



SEVENTH FRAMEWORK PROGRAMME
THEME 6

Environment (Including Climate Change)

MEECE Synthesis Workshop Report, Berlin 2012

Proposal Acronym: **MEECE**

Proposal full title: **Marine Ecosystem Evolution in a Changing Environment**

Grant agreement no: **212085**

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MEECE Berlin Workshop
1-2 November 2012, Berlin, Germany

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Summary

The final workshop of the MEECE project was held in Berlin. One goal of this workshop was to examine the diverse range of regional model outputs produced under the full range of MEECE scenarios and define strategies for synthesising the results for inter-regional comparison. The partners presented the results from the regional models demonstrating a wide range of responses in different regions on the global and regional scale. A number of synthesis strategies were proposed and discussed by the partners and actions taken to implement some of them (see table). In addition we looked at the status of the remaining deliverables in WP5 and discussed how better to integrate regional model outputs into the final reports. The MEECE web Model Atlas was demonstrated to the community and suggestions noted on how to improve it. Finally it was proposed that we canvass the MEECE community to see if there was interest in developing a MEECE special Issue.

List of Actions

No.	Action	Delivered	Person responsible
1	HTL plots (4 points per ecosystem Point 1 AIB 2080 (climate) Point 2 Fishing– World Market and Global Community)	January 2013	Relevant person per Region
2	LTL plots Consistency plots Radar plot using Atlas data SYN/ANT plot (best endeavours)	January 2013 End December 2012 December 2012	Jason provides template Benguela – Eric North Sea - Jason Baltic - Corrina Biscay - Marina PML Icarus to provide template Benguela – Eric Aegean – Kostas Baltic – Corrina Barents – Morten North Sea – Sarah Adriatic – Marco
3	Contamination Fact Sheet	November 2012	Alessandro D./Jessica H.
4	Fisheries Fact sheet	November 2012	GerJan Piet/ Jessica H.
5	Feedback on Model Atlas	Mid November 2012	Everyone
6	Missing data delivered from Atlas: caveats, regional summaries, remaining LTL and HRL plots etc Check descriptions for maps	January 2013 November 2012	Relevant persons per region Black Sea – Baris S. Barents – Morten S. Baltic – Corrina S. Adriatic – Marco Z. Atlantic – Yuri A. Benguela – Eric M. Aegean – Kostos T.

			Biscay – Guillem C. Global – Laurent B.
7	Fact Sheet: Management Strategies	January 2013 dependant on completion of D5.3/4	Margit Eero/Jessica Heard
8	Fact Sheet: Expert Systems	December 2012	Alessandro Dagnino
9	Special Issue Icarus to circulate a request for ideas for synthesis papers for special issue – then decided if possible to produce full special issue	Mid November 2012	Icarus Allen to initiate Volunteers for guest editors
10	Periodic Reporting templates circulated to consortium	December 2012	Jessica Heard

Aim of the workshop

To generate an overall summary of the modelling activities in the project and ensure information is fed into WP5

Key tasks addressed during the workshop included:

T4.3 Relative impact of climate and direct anthropogenic drivers

Comparative assessment of the WP3 and WP4 results will be carried out in order to disentangle the climatic from the direct anthropogenic drivers.

D4.3 Synthesis report on the comparison of WP3 and WP4 simulations (M48, R, PU, resp UNIBO)

Presentations and discussions

On the first morning of the workshop partners presented their latest work on the regional models, followed by a discussion session to address any deviations and to finalise a common approach to synthesising the final model results.

Presentations are available to view at http://www.meece.eu/meetings/Berlin/berlin_pt.html

The afternoon session focused on WP5, with presentations on latest achievements and work to be completed. A discussion session on maximising the linkages between WP3, 4 and 5 followed the presentations.

Participant's discussed new ideas for presenting results to help disseminate project findings, and the possibility of producing a MEECE special issue.

