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Theme Session R

Mapping and modelling of planktonic ecosystems for better monitoring and future projections of responses to global change

Conveners: Icarus Allen (UK), Johnny Johannessen (Norway), and Marcello Vichi (Italy)

Papers/Oral Presentations

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| R:01 | <p>Title: Estimation from space of organic and inorganic production by phytoplankton in the ice-free Arctic Ocean</p> <hr/> <p>Authors: Dmitry Pozdnyakov, Dmitry Petrenko, Elizaveta Zabolotskikh, and Francois Counillon</p> <hr/> <p>Keywords: remote sensing, phytoplankton, production of organic and inorganic carbon, Arctic Ocean</p> |
| R:02 | <p>Title: Mapping plankton biomass in the deep-ocean: an ecological provinces approach</p> <hr/> <p>Authors: A. Bode <i>et al.</i></p> <hr/> <p>Keywords: plankton, biomass, deep-ocean, size-fractions, ecological provinces, Atlantic, Pacific, Indian</p> |
| R:03 | <p>Title: How the Subpolar gyre strength influences phytoplankton blooms dynamics in the North Atlantic</p> <hr/> <p>Authors: A.S.A. Ferreira, M. R. Payne, B. MacKenzie, and A. W. Visser</p> <hr/> <p>Keywords: Phytoplankton blooms, subpolar gyre, North Atlantic</p> |
| R:04 | <p>Title: Modeling interannual variability in the lower trophic levels in the North Atlantic</p> <hr/> <p>Authors: Annette Samuelsen, Ehouarn Simon, and Laurent Bertino</p> <hr/> <p>Keywords: North Atlantic, interannual variability, modeling, phytoplankton</p> |
| R:05 | <p>Title: Modelling climate impacts on acidification in the North and Baltic Sea with ECOSMO II</p> <hr/> <p>Authors: Ute Daewel, Corinna Schrum, and Dhanya Pushpadas</p> <hr/> <p>Keywords: North and Baltic Sea, ECOSMO, acidification, climate change</p> |
| R:06 | <p>Title: Challenges in the integration of ecological indicators within a network of Atlantic Ocean observations</p> <hr/> <p>Authors: Marie-Fanny Racault, Trevor Platt, Shubha Sathyendranath, Ertugrul Agirbas, Victor Martinez Vicente, and John Bruun</p> |
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Keywords: ecological indicators, earth observation, climate change, phytoplankton

R:07 **Title:** Effects of climate change on the *Calanus complex* in the Nordic Seas from individual based model simulations

Authors: Geir Huse, Solfrid Hjøllø, Cecilie Broms, Morten D. Skogen, and Webjørn Melle

Keywords: *Calanus finmarchicus*, *C. hyperboreus*, Nordic Seas, individual based modeling, life history strategy, climate change, genetic algorithm

R:08 **Withdrawn**

[R:09](#) **Title:** Impact of resolved scales on global marine biogeochemical models

Authors: William McKiver, Marcello Vichi, and Tomas Lovato

Keywords: Atlantic ocean, resolution, biogeochemical, models

[R:10](#) **Title:** New methodologies to build an integrated global plankton database: the GreenSeas Analysis Framework

Authors: John Bruun *et al.*

Keywords: Atlantic, integrated analysis, protocols

[R:11](#) **Title:** Assessment of seasonal and decadal signals in the in-situ Atlantic plankton data

Authors: John Bruun *et al.*

Keywords: Atlantic, *in-situ*, historical, longer term

R:12 **Title:** Satellite derived phytoplankton functional group estimates in the northeast US Continental Shelf Large Marine Ecosystem

Authors: Kimberly Hyde, Antonio Mannino, Xiaoju Pan, Margaret Mulholland, Michael Fogarty, Christopher Melrose, and Jonathan Hare

Keywords: phytoplankton functional groups, primary production, diatoms, ocean color remote sensing

R:13 **Title:** Climate-driven changes in plankton trophic dynamics

Authors: Stefano Ciavatta, Claudia Halsband, Claire Widdicombe, Tim Smyth, Elaine Fileman, and Angus Atkinson

Keywords: essential climate variables, plankton trophic dynamics, Western Channel Observatory

