

The OSPAR Science Agenda



Lisette Enserink, C. Moffat, **Bill Turrell**, P. Nilsson, I. Terrier, M. Dickey-Collas



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- A Regional Seas Convention
- Identifies threats to the marine environment (Quality Status Reports)
- Ensure effective national action to combat these, through ..
- Programmes and Measures
- Regional Coordination





North-East Atlantic Environment Strategy

6 Strategies

Strategy	Committee or group
the Biodiversity and Ecosystem Strategy	BDC and EIHA
the Eutrophication Strategy	HASEC
the Hazardous Substances Strategy	HASEC
the Offshore Industry Strategy	OIC
the Radioactive Substances Strategy	RSC
a Strategy for the Joint Assessment and Monitoring Programme (JAMP)	All committees for their theme, the Coordination Group for 'Theme A' (General, i.e. overall Ecosystem Approach)

Why did OSPAR need a Science Agenda?

- **1992 Convention – OSPAR work must be science based**
- **Science base – Contracting Parties + Wider science community**
- **2003 - Ecosystem Approach endorsed by Ministers**
- **Ecosystem Approach within the European Union ..**
 - Integrated Maritime Policy
 - Environmental Pillar - MSFD
 - Norway has similar objectives (integrated Management Plans)

Why did OSPAR need a Science Agenda?

- **Quality Status Reports**
 - Identified gaps in knowledge
- **OSPAR Joint Assessment and Monitoring Programme (JAMP)**
 - Long term improvements to assessment and monitoring
 - But dependent on scientific developments
- **OSPAR Science Agenda compliments JAMP**
 - Long term development of research needs
 - Providing new science for JAMP
 - A parallel focus on MSFD delivery
- **OSPAR Science Agenda**
 - Remove blocks to progress of OSPAR Strategies

Aims of the OSPAR Science Agenda

- **Prioritise OSPAR research needs (especially with respect to MSFD)**
- **Communicate research needs to funders and providers**
- **Set framework for partnership with science community (e.g. ICES)**
- **Provide input to national science programmes**
- **Define research needs best addressed at regional / international level**
- **Promote Joint Projects**

Criteria used to select Research Needs

Research needs should ..

- ... relate to a concrete OSPAR deadline (e.g. Intermediate Assessment 2017)**
- ... be applicable at a regional or sub-regional basis**
- ... be related to a human activity that may have ecosystem-level impact**
- ... have a likelihood of success within the required time frame**

6 Themes

A. Ecosystem approach and cross-cutting issues

B. Biodiversity and ecosystems (MSFD D1 D2 D3 D4 D6 D7 D10 D11)

E. Eutrophication (MSFD D5)

H. Hazardous substances (MSFD D8 D9)

O. Oil and gas industry

R. Radioactive substances

- **Themes of JAMP – Joint Assessment and Monitoring Programme**

6 Themes – 63 Research Needs

A	Ecosystem Approach and Cross-Cutting Issues		2
B	Biodiversity and Ecosystems	General	10
		MSFD <u>D1</u> (Biodiversity)	7
		MSFD <u>D2</u> (Non-Indigenous Species)	3
		MSFD <u>D3</u> (Commercial Fish)	5
		MSFD <u>D4</u> (Food Webs)	6
		MSFD <u>D6</u> (Seabed Integrity)	2
		MSFD <u>D7</u> (Hydrographic Conditions)	2
		MSFD <u>D10</u> (Marine Litter)	5
		MSFD <u>D11</u> (Noise)	3
E	Eutrophication	MSFD <u>D5</u> (Eutrophication)	6
H	Hazardous Substance	MSFD <u>D8</u> (Contaminants)	7
		MSFD <u>D9</u> (Contaminants in Food)	5

- Input from Contracting Parties, OSPAR Committees
- FP7 STAGES - Provided significant input from Pressures and Impacts Workshop

B – Biodiversity and Ecosystems

D1 - Biodiversity

#14 - Develop and **apply new technologies for rapid biodiversity discovery**, especially environmental genomics and other 'omics' technologies, for improved understanding of functional biodiversity

B – Biodiversity and Ecosystems

D2 – Non-indigenous Species

#20 – Develop **risk based criteria** to highlight key **pathways of non-indigenous species (NIS) introduction**, hot spot areas and secondary spread in order to assess effectiveness of management measures

E – Eutrophication

D5 - Eutrophication

#50c – Rapid phytoplankton species identification, origin, early detection, and prediction of HAB, e.g. by improved **remote sensing** and by **molecular methods**

H – Hazardous Substances

D8 - Contaminants

#55 – Develop an understanding of the impact of climate change and ocean acidification on the effects, distribution and presence of **hazardous substances**

