



Minutes of the 2nd IMBER Executive Committee Meeting

Plymouth Marine Laboratory (Plymouth, UK)
27-29 September 2006

Present:

IMBER SSC members:

Julie Hall, Dennis Hansell, Patrick Monfray, Arne Körtzinger, Jack Middelburg, Raymond Pollard,
Sylvie Roy, Sophie Beauvais

Participation on a conference call:

Ed Urban, Eileen Hoffman

Note: This meeting included a joint session between the IMBER and GLOBEC Executive Committees. The Minutes of the Joint session are available in Annex 1.

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1 Welcome and IPO update

Julie Hall welcomed the Executive Committee to its 2nd meeting. She gave an overview of the aims of the meeting, which were:

- Review the implementation of IMBER to date;
- Review the Working Groups and Task Team activities;
- Identify priorities for the IMBER SSC and the IPO;
- Review the budget.

1.1 Update of IPO

Sylvie Roy gave an overview of IMBER activities since the last SSC meeting, held in Brest (10-12 May 2006), and of the accomplishments of the IPO, including support of working groups, promotional products developed (brochure, poster, newsletter), publications, sponsored activities, meetings, special sessions, workshops. She also identified future IPO priorities such as seeking additional funding for diverse activities.

2 IMBER implementation: Working Groups and Task Teams

2.1 IMBER / LOICZ Continental Margin Task Team

The members of the Joint Task Team have been approved by LOICZ and IMBER. The objective of this group is to organise an Open Science Conference to be held in September 2007 in Shanghai.

Scientific Program:

This conference should geographically focus on the overlap between the two programs (mid to outer continental shelves, shelf breaks and upper slopes and exchange between adjacent ecosystems) and scientifically cover global and local changing forcings and the interaction between elemental cycling and marine food webs. It is suggested to start with the book on continental margins edited by KK Liu to build on current knowledge.

It is proposed that the output of the meeting should be:

- 1) to develop an implementation plan as stated in the ToR of this group; we should plan an extra day after the meeting for the working group to summarize the discussions.
- 2) to stimulate interactions between the local and international scientists;
- 3) to publish a post-conference report. The final shape has to be decided by the committee (special issue in an electronic journal, book, ...etc)

The US involvement was discussed. Burke Hales should be the link to OCB and should connect with Scott Doney. It is also suggested to get people from the Coastal Ocean Processes (CoOP) informed about this activity. A key person for this is Rick Jahnke.

Action: IPO to put an announcement about the OSC in the CoOP newsletter.

Action: Jack/Nancy to ask Burke to get feedback from Scott Doney regarding the scientific program of the OSC once the draft is completed.

Organising Committees: The Joint Task Team will be the Scientific Organising Committee for the conference. There will be a local (5-6 persons) organising

committee. Jing Zhang's membership on both committees will facilitate the exchange of information between the two groups, the co-chairs and the IPOs. The membership of the local organising committee will be finalised with LOICZ's input.

Action: Sylvie to finalise the formation of the local committee with Jing and Hartwig.

Action: Sylvie to send a reminder to the committee to get more input on the program.

Action: Jack and Nancy to summarize the comments received and circulate again.

Logistic:

An estimation circulated by Jack and Nancy added up to roughly 150 participants including 50 Asian/Chinese scientists. It was decided to ask Jing Zhang, as a local host to confirm the potential number of Chinese participants. The duration of the meeting should be of about 6 days from Sunday to Friday (including OSC, workshops, and tours). The dates of the conference will have to be slimmed down in the 10th and 22nd September 2007 bracket. Considering the work load that the LOICZ IPO is facing during this transition time, it was suggested that the IMBER IPO takes the lead in terms of the organisation of the meeting and communication, keeping the LOICZ IPO well informed.

Action: Sylvie to email Jing about the number of Chinese participants.

Action: IMBER IPO to be in charge of communication/coordination for the OSC organization

Action: Sylvie to determine with Jing the final dates for the conference.

Budget

The major priority is to raise additional funds to the LOICZ/IMBER funds already available. A draft budget was prepared by the IPOs. The income is based on 150 participants. We decided to keep a reasonable registration fee that could be revised. There will be equal contributions from LOICZ and IMBER, and hopefully SCOR for developing country scientists. The level of potential Chinese funding needs to be confirmed with Jing. Hartwig and Sylvie are to explore further funding opportunity (IOC, APN, START, ESF and US NSF in China). Sharon Smith (University of Miami) was also suggested. Also Nancy (for developing countries) and Wajih (capacity building) should be contacted for funding ideas. The expenses are based on a four day meeting. Again, local costs need to be rationalized. EUR-OCEANS is linked to Asia-China cooperation. We should explore the possibility of funding for 4-5 participants from EUR-OCEANS.

Action: Jing to fill in the Chinese funds line of the budget, meals and accommodations costs.

Action: Patrick to explore possibilities of funding in Europe.

Action: Wajih to explore possibilities of funding in Asian Countries.

Action: Sylvie to talk to Paul/Caroline about potential support for travel for 4-5 participants.

Public Announcement:

It was suggested to start working as soon as possible on the preparation of a poster for the first announcement. This should be sent out as soon as possible. The IMBER IPO has agreed to prepare the poster.

Action: IMBER IPO to explore possibilities of working with a designer (delay, cost) to create the OSC announcement poster.

Side Meetings:

A few side meetings are also planned.