Additional plots: The SYN/ANTAGO plot

(or Amplification/Attenuation plot)

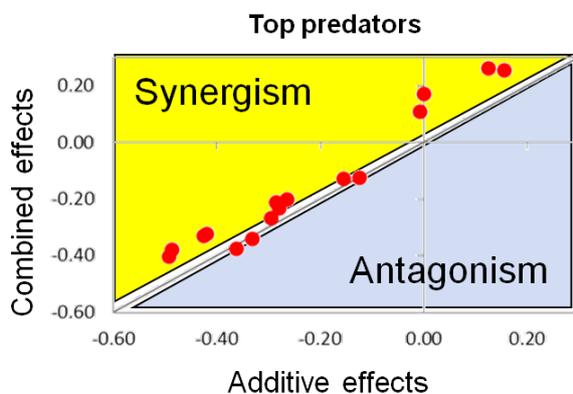
Where current simulations allow partner will work on generating a new plot, draft name Synergistic/ Antagonistic plots, details are provided below:

Question addressed: are combined effects of climate change and fishing bigger than their individual summed effects?

Ecosystems involved:

- Benguela (Y. Shin)
- Aegean Sea (K. Tsiaras)
- North Sea (J. Beecham)
- Adriatic (M. Zavatarelli)
- Bay of Biscay (M. Chifflet)
- Black Sea (B. Salihoglu)
- Baltic Sea (S. Neuenfeldt)

Actions



We aim to produce one plot which would synthesize the combined effects across ecosystem and models.

The climate scenario is A1B in 2080 slice period.

The 2 fishing scenarios are:

- Global Community (all F species at FMSY)
- World Market (all F species at FPA)

Simulations to be run (some of them already done in some ecosystems) on 1-way coupled models:

- run isolate effect climate A1B 2080
- run isolate FMSY scenario (GC) on present days config
- run isolate FPA scenario (WM) on present days config
- run combined GC+A1B
- run combined WM+A1B

Out of these experiments, each ecosystem will provide:

- summed variation in isolated GC and A1B for B(small pela) and B(demersal)

- summed variation in isolated WM and A1B for B(small pela) and B(demersal)
- combined variation in GC+A1B for B(small pela) and B(demersal)
- combined variation in WM+A1B for B(small pela) and B(demersal)

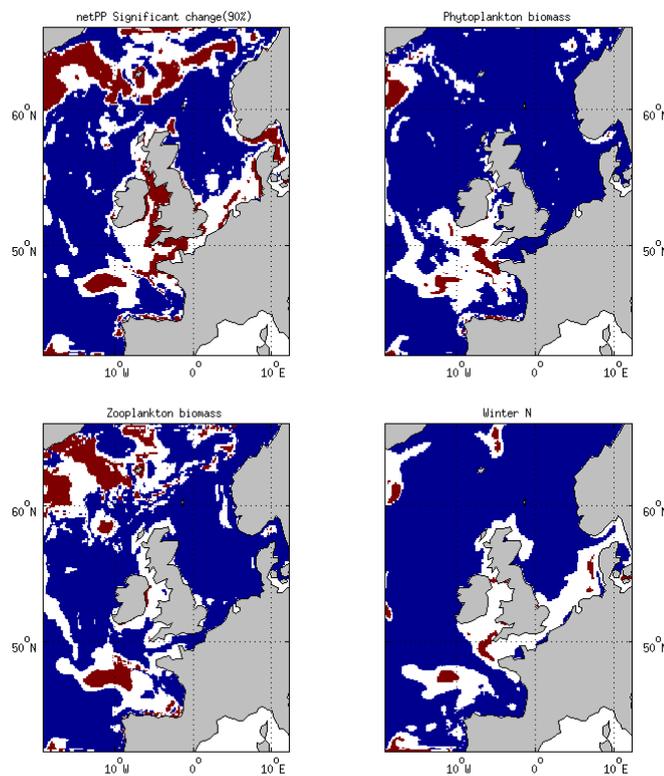
This will correspond to 4 points in the plot.

Deadline

End January 2013

Plots of statistically significant change

Plots were proposed by Jason Holt which shows the statistically significant differences between pairs of runs. See example below which show the difference between IPSL climates forced simulations (2100-2000) of the NW European Shelf made using POLCOMS ERSEM. Blue indicates statistically significant negative change, brown statistically significant positive change, and white indicates regions where the changes are not statistically significant.



Dissemination and reporting

On the final morning of the workshop and the draft web based MEECE Model Atlas was presented and feedback from the consortium provided, resulting in further modifications and development before the Atlas is circulated to the User Advisory Group for feedback.