Research Needs prioritised for MSFD

- **ICG-MSFD - Set MSFD research priorities to:**
 - Inform EU level science needs agendas, e.g.
 - EU programmes, JPI Oceans Strategic Research and Innovation Agenda
 - Start joint research projects, potentially using EU funds
- **Examples of MSFD priority research needs:**
 - **Cumulative effects** of human pressures on biodiversity
 - **Thresholds and baselines** for **biodiversity indicators**
 - Methods to **evaluate impact** of spatial and temporal distribution of human activities **on vulnerable benthic habitats**
 - Relationship between types and amounts of **litter and “harm”** at populations and individual level
 - **Effect of** increased **ambient noise levels** on marine life

Conclusion

- **Member States need to implement MSFD in a coherent way**
- **Article 12 assessments noted**
 - **lack of regional coherence**
 - **significant research needs**
- **Organise regional cooperation through RSCs (OSPAR/HELCOM)**
 - **eg. Developing common indicators for GES**
 - **Making of roof report (IA 2017) for the 2018 MSFD assessment**
- **Need to address regional coherence and research gaps for 2018 MSFD assessment**

- **OSPAR Science Agenda**
 - **Provides prioritised research needs (including MSFD priorities)**
 - **From the perspective of**
 - **OSPAR Contracting Parties**
 - **OSPAR Committees**
 - **Available to be used by science providers and funders**
 - **National and Regional**

- **Next steps**
 - **Keep OSA current and relevant**
 - **Promote OSA and prioritised MSFD research needs**
 - **Clarify, summarise, simplify**
 - **Disseminate**
 - **Promote regional Joint Projects**
 - **With OSPAR involvement**
 - **Cross-national, cross-institute**

Examples of Joint Projects

Funding: EMFF Call DG ENV/MSFD/Action Plans 2014
Coordinator: OSPAR Secretariat
Name: Applying Ecosystem Approach to Regional Habitat Assessments
Acronym: EcApRHA
Status: Pending decision

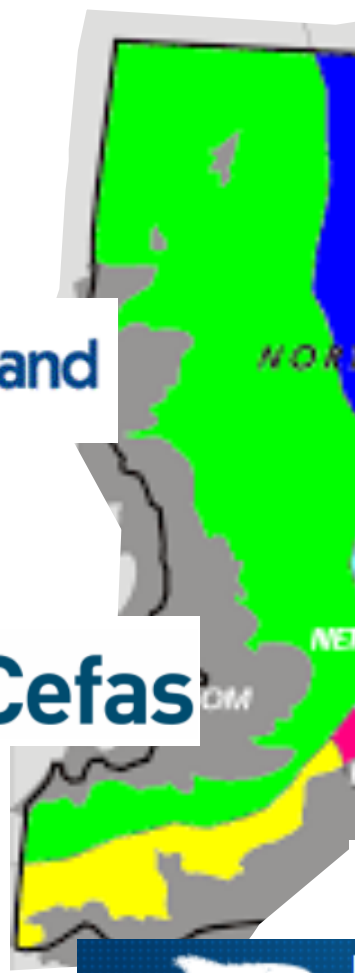
Funding: DG ENV call ENV/PP 2012/SEA “New knowledge for integrated management”
Coordinator: Netherlands
Name: Towards a Joint Monitoring Programme for the North Sea and Celtic Sea
Acronym: JMP NS/CS
Status: Funded (2014-2015)

Joint Project – JMP NS/CS (2014-2015)

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 Cefas

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Aim

Investigate Joint MSFD Monitoring Programme

Achievements

Assembled consortium
Established dialogue

- regionally
- between science / managers / policy

Started evolution / thinking needed

Failure

No monitoring legacy
EU provided “seedcorn” funding
National barriers ??

Future

The “North Sea Institute” proposal ?

Further Information

- **Google “OSPAR Science Agenda”**

http://www.ospar.org/documents/dbase/publications/p00642/p00642_ospar_science_agenda.pdf

- **Note the Background Document – Available by email from OSPAR Secretariat**
 - **Full details of national comments and ideas on science priorities**

secretariat@ospar.org

- **MSFD research priorities from ICG-MSFD**

[CoG\(2\) 14/03/03, CoG\(2\) 14/3/Info 1](#)

- **Email Lisette Enserink**

lisette.enserink@rws.nl

Examples of OSPAR Priority Research Questions

A – Ecosystem Approach and Cross-cutting Issues

General

#2 - Cumulative effects – When is a change significant and when should it trigger action ?

B – Biodiversity and Ecosystems

General

#10 - Increased assessment of the effects of human activities on MPA features

B – Biodiversity and Ecosystems

D3 – Commercial Fish

#27 – Develop methods for quantification of fishing pressure from small scale and recreational fisheries including the impact of discarded fishing gear.

B – Biodiversity and Ecosystems

D7 – Hydrographic Conditions

#36 – Develop a relevant and harmonised definition of “permanent alteration” both in terms of hydrographic conditions and species and habitats to ensure consistency in assessing impacts of major projects