- 1) The SCOR Working Group 128 has proposed to hold their next meeting in conjunction with this OSC. The group agreed that it would bring in more people that can contribute to the SSC.
- 2) A modeling workshop has been proposed by John Parslow.
- 3) A workshop on dimension issues may also take place.

2.2 Capacity Building Task Team

Capacity building strategy

The Capacity Building implementation strategy has been written by the task team. Questions to consider are:

- 1) do we form a capacity building working group?
- 2) do we develop our own network or link with other program?
- 3) do we develop a Web portal for capacity building?

The executive committee commented on the document and revised the proposed Terms of Reference for the Capacity Building Working Group and agreed this group should be established.

Action: Sylvie to make changes to the ToR and circulate to Wajih and executive committee members for their feedback.

Action: Sylvie to contact Wajih to get proposed membership for Capacity Building working Group.

- Julie mentioned that SCOR is thinking of forming a capacity building committee. We should make sure one member of the SSC links with the group.
- We should take advantage of the already existing network. There is a need to identify wider opportunities and funding.
- The website could be a tool for developing country students. Jack proposed to add student courses on the website in the future. In a short term, a portal with cruise opportunities for students could be added to the website.

Action: Julie, Sylvie and Sophie to work with the Capacity Building Working Group to explore how best to set the capacity building network.

Action: Sophie and Wajih to work together to create a web portal for young scientists and students from developing countries on the IMBER website, and to post opportunities for cruises, and other opportunities.

Action: Julie to remind Wajih about developing a wider approach for the Marine project Summit in London.

Floating University

- Sophie contacted the leader scientists of the French project “BONUS-GOODHOPE, Marie Boye (LEMAR) and Sabrina Speich (LPO). The project is focussed on iron and circulation in the Southern Ocean. They are interested in organizing a Floating University in collaboration with a cruise planned for late 2007/early 2008. This could be an interesting opportunity to involve South African students.

Action: Possibilities for regional funding available in South Africa for students needs to be explored.

- Jack told that TTR/Unesco has provided (limited) funding in the past: \$10000 for three weeks for Floating University.
- Ed suggests that the ICSU regional office for Africa (contact Sospeter Muhongo at s.muhongo@icsu-africa.org) and the Third World Academy of Sciences (contact Daniel Schaffer at schaffer@ictp.trieste.it) be contacted.
- Arne mentioned that the Polarstern will stop the repeat transect line in 2010.

Action: Sophie: to continue to investigate the possibility of a Floating University in correlation with BONUS-GOODHOPE project.

Action: Arne to continue to explore possibilities with the Polarstern.

Action: Sophie to explore funding possibilities for a Floating University initiative.

Summer School

The possibility to organize an IMBER Summer School has been discussed. It could be a good opportunity for a joint activity with EUR-OCEANS.

Action: Sophie to explore with EUR-OCEANS the possibility to set up a Joint Summer School.

2.3 Joint SOLAS/IMBER Carbon Working Group

Arne gave an overview of the activities of the Carbon Working Group.

Sub-Group 1

- The sub-group 1 (SG1) “Surface Ocean system”, chaired by Nicolas Metzl, participated in the CARBOOCEAN WP4 Workshop, in Norwich, UK at UEA (27-29 September 2006). This workshop was entitled “Towards a synthesis on the changing North Atlantic sink”.
- The major action of SG1 is to organize with IOCCP an international Workshop on “Surface pCO₂ and vulnerability” (UNESCO, Paris, 11-13 April 2007). The co-chairs of the organizing committee are Nicolas Metzl and Bronte Tilbrook. About 60-70 participants will attend this meeting. The organizing committee approached IMBER to sponsor participants; we agreed to support 5-6 participants (maximum \$10K).

Sub-Group2

- The Sub-Group 2 “Interior Ocean Carbon Storage”, chaired by Nicolas Gruber, participated in a first CARBOOCEAN synthesis workshop on the Atlantic that was held in Iceland (June 28-30, 2006). Three working groups were formed to synthesize present knowledge.

- The Sub-Group 2 is also working on the preparation of a white paper for the addition of oxygen sensors on Argo floats. This has been delayed by the move of Nicolas Gruber to Switzerland but should be finalized by the end of 2006.
- The Sub-group 2 should broaden the initiative to other basins so IMBER does something that would not be done otherwise.

Action: Arne to forward the report of the Iceland meeting to Julie and Sylvie

Action: Arne to communicate to Nicolas the message from the IMBER SSC to broaden the CARBOOCEAN synthesis initiative to the other ocean basins.

Action: Sylvie to contact Nicolas to explore how IMBER can support the FOO initiative.

Printing the Carbon Implementation plan

How many copies are needed? Dennis suggests 50 for the USA and a total of 200 should be sufficient. The time frame for this to be done is the end of October. IMBER will pay for half the cost of printing.

Action: Sylvie to contact Jeff to initiate the editing of the Carbon Implementation plan.

Action: Sylvie and Elena to explore for better price for printing 200 copies of the Carbon plan.

2.4 Data Management Working Group

Data management committee

Sophie and Raymond reviewed the progress about Data Management. They proposed a list of members for the Data Management Committee (DMC) including 2 modellers, 2 observationalists and 2 data experts. The proposed membership is:

- Sophie Beauvais (Data Liaison Officer)
- Jay Cullen (Canada)
- Wilco Hazeleger (Netherlands)
- Gwen Moncoiffé (UK, biological oceanography at BODC)
- Todd O'Brien (USA, marine biologist, COPEPOD database)
- Raymond Pollard (UK, Chair, IMBER SSC)
- Reiner Schlitzer (Germany, modeller, Pangea, SeaDataNet, GEOTRACES SSC)

The proposed membership and ToR were approved by the Executive Committee. However, the committee suggested adding an Asian representative to enhance communication toward Asian countries. Toshi Saino should be contacted for suggestions.