[R:14](#) **Title:** Modelling the beginning and end of a planktonic life stage – the distribution of cod eggs and settled juveniles in the North Sea

Authors: Hannes Höffle and Peter Munk

Keywords: fish eggs, juvenile fish, cod, North Sea

Posters

R:15 Poster	<p>Title: Planktonic ecosystem response to climate warming, signified by changes in abundance of krill and amphipods in Kongsfjorden, Svalbard</p> <p>Authors: Jon Rønning, Padmini Dalpadado, and Haakon Hop</p> <p>Keywords: Key words: macro-zooplankton, Kongsfjord, Arctic fjord systems, climate effects</p>
R:16 Poster	<p>Withdrawn</p>
R:17 Poster	<p>Title: Intercomparison of zooplankton (net) sampling systems used in mapping zooplankton.</p> <p>Authors: Hein Rune Skjoldal, Peter H. Wiebe, Lutz Postel, Tor Knutsen, Stein Kaartvedt, and Doug Sameoto</p> <p>Keywords: zooplankton; plankton nets; net intercomparison; towing speed</p>
R:18 Poster	<p>Title: Nitrogen regeneration and assimilation rates in the euphotic zone of the Southern Benguela upwelling system</p> <p>Authors: Raissa Philibert, Howard Waldron, and Darren Clark</p> <p>Keywords: Southern Benguela; Nitrogen dynamics; Nitrification</p>
R:19 Poster	<p>Title: Towards a reanalysis of the North Atlantic and Arctic Ocean biology: a multi-year assimilation of satellite ocean color data with the deterministic ensemble Kalman filter</p> <p>Authors: Ehouarn Simon, Annette Samuelsen, and Laurent Bertino</p> <p>Keywords: data assimilation, reanalysis, North Atlantic/Arctic Ocean</p>
R:20 Poster	<p>Title: Copepods Monitoring in the southern Moroccan atlantic ocean : 21°N to 26°N</p> <p>Authors: Soukaina Zizah, Omar Ettahiri, Siham Salah, Ahmed Yahyaoui, and Mohammed Ramdani</p> <p>Keywords: Chlorophyll, Copepods, Biomass, Pelagic ecosystem, South Moroccan Atlantic</p>
R:21 Poster	<p>Title: Planktonic ecosystem model in the Japan Sea based on an operational ocean forecast system</p> <p>Authors: Tatsuro Watanabe and Katsumi Takayama</p> <p>Keywords: Japan Sea, NEMURO, operational ocean forecast system</p>
R:22 Poster	<p>Title: Applications of Box Jenkins Transfer function methods to identify seasonal and longer term trends in Marine time series</p> <p>Authors: John Bruun; Paul Somerfield, and Icarus Allen</p> <p>Keywords: Atlantic, time series analysis, transfer function, coherence</p>
R:23 Poster	<p>Title: Global plankton data and marine ecosystem modelling - GreenSeas</p>

Authors: The Green seas consortium

Keywords: plankton data, global, numerical models, environmental indicators

R:24 **Title:** Atlantic zone monitoring program zooplankton atlas for the Northwest
Poster Atlantic

Authors: Catherine L. Johnson, Pierre Pepin, Michel Harvey, and Benoit Casault

Keywords: Northwest Atlantic, zooplankton, spatial distribution, biogeography

R:25 **Title:** Primary production in coastal waters off Mid-Norway
Poster

Authors: Ingrid H. Ellingsen, Ole Jacob Broch, Øyvind Knutsen, Johanne Arff, Thomas A. McClimans, and Dag Slagstad

Keywords: coupled models, primary production, upwelling

R:26 **Title:** Planktonic copepods structures and the impact of environmental
Poster parameters "Northwest African upwelling area"

Authors: Siham Salah *et al.*

Keywords: Cape Ghir Filament, Copepods, Seasonal variation, Physico-chemical parameters and Nutrients

[R:27](#) **Title:** The Integrated Ecosystems Assessment Initiative – enabling the
[Poster](#) assessment of impacts on Large Marine Ecosystems: informatics to the forefront of science based decision support

Authors: Massimo DiStefano, Peter Fox, Stace Beaulieu, and Andrew Maffei

Keywords: data science, xinformatics, and escience