Followed by a general discussion about the delivery of the final reports and a wrap up of the project.

Special Issue: Suggested topics included.

- Downscaling
- Multi model ensemble in the North Sea
- Climate response – All regions
- Interannual variability and hindcast (AMM – Atlantic Margin Model)
- Baltic/Black Sea comparison
- Black Sea – addressing region specific questions, e.g. physics, HTL, LTL, impact of climate variability on model
- POM BFM OSMOSE –
- Synergist/antagonistic
- Fmsy paper
- Barents Sea/ Northwest Europe comparison

Workshop Participants

- Alessandro Dagnino | U Piedmont
- Baris Salihoglu | IMS_METU
- Corrina Schrum | UiB
- Eric Machu | IRD
- George Triantafillou | HCMR
- GerJan Piet | IMARES
- Guillem Chust | AZTI
- Icarus Allen | PML
- Jason Holt | NERC
- Jessica Heard | PML
- Jonathan Beecham | Cefas
- Kostas Tsairas | HCMR
- Margit Eero | DTU
- Momme Butschenson | PML
- Morten Skogen | IMR
- Sarah Wakelin | NERC
- Yunne Shin | IRD
- Yuri Artioli | PML

Workshop Agenda

MEECE Final Synthesis Workshop

Berlin 1st 2nd November 2012

Aim of the workshop: To generate an overall summary of the modelling activities in the project and ensure information is fed into WP5

T4.3 Relative impact of climate and direct anthropogenic drivers

Comparative assessment of the WP3 and WP4 results will be carried out in order to disentangle the climatic from the direct anthropogenic drivers. A common methodological approach to carry out the assessment will be defined in a dedicated meeting.

Methodologies for synthesizing the information of multi-model multi-forcing ensembles into a probabilistic picture of future ecosystem function (cooperation with WP3) will be used. We shall produce synthetic reports summarizing the main consequences of the analyzed scenarios in the ecosystem. Mid-term and final year workshops will facilitate this. This distilled information will be provided as a web-based atlas to WP's 5 and 6. A joint workshop will be held between WP's 3, 4 and 5 to assess the relative impacts of climate and direct anthropogenic drivers (M45)

D4.3 Synthesis report on the comparison of WP3 and WP4 simulations (M48, R, PU, resp UNIBO)

Finalise the demonstration of linkages between models and WP5.

- D5.2 decision support tools
- D5.3/D5.4 Management Strategy Evaluation Tools
- D5.5 Indicators

Thursday

9:00 Introduction aims and objectives of workshop: Allen

Status of the project. 30 mins.

Regional presentations: High level summary of the significant outcomes of the simulations in WP3 and WP4. i.e. Climate simulations (LTL, HTL), anthropogenic simulations (present day), multiple drivers (2030:2040), suggested approaches to the synthesis.

9:30 Global (Bopp)

9:45 Barents (M Skogen, C Schrum)

10:00 Baltic (C Schrum, S Neufeld/M Eero)

10:15 NE Atlantic / N Sea (Holt, Wakelin, Artioli, Butenschon, Schrum, Beecham)

10:45 Biscay (G Chust)

11:00 Coffee

11:30 Benguela (Machu, Shin)

11:45 Adriatic (M. Zavatarelli)

12:00 Aegean (George T.)

12:15 Black Sea (B. Salihoglu)

12:30 Discussion:

How do we best define a common approach to synthesising the model results. Comparative approaches. Addressing uncertainty. Addressing probabilistic view (if we can ; if not what's the alternative)

13:00 Lunch

14:00 – Continue discussion

15:30 Coffee

WP5: short presentations on the current status (15 mins)

16:00 Decision support (Piet)

16:15 MSE (Eero)

16:30 Indicators (Shin)

16:45 Discussion

Status of WP5, how best to maximise linkages between WP's

17.30 Close

19:30 Group diner TBC

Friday

9:00 Discussion: extending the common synthesis approach to WP5.

9:30 Model based Atlas

10:00 Factsheets and outreach

11:00 Reporting

11.30 Action for final delivery of project

12:30 Wrap –up and thanks

13:00 Finish