Action: Sophie to formally send invitations to member of the DMC.

Action: Sophie and Raymond to find an Asian representative for the DMC and to invite him (ask Hiroaki's input).

Strategy, policies and guidelines for endorsed projects

- Raymond reported the output from the meeting in BODC with Roy Lowry (3-4 August 2006). He stated that there is currently a gap between what IMBER scientists would like from data management and what data managers can realistically achieve. One possible baseline for IMBER metadata is the Cruise Summary Reports (CSPs) for every cruise and Directory Interchange Format

records (DIFs) for every non cruise IMBER activity. The DMC will look into working with GCMD as an international portal for metadata.

- IMBER can push for some advances in marine metadata standards. It can encourage development of tools to make the creation of some types of metadata easy for the scientists. We can also educate marine scientists in the value of metadata and assist scientists in creating metadata by providing suitable tools and tutorial materias.
- The next steps are to develop guidelines for endorsed projects and a Data Management Policy for IMBER. The DMC needs to work with the DLO to create useful guidance on the IMBER website. This must be carefully done to encourage scientists, and show them that it is in their interests to create accurate metadata. Those documents should be discussed at the London Summit in December to have the input from other SCOR marine projects.

Action: Sophie to draft the guidelines for endorsed projects based on examples available.

Action: DMC to write the Data Management Policies

Action: Raymond and Sophie to attend the Marine Project Summit in London to present the IMBER data management strategy

Action: Sophie to add guidelines and policies in the website when completed.

Action: Sophie to keep track of all IMBER projects and cruises

2.5 Joint IMBER/GLOBEC End-to-End Task Team

Note: This discussion has been held during the Joint IMBER/GLOBEC Executive meeting)

See Annex 1

2.6 Theme 4 - Human Dimension

Note: This discussion has been held during the Joint IMBER/GLOBEC Executive meeting)

See Annex 1

3 Promotion of IMBER

3.1 Website

The website has been updated following the comments from the last SSC meeting. Sophie presented a report based on information provided by "Google Analytics", a free tool providing statistics about the website visitors. This information will allow Sophie to identify the most visited pages.

Action: Sophie to keep an up to date calendar on the website.

Action: Sophie to post low and high resolution poster version for public download on the website.

Action: Sophie to update banner on the website to replace old version of the logo.

Action: Sophie to create a portal for young scientists and students on the IMBER website (*see Capacity Building report*).

Action: Sophie to establish a close communication with ICED and their website

Action: Sophie to explore Outreach Pages (Carboschool, oceanopolis...) to develop this in the future.

3.2 Brochure

The IMBER brochure is now finished and printed, and the distribution started. So far, 4615 brochures have been sent. Elena will continue the distribution and update the mailing list at the same time.

Action: IPO to send brochures to: Humboldt Current Meeting, OMZ workshop, CARBO-OCEAN and Scott Doney (OCB).

Action: IPO to ask Beatriz how many copies IGBP would like.

3.3 Poster

The poster has been finalised. Two versions have been designed: one for international meetings and one for promotion in France. The poster will be available on the website in high resolution. The poster will be for specific meetings.

3.4 Gorick Image

Sophie presented the latest version of Gorick's image. The Exec gave its input to refine the illustration. Three main comments rose from the discussion:

- 1) To focus on the second theme "Sensitivity to Global Change", to illustrate the human impact on ocean.
- 2) To give a feeling of movement, to make the illustration more dynamic
- 3) To emphasize biogeochemistry

Dennis suggested designing the illustration in 3 dimensions (a three-faced cube) with biological processes on the face, biogeochemistry on the side, and physical processes on the top. The three faces of the cube should connect via processes. The purpose is to give a fully integrated look to the image.

Action: Sophie to continue to interact with Glynn to have a final draft for the next SSC Meeting.

3.5 Newsletter

The *IMBER update* Issue 4 is almost finalised. Suggestions for the content of the next issues are: CARBOOCEAN, North Atlantic Synthesis workshop report (Christoph Heinze), Surface pCO₂ and vulnerability workshop announcement (Sylvie), SIBER workshop report (Wajih), Fast track Initiative report (Carol Turley).

Action: Elena to contact people above regarding preparing material for next Update.

3.6 Celebration 10 years of IUEM

- From September 2006 to March 2007, IUEM celebrates its tenth year. A series of activities for scientific and broader public will be organized. IUEM will also hold a "Open House". IMBER and EUR-OCEANS are organizing a joint stand on "Oceans and Climate Change". Sophie is working closely with the aquarium Oceanopolis to prepare this.
- Oceanopolis is interested in interactions in the future with IMBER for outreach activities.
- IMBER proposed to sponsor this celebration by funding the design of the flyer announcing this celebration.

Action: Sophie to work with a graphic designer to prepare the poster.

Action: Sophie to prepare the IMBER/EUR-OCEANS stand “Oceans and Climate Change” for March 2007.

