trends in the Baltic Sea?

§5. Evening with student presentations

14 May 2009, 900-2100

§6 Mineralization of organic material, deepwater-sediment interaction.
Janusz Pempkowiak. Part I Organic matter in the Baltic
Karol Kuliński. Part II Carbon return flux from the Baltic Sea sediments

§7 Atmospheric forcing
Björn Carlsson. Part I Acid Deposition
Anna Rutgersson. Part II Climate scenarios

§8 modelling the organic matter input from terrestrial vegetation and soils
Benjamin Smith. Present state of art.

§9 modelling the input of AT, CT, Ca, and Corg from all rivers entering the Baltic Sea
Magnus Mörth. Part I. Weathering
Christoph Humborg. Part II. Hydrological modelling

§10 Evening lectures.
Aleksandra Szczepańska.Part III. Sedimentation rates by the ^{210}Pb method
Anna Maciejewska . Part IV. Modeling of POC concentration in the Baltic sea – water"

15 May 2009, 900-1200
§11 Anders Omstedt. Modelling the Baltic Sea physical–biogeochemical system based on CO2/O2 dynamics and climate change

§12 Anders Omstedt. Program managements.

We have now an e-mail list (baltic-c@gvc.gu.se) and a home page (http://www.baltex-research.eu/baltic-c/). The Baltic-C program started up January 2009 and all deliverables should be reported through the BONUS electronic program. The Consortium agreement needs to be signed by all institutes within Baltic-C. The present version can now be signed by BONUS,GU, UU and FMI. I need information on any corrections or problems from SU, LU, IOW and IOPAS as soon as possible.

Next meetings:

1. Autumn 2009 meetings with regard to modelling land-ocean exchange. Date to be determined by SU and LU.

2. Baltic-C Second Scientific Study Workshop, 9-10 November, 2009 in Warnemuende. One extra day 2009-11-11 related to marine observations.

3. Baltic-C Third Scientific Study Workshop, prel. 18-19 June, 2009 in connection to the BALTEX conference in Polen.

Anders Omstedt
2009-05-19

Attachment 1

UNIVERSITY OF GOTHENBURG

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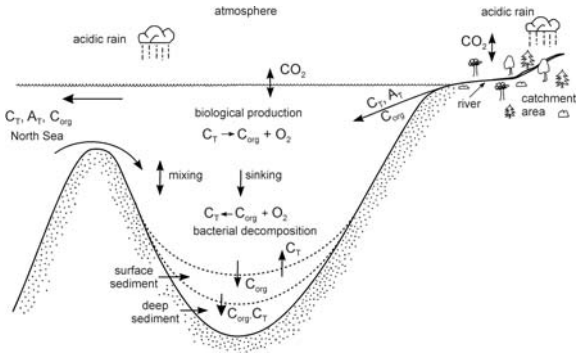

Baltic-C First Scientific Study Workshop, 13-15 May, 2009.

Organised by Uppsala University at Sunnersta Herrgård

Wed 13 May

1200-1300 Lunch
1315-1330 Welcome (Anna Rutgersson)
1330-1500 Topic 1
1530-1700 Topic 2
1800-1900 Dinner
1930-2100 Extra (Analysing pH data, Ph D student's presentations)

Thu 14 May

0900-1030 Topic 3
1030-1200 Topic 4
1200-1300 Lunch
1330-1500 Topic 5
1530-1700 Topic 6
1800-1900 Dinner
1930-2100 Extra (New ideas, Ph D student presentations)

Fri 15 May

0900-1000 Topic 7
1000-1100 Topic 8
1100-1200 Summary and planning
1200-1300 Lunch and end of meeting

Topic 1 Measuring the Baltic Sea CO2 system and carbon inventories (Bernd Schneider)

Topic 2 Inventory of river runoff data (Matti Pertillä).

Topic 3 Mineralization of organic material, deepwater-sediment interaction (Janusz Pempkowiak).

Topic 4 Atmospheric forcing, including air-sea CO2 interaction, atmospheric deposition of acidic components (H2SO4 and HNO3) over whole catchments, and climate scenario outputs available from other EU programs (Anna Rutgersson, concentrate on acid precipitation and climate scenarios that will be used within Baltic-C).

Topic 5 modeling the organic matter input from terrestrial vegetation and soils (Benjamin Smith).

Topic 6 modeling the input of AT, CT, Ca, and Corg from all rivers entering the Baltic Sea (Christoph Humborg/Magnus Mörth).

Topic 7 Modeling the Baltic Sea physical–biogeochemical system based on CO2/O2 dynamics and climate change (Anders Omstedt).

Topic 8 Program managements. New web site, Bornholm summer school, deliverables, consortium agreement, next meeting, other questions?