3.7 Sea Tech Week

IMBER will be present at the International Marine Science and Technology week, in Brest on October 17-19th 2006. IMBER and EUR-OCEANS will have a common stand to promote both projects and present their activities. Sea Tech week offers a programme of conferences, symposia and workshops on ocean depth, sea rescue, corrosion, and European maritime policy. The participants include researchers, engineers, policy makers and funders.

4 Interactions with other projects and programmes and joint activities

4.1 EUR-OCEANS

IMBER, EUR-OCEANS and GLOBEC are co-sponsoring the International Symposium on “Parameterization of Trophic Interactions in Ecosystem Modeling”, in Cadiz (March 20-23rd 2007). This activity was discussed during the Joint IMBER/GLOBEC Meeting (see Annex 1).

Following the review of the program, all Work-Package leaders (WP) have been asked to provide a document on future plans for the next EUR-OCEANS SSC Meeting held in November 2006.

As the leader of the WP 3-1 “Model Integration-Model Interfacing”, Patrick presented the latest tool developed by Ivo Grigorov to allow searching and direct comparison of model equations (see article in *IMBER Update N°4*). This is a prototype for an online tool. The purpose of the model clickable database is to allow model developers to compare model philosophy and mathematical notations of real-life processes across models, as well as involving process scientists by eventually making model parameters and model limitations and simplifications more easily accessible and open to discussion and improvement.

The interactions between IMBER and EUR-OCEANS were discussed and a need to increase interaction was identified. Julie proposed that the IPO contact directly the Work-Package leaders and maybe invite some key ones to come to the next IMBER SSC meeting to stimulate discussions. IMBER could also submit a joint proposal for the next Summer-School call.

Action: Julie to invite EUR-OCEANS members to our next meeting.

Action: Sylvie to request access to the EUR-OCEANS protected website.

Action: IPO to explore the possibility to organize a Summer School co-funded by EUR-OCEANS.

4.2 CARBOOCEAN

- The next CARBOOCEAN annual meeting will be held 4-8 Dec 2006 in Maspalomas, Gran Canaria. Arne will attend this meeting as he participates in

the project. Christoph invited an IMBER SSC member to attend the meeting. Arne should be the IMBER representative.

- Christoph suggested topics for joint working groups, including “ocean acidification and related impacts”; or “climate-carbon cycle feedbacks including biological particle production and particle dynamics”. The committee feel that ocean acidification is being covered by the IGBP/SCOR FTI lead by PAGES. The second proposed idea will be addressed jointly with CLIVAR at the one-day planning in London.
- The CARBOSCHOOLS is a true outreach portal and IMBER could link to it on the website as well as the EUR-OCEANS outreach site. IMBER is not ready for communication to the politician and decision makers.

Action: Sylvie: It is recommended to link CARBOOCEAN with the carbon working group, the climate variability initiative and to the regional partners.

Action: Sylvie to draft a response to Christoph

Action: Sophie to link the IMBER website to the CARBOSCHOOL.

4.3 IMBER-PICES

PICES proposed a new scientific program, FUTURE (**F**orecasting and **U**nderstanding **T**rends, **U**ncertainty and **R**esponses of the North Pacific **E**cosystem), built on the success of the Climate Change Carrying Capacity (CCCC). Hiroaki Saito and Angelica Pena are convening a special session during the annual general PICES meeting in Yokohama. Julie will be attending the meeting and will talk to the council regarding links between FUTURE and IMBER. IMBER will collaborate where there is a clear link i.e. biogeochemistry and ecosystems, and possibly in the human dimensions theme of FUTURE.

4.4 PACKMEDS

PACKMEDS is a new project focusing on the dynamics of semi-enclosed marine ecosystems, especially the integrated effects of changes in sediment and nutrient inputs from land, in the context of ocean physics and biogeochemistry. A synthesis book is in preparation. PACKMEDS is a proposed activity of SCOPE, IAPSO, and SCOR to conduct a Dahlem Conference-style meeting on the topic of the influences of land processes on enclosed marine and brackish basins. One planning meeting has been held, but there are not sufficient funds yet to conduct the actual conference.

4.5 GODAE

GODAE is a global system of observations, communications, modeling and assimilation that will deliver regular, comprehensive information on the state of the oceans, in a way that will promote and engender wide utility and availability of this resource for maximum benefit to the community.

IMBER agreed to organize a joint workshop on biogeochemistry issues with operational oceanography as proposed by PY Le Traon (IFREMER) at the last IMBER SSC meeting in Brest. Patrick was invited to Beijing for the GODAE meeting (October 20). He will explore the potential link between IMBER and GODAE and the possibility to organize a small workshop of 10-12 people.

IMBER must know the clear objectives and strategy for a joint workshop. A small group including Patrick and people from MERSEA project will write a proposal. The workshop should include a member of the Friends of Oxygen (FOO) group.

Action: Sylvie to send the list of FOO members to Patrick.

Action: Patrick to explore further the potential collaboration with GODAE and report for next IMBER SSC meeting.

Action: Patrick to gather more information about the objectives and the issue of the joint workshop and report after the GODAE meeting.

4.6 GEOTRACES

The GEOTRACES SSC has been approved as a research project by SCOR. It is co-chaired by Robert Anderson (USA) and Gideon Henderson (UK). The SSC will meet in San Francisco immediately after the AGU meeting on December 16 2006. The Science Plan is being printed now. Jay Cullen is our link with GEOTRACES and will attend the GEOTRACES SSC meeting.

Action: Sylvie to send the latest information about GEOTRACES to Jay.

4.7 PAGES-FTI

The first IGBP-SCOR FTI workshop on "Ocean Acidification-modern observations and past-experiences" was held in Lamont-Doherty Earth Observatory of Columbia University in September 28, 2006.

Action: Elena to ask Carol Turley to write a report from the meeting for the next IMBER update (with cc to Thorsten).

4.8 CLIVAR

At the SSG meeting of CLIVAR it was proposed to organise a small open Science conference together with the marine programs of SCOR/IGBP to address the impact of climate variability patterns on the marine environment. A half-day planning meeting will be held in London before the Marine Project meeting.

4.9 SCOR

(conference call with Ed)

- The GEOTRACES SSC will meet in San Francisco immediately after the AGU meeting in December 16-18 2006. The Science Plan is being printed now and will be available to IMBER. The major issue now will be the intercalibration of methods.
- The second SCOR Meeting on Coordination of International Marine Research Projects to be held in London, December 2006, is under preparation. The number of participants is limited to the Chair & Executive Officer of each project. It has been suggested that Raymond and Sophie attend the data management section of the meeting.
- The Capacity Building WG is supposed to prepare a broader strategy for this meeting.
- The SCOR WG128, Natural and Human-Induced Hypoxia and Consequence for Coastal Area, have suggested holding their next meeting at the Continental margins OSC in Shanghai. About 150 participants will attend this meeting including Chinese participants. Jack will be the link with the Continental Margins Open Science Conference.

- There is a push from Raleigh and Eileen for the OCB to develop the ecosystem side of IMBER in the US. They have talked to Phil Taylor about adding and “E” to OCB.
- Ed reports about the FTI on Ocean acidification. Some objectives were to bring together modern and paleo scientist and explore new proxies. The meeting report will be published in EOS.
- SSC rotation: the potential conflict of interest with Mary-Elena is discussed. Ed agrees that we can ask her to attend the next SSC but pending SCOR’s approval in October.
- Elena to Baltimore: Ed agreed to arrange for Elena to visit Havelly and Liz at the SCOR office to learn about using Quickbooks and managing IMBER’s funds and online conference manager tool” for conference organisation in November.

Action: IPO to synchronize with the SCOR secretariat and organize Elena’s travel to SCOR (before the end of the year).

4.10 IGBP

IGBP has a new website (<http://www.igbp.kva.se/>).

IGBP is organizing its 4th IGBP Congress to be held in Cape Town (4-9 May 2008). IGBP seeks an active involvement of IGBP projects, National committees and scientific networking institutions in the whole scientific programme. IGBP asks IMBER to identify a cross-cutting theme to develop in the Congress. The discussion about the cross-cutting session has been held during the Joint IMBER/GLOBEC meeting (see Annex 1).

The IMBER SSC meeting in 2008 will be held in Cape Town in conjunction with the Congress. The suggested time slots are Day 1 and 5. As we need three days to discuss all the IMBER business, it is suggested to meet one half day (day 0) and meet on the afternoon of Day 2.

5 Update on regional and National activities of IMBER

5.1 PRIMO

The PRIMO project is focused on the Oxygen Minimum Zone of the Southeast Pacific Ocean. It is a collaboration between France (IRD), Chile and Peru. The proposal for ship time in 2008 failed. The PIs will meet at the “Humboldt Current System” Meeting in December (Lima, Peru) to discuss the project. One way to go forward would be to attract biogeochemists from Germany by including anoxia questions in the project. Wilco is preparing a proposal for EU FP7 on “Oxygen Minimum in Atlantic and Pacific”. If PRIMO can be linked to EU FP7 proposal it could provide PRIMO a new strategy forward.

Action: Sylvie to send recommendation to PRIMO to involve a wider scientific community.

IRD will launch 6 new Argo Floats with oxygen sensors in the Humboldt Current.

5.2 BOUM

The French project BOUM was not approved by the French CYBER Committee. However, it has been noted that the project shows an original approach regarding the issue of diazotrophy in surface. BOUM was asked to develop a more detailed implementation strategy. The committee encouraged the Leader T. Moutin to reapply the next year.

BOUM has the support from the EU FP6 SESAME (from Greece) for equipment.

5.3 INDIA: Indian Ocean initiative

- The recommendation of the Indian National Committee for IGBP is that SOLAS and IMBER are being implemented together as a single national programme. The project entitled “Impact of anthropogenic perturbations on oceanographic-atmospheric processes in and around India in the context of Global Change”, is coordinated by NIO, and comprises three activities: impact of nitrogenous fertilizers, upwelling intensity/anoxia, and long-term time series measurements including calibration of critical atmospheric and oceanographic parameters.
- The Workshop “Sustained Indian Ocean Biogeochemical and Ecological Research” (SIBER) was held at NIO (Goa), on 3-7 October 2006. The workshop was sponsored by NSF, NIO, SCOR and IMBER. The workshop will provide a platform for launching a regional IMBER initiative in the Indian Ocean.
- Bunks are still available on one leg of the CLIVAR line. We need to find out which CLIVAR line – Dennis should know. Jim Swift is the chief scientist.

Action: Sophie to contact Jim Swift to verify this information and post on website.

5.4 GERMANY: GIMBER

- A special volume in the *International Journal of Earth Sciences* is planned for next year.
- A link to OMZ Peru and an Arabian Sea project are being planned.

5.5 THE NETHERLANDS

The Netherlands will join with the Indian Ocean initiative.

5.6 USA: New Ocean Biogeochemistry Committee

- The new OCB is hoping to get \$10M of funding in two years.
- It is proposed to invite Scott Doney to the next IMBER SSC meeting to ensure good links between IMBER and the OCB.

Action: Julie to explore how to get more involved in BASIN, possibly through Mike Roman.

5.7 FRANCE

CYBER, the new French Programme for “Cycles Biogéochimiques, Ecosystèmes et Ressources” is funded for 3 years (2006-2009). It is important to have close connection with Hervé Claustre to ensure good links with IMBER.

5.8 NEW ZEALAND

- Program funded for 10 years;

- Two cruises focussed on the nitrogen cycle have been completed and a workshop is planned for February 2007;
- A third cruise, with a mesopelagic focus, is planned for March 2008.

5.9 AUSTRALIA

There is a strong interest from coastal people.

Action: Julie to talk to Peter Dorothy about Australian involvement.

5.10 UNITED KINGDOM

- Recommendations for funding of the 2025 are going to be released by NERC in November.
- The way forward for IMBER in the UK needs to be discussed after this announcement.

5.11 JAPAN

There is a benthic program in Indian Ocean.

Action: Hiroaki to report at the next meeting.

5.12 Humboldt Current System conference (Lima, 27 Nov- 1 Dec 2006)

The conference is focussed on climate-induced change, and fisheries in the Humboldt Current system.

Action: Sylvie to pay the IMBER sponsorship to the organising committee.

5.13 OMZ Workshop (Concepcion, 24-26 Oct 2006)

It will take place during the SCOR Executive Meeting; Julie, Wajih and Carina will attend this meeting.

Action: IPO make sure there are brochures for distribution at the meeting.

6 IMBER Budget review

The IMBER budget was presented with planned and to-date expenses for 2006. NSF/SCOR funding has been renewed and SCOR confirmed a \$50K U.S. contribution for the next 3 years (2006-2009). CNRS contributed \$25K euros to the IMBER office that has been used for travel expenses and sponsoring. This income has been included in the total IMBER budget.

Approved expenses include (in USD):

- ICED modeling workshop, 2007: 10k
- EUR-OCEANS parameterization workshop, 2007: 10k
- Raymond and Sophie to London: 2k
- DMC meeting, 2007: 15k
- End-to-End Food Web task team: 5k
- Carbon plan printing: 1.5k
- Surface pCO₂ workshop (5 participants, 2007): 7-10k
- IMBER/LOICZ OSC, 2007: 20k + 7.5k in 2008

The IPO should ensure the CNRS funding is spent before the end of the calendar year.

Action: IPO to start managing the French funds and the SCOR/IGBP funds

7 Review of IPO priorities

The IPO needs to be more pro-active in supporting SSC activities, national contacts and with circulating information.

The IPO must take the lead on seeking funding, for IMBER activities.

Continental margins Open Science:

- Take the lead with the organisation
- Form a local organising committee
- Decide on venue and dates
- Assist in seeking Chinese funds
- Seek extra funding for OSC.

Carbon group:

- Participate with the organisation of the Surface pCO₂ workshop in April 2007.
- Work with SOLAS IPO for edition and printing of the carbon Implementation Plan
- Work with SOLAS office to seek funding for secretarial support of the group

Data management:

- Formally appoint the Data Management Committee
- Support preparation of an IMBER Data Management Strategy
- Write metadata guidelines for endorsed projects

Climate variability (IMBER/CLIVAR):

- Planning meeting for an Open Science conference

Administration:

- Transfer IMBER funds administration from SCOR to the IPO
- Manage the CNRS (French) IMBER funds
- Gain the capacity to use conference planning and organisation software.
- Identify potential sources of funding for IMBER activities

IMBER Open Science Meeting:

- Develop a strong link with the Canadian SCOR organisation
- Decide on venue and dates
- Form a local and international organising committee
- Seek funding for OSC.

IMBER SSC meeting in Victoria:

- fix dates
- book venue
- Organise logistics for meeting.

Email / mailing / national contact list

- Need some input for Canada, Germany and the Netherlands
- Contact for Germany could be the chair of G-IMBER, Jürgen Alheit

Action: IPO should contact Sharon Smith from US JGOFS, to get their Middle East contact list.

Action: Sylvie to provide the C-SOLAS contact list

SSC Rotation

In 2007, Dave Hutchins and Ann Bucklin will retire from IMBER. The proposed names to replace them are Mary-Elena Carr (Biogeochemist from USA) and Michael Roman (Biologist from USA).

8 Next SSC Meeting

The next SSC Meeting will be held in Victoria in May-June 2007.

Possible location: Dunsmuir Lodge

Action: Sylvie to prepare letters of thanks for Ann and Dave for their contribution to the development of IMBER.

Action: Julie and the IPO are to determine national representatives to invite.

Action: Elena and Jay to continue to take care of the logistics.

Annex 1

Joint IMBER/GLOBEC Executive Meeting

Plymouth Marine Laboratory (Plymouth, UK)
28 September 2006

Present:

IMBER SSC members

Julie Hall, Dennis Hansell, Patrick Monfray, Arne Körtzinger, Jack Middelburg, Raymond Pollard, Sylvie Roy, Sophie Beauvais

GLOBEC SSC members

Cisco Werner, Ian Perry, Manuel Barange, Dawn Ashby, Roger Harris, John Field, Eileen Hoffman (by Conference Call)

1 End-to-end food web task team

Manuscript

- The group has submitted a review to *Science* focused on the concepts for end-to-end food web research. It has been rejected as it was not “novel” enough.
- The joint committee had a discussion about the manuscript. There is a general feeling that the paper is missing the issue about how we can make headway in the experimental, observational and modeling components of marine end-to-end food webs. The definition of end-to-end food web is broad and includes “the impacts” which was not present in the original version presented at the SSC.

Action: Julie and Cisco to communicate comments about the paper to Coleen and Mike.

Recommendation to form a Working group

- The joint committee have been impressed by the work done so far; however, the group needs to refine objectives, to adopt a new vision. The joint committee feels the terms of reference of the task team have not all been fulfilled.
- The new proposed ToRs are not clear and the joint committee agrees not to form a new group before these have been revised.
- Since there are overlapping issues with the ICED, EUR-OCEANS and CLIOTOP proposals for workshops, it is suggested to use the planned activities in the next year to develop a new perspective and get scientists from those groups involve in the development of a new working group.

- It is proposed to charge Coleen and Mike of the task team to attend four workshops over 2007 and ask them to develop recommendations. The meetings identified are:
 - Parameterization workshop (Cadiz, March, 2007)
 - ICED modeling workshop (Late 2007)
 - CLIOTOP Open Science Conference (Late 2007)
 - EUR-OCEANS End to end food web workshop (November 2007)
- It is suggested that Coleen and Mike digest that information after the meetings, revise the ToRs, suggest a membership and identify a new vision.
- The group will report to IMBER and GLOBEC in Cape Town during the IGBP Congress in May 2008.

2 Joint EUR-OCEANS/IMBER/GLOBEC parameterization workshop

Objectives

IMBER, EUR-OCEANS and GLOBEC are co-sponsoring an International Symposium on “Parameterization of Trophic Interactions in Ecosystem Modeling”, in Cadiz (March 20-23rd 2007). This symposium is convened by Mike St John and Patrick Monfray. This symposium will provide a review, synthesis, and forum for lively discussion of the present understanding of trophic interactions at key interfaces in particular identifying key knowledge gaps and providing a vision for the development of future modeling strategies. John Field suggested adding “trophic structure” in the goal of the symposium.

Action: Patrick to pass John’s suggestion to the organising committee

Format

- The program consists of 8 sessions organised around key speakers who will provide a one-hour visionary presentation of the state of the art in their respective modeling area. Following each of these presentations a discussion session will be led by a provocateur who will focus and lead the debate. In addition to oral presentations, poster sessions will be organized to stimulate informal discussions. Approximately 60 participants will attend the meeting including one-third experimental biologists/ecologists and two-thirds modelers.
- Basically, 8 speakers, 8 provocateurs and 8 rapporteurs are needed.
- Patrick asked the IMBER and GLOBEC Executive Committees to suggest names. Julie asked that gender and geographical balance be considered.

IMBER and GLOBEC will fund 10 participants (5 IMBER/5 GLOBEC) from individual funding requests. For IMBER these participants will be from outside Europe and preferably from developing countries.

Action: Sylvie to contact Mike St John to identify how IMBER-funded participants will be selected.

3 IRD/EUR-OCEANS/IMBER/GLOBEC Upwelling Symposium Proposal

- Pierre Fréon (IRD, France) asked IMBER and GLOBEC to sponsor an international symposium on eastern boundary upwelling ecosystems to be held in Casablanca, Morocco (mid-June 2008). About 300 participants would attend this meeting. The tentative budget is 160 000 US\$. The sponsorship of IRD and EUR-OCEANS is nearly secured.
- The symposium will deal with nearly all aspects related to the structure and functioning of the four major eastern boundary upwelling ecosystems (Benguela, California, Canary and Humboldt).
- The output of the symposium will be either special volumes published in international peer-reviewed journals or a book of proceedings to be published by an acknowledged publisher after a peer-review process.
- IMBER and GLOBEC agreed to support this symposium. IMBER and GLOBEC will ask the organizers the amount of support they expect.

Action: Sylvie/Manuel to contact Pierre Fréon to inquire about the amount of support they expect from IMBER and GLOBEC.

Action: IMBER and GLOBEC to jointly identify a co-convenor for the symposium on upwelling.

Action: Sophie to inform the Capacity Building Working Group about this symposium.

4 ICED: Southern Ocean Regional activity

ICED has also been endorsed as a co-ordinating project for the International Polar Year (IPY). ICED will lead and coordinate international research in conjunction with the Southern Ocean System of the EUR-OCEANS and the consortia ICED-IPY.

ICED held its first scientific session during the 2nd Scientific Committee on Antarctic Research (SCAR) OSC in July 2006 in Hobart. A summary of the session will be posted on the ICED, IMBER and GLOBEC websites.

Science Plan

- The latest version of the ICED SPIS was sent out for review to all ICED workshop delegates at the end of June 2006. The revised draft will be sent to a wider group for peer review, before submitting to IMBER/GLOBEC for approval. Once finalized, this will be published jointly by IMBER and GLOBEC in October/November 2006. The issue of ocean acidification and carbon cycle needs to be embedded in the science plan. Patrick suggested making use of the paper on aragonite undersaturation in the Ross Sea (Paul Tréguer) that links with the Orr *et al*, 2005 paper (Nature, vol. 437). Eileen and Eugene are trying to find a way to embed ocean acidification in the science plan.
- The steering Committee will be formed following the approval of the Science Plan.
- ICED should send a list of suggested reviewers when sending the Science plan to IMBER and GLOBEC for review.

- IMBER and GLOBEC agreed to jointly appoint the ICED SSC.

Action: ICED to submit science plan for review to IMBER and GLOBEC with a list of potential reviewers and SSC members.

Action: SSCs to jointly appoint reviewers for ICED Science Plan.

Communication

- An article summarizing the first ICED workshop was published in the April 2006 issue of the International GLOBEC Newsletter.
- ICED recently developed its logo and its website. ICED will ensure clear links are made to both IMBER and GLOBEC websites.

Action: Sophie and Dawn to link the IMBER and GLOBEC website with the ICED website.

Taking ICED forward: workshop proposal

- An evening meeting was held in Hobart between those members of the ICED interim steering committee and Julie Hall. A number of items were discussed for the near future including the idea of a series of ICED-IPY workshops and a series of ICED-led review papers.
- ICED presented a proposal for a modeling workshop to be held in late 2007. The objectives are 1) to determine how trophic interactions affect the dynamics of individual species/groups in oceanic food webs and their responses to climate change and 2) to understand how trophic interactions affect the overall structure of the ecosystem and its characteristics responses to perturbation and change.
- The workshop will happen after the publication of the Science Plan.
- The Southern Ocean modeling workshop could provide an example for the End-to-end food web group for the study of other systems.
- The product of the workshop should be a paper in an Antarctic journal.

Budget expectation

- ICED requested £5K for supporting the modeling workshop in late 2007.
- IMBER should also plan on support for the publication of the Science Plan.
- No financial support for SSC meeting was requested.

5 BASIN

The North Atlantic BASIN program is an EU- and NSF-funded program. After the workshop held in Reikjavik, March 2005, a specific support action (SSA) has been submitted and funding obtained to support 4 workshops. The NSF project manager is Phil Taylor. The EU manager is Pierre Maty.

Workshops are proposed for 2007 (quarterly) to develop a plan for BASIN.

Action: Julie to keep in touch with Cisco to ensure good links between the BASIN initiative and IMBER.

6 Chinese meeting offer

- Chinese IMBER/GLOBEC projects are interested in hosting a joint IMBER/GLOBEC meeting in 2008.
- A topic for this meeting was discussed. Manuel suggested it could be a good opportunity to organize an E2E symposium.
- It is also suggested to hold a local Asian-focussed meeting (Japan/Korean/China)
- IMBER and GLOBEC are potentially interested, but we need to identify an interesting topic.

Action: Sylvie to contact Jing to express the interest from IMBER and GLOBEC to participate in this effort and the need to identify a topic of strong interest to China and IMBER & GLOBEC.

7 Data Management

Raymond asked advices from GLOBEC regarding the data management strategy that GLOBEC adopted.

- GLOBEC tried to centralize a global database in connection with BODC, IGBP, and JGOFS. GLOBEC's experience is that it is impossible to collect all data. GLOBEC advises to manage metadata only, even though having complete metadata is very difficult.
- The strong recommendation is to start from the beginning and that endorsed projects identify a data specialist (DS). The DS will be responsible for providing IMBER with metadata.
- EUR-OCEANS include an active Work Package on Data Management, led by Mikael Diepenburg. He could have good advice for us.
- Seadatanet is a Cruise Summary Report (CSP) repository. CSP can be submitted online through Seadatanet portal.
- GLOBEC used the Global Change Master Directory (GCMD) to make metadata available through internet.
- SeaDataNet also recently won approval from POGO to set up a database or research cruises.
- GOOS dealt with IODE.

Action: Sophie to explore what is possible with Seadatanet and GCMD, and contact Michael Diepenbroek to have his input.
(Beatriz Balino advises to contact the NASA official Lola Olsen).

8 IMBER theme 4

- Following the last SSC Meeting, IMBER decided to not set up the Task Team yet and to have a workshop together with the other marine projects to identify a way forward for Theme 4.
- IMBER is considering holding a workshop in coordination with the Continental margins OSC in Shanghai.
- GLOBEC suggest to have it with a Boulder meeting next year (July 2007) organised by WG5 on socio-economics aspects and management activities.

(see GLOBEC website: CLIOTOP, contacts: Kathleen Miller and Olivier Maury)

9 IGBP Congress

IGBP is organizing the 4th IGBP Congress to be held in Cape Town (4-9 May 2008). IGBP seeks active involvement of IGBP projects, National IGBP Committees and Scientific networking institutions in the whole scientific programme. IGBP have asked projects to identify a cross-cutting theme to develop in the Congress. Suggestions are:

- End-to-End (terrestrial and aquatic) including the new paradigm of the Ocean
- Observing systems and global change
- IPY and IGBP (High Latitude)
- Ocean Acidification (with SOLAS)

John Field is on the program committee. He will report the suggestions to the committee.

The organisation of the 2008 IMBER SSC meeting was discussed.

10 Issues for Marine Projects meeting in London

IMBER and GLOBEC will attend the Marine Projects meeting in London, December 2006.

11 Addendum to IMBER SPIS

- A joint team will be formed next year to write an addendum to the IMBER SPIS.
- Issues that have been raised for consideration so far are:
 - Human dimension
 - CLIOTOP
 - ESSAS
 - ICED
 - End-to-End food web
- This group should start early 2008
- We should budget for a meeting of the group in 2008.