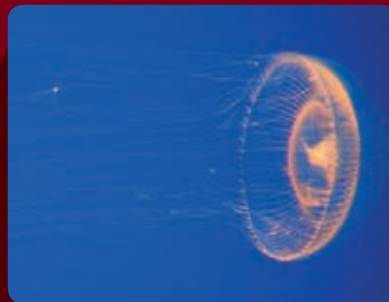




ANNUAL ACTIVITY REPORT



2010

The Marine Board provides a pan-European platform for its member organizations to develop common priorities, to advance marine research and to bridge the gap between science and policy, in order to meet future marine science challenges and opportunities.

Marine Board

The Marine Board (established in 1995) facilitates enhanced cooperation between European organizations involved in marine science (research institutes, research funding bodies and nationally-based consortia of third-level institutes) towards development of a common vision on the research priorities and strategies for marine science in Europe. In 2010, the Marine Board represented 31 Member Organizations from 19 countries.

The Marine Board provides the essential components for transferring knowledge for leadership in European marine research and technology. Adopting a strategic role, the Marine Board provides a forum within which marine research policy advice to national agencies and to the European Institutions is developed, with the objective of promoting the establishment of the European *Marine* Research Area.

The Marine Board operates in partnership with the European Science Foundation.



European Science Foundation

The European Science Foundation (ESF) was established in 1974 to provide a common platform for its Member Organizations to advance European research collaboration and explore new directions for research. It is an independent organisation, owned by 78 Member Organizations, which are research funding organizations, research performing organizations, academies and learned societies from 30 countries. ESF promotes collaboration in research itself, in funding of research and in science policy activities at the European level.



ANNUAL ACTIVITY REPORT

2010

ANNUAL ACTIVITY REPORT

2010

Contents

Marine Board Highlights 2010	4
Message from the Chair	8
Executive Scientific Secretary's Report	10
About Marine Board	12
Marine Board Objectives and Approaches	12
Marine Board Instruments	13
Marine Board Structure and Governance.....	14
2010 in a Nutshell	16
Forum: Providing a European platform for marine science	17
Marine Board Plenary Meetings	17
Marine Board Biennial Forum	18
Marine Board Panels	20
Synergy: Reducing fragmentation in European marine research	22
Framework Programme Projects	22
InnovOceanSite	26
Strategy: Providing analysis and foresight to advance marine science	27
Marine Board Position Papers	27
Navigating the Future	33
OstendDeclaration.....	33
Voice: Expressing a collective vision for marine science	34
Conferences.....	34
Other Stakeholder Collaborations	37
Communication Output	40
Marine Board Finances 2010	41

Annexes

Annex I: Marine Board Member Organizations and Delegates 2010	42
Annex II: Marine Board Plenary Meetings 2010	44
Annex III: Marine Board Working and Vision Group Members 2010	48
Annex IV: Marine Board Panel Members 2010	51
Annex V: Ostend Declaration Drafting Group Members.....	52
Annex VI: Meetings and Events Organized by the Marine Board Secretariat in 2010 (incl. jointly)	53
Annex VII: Presentations to Meetings by Marine Board Executive Committee Members and Secretariat in 2010	56
Annex VIII: Participation in Conference and Meeting Exhibitions in 2010	58
Annex IX: Marine Board Member Contributions 2010	59
Annex X: Full List of Marine Board Publications.....	60
Annex XI: Marine Board Secretariat	64
Annex XII: Glossary.....	65

A Selection of Key Events and

12 January 2010, Copenhagen



22 EU FP7 MARCOM+ kick-off meeting

29 January 2010, Paris



31 Marine Board Vision Group on *Marine Renewable Energy* kick-off meeting

17 February 2010, Brussels



29 Marine Board Working Group on *Marine Microbial Diversity* kick-off meeting

3-4 March 2010, Ostend



33 Marine Board *Navigating the Future IV* Brainstorming Workshop

15-16 March 2010, Brussels



21 EU FP7 CLAMER kick-off meeting

16 March 2010, Brussels



30 Marine Board Working Group on *Marine Protected Areas* kick-off meeting

19 May 2010, Gijon



27 Launch of Marine Board-ICES-EFARO joint report, *Science Dimensions of an Ecosystem Approach to Management of Biotic Ocean Resources*, SEAMBOR

21-25 June 2010, Aquafredda di Maratea



36 Marine Board – ESF – COST High-level Conference, *Marine Biotechnology: Future Challenges*

29-30 June 2010, Ostend



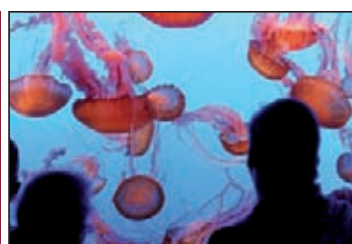
22 EU FP7 EMAR²RES workshops, *Identifying Areas of Common Interest*, series 1

29-30 June 2010, Madrid



23 EU FP7 SEAS-ERA kick-off meeting

6-7 July 2010, Ostend



21 EU FP7 CLAMER's workshops, *Scientific Knowledge of Climate Change Impacts, Public Perception and Outreach Mechanisms*, series 1

16 September 2010, Brussels



18 2nd Marine Board Forum, *Towards a European Network of Marine Observatories for Monitoring and Research*

Milestones from the 2010 Calendar

27-28 September 2010, Brussels



20 Marine Board European Scientific Diving Panel - COST Workshop, *Strengthening Synergy and Excellence in Diving-Supported Sciences across Europe*

12-13 October 2010, Ostend



34 EuroOCEAN 2010, *Grand Challenges for Marine Research in the Next Decade*

12 October 2010, Ostend



31 Launch of Marine Board Vision Document 2, *Marine Renewable Energy – Research Challenges and Opportunities for a New Energy Era in Europe*

13 October 2010, Ostend



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28 Launch of Marine Board Position Paper 15 *Marine Biotechnology: A New Vision and Strategy for Europe*

3-4 November 2010, Ostend



22 EU FP7 EMAR²RES workshops, *Identifying Areas of Common Interest*, series 2

16-18 November 2010, Amsterdam



21 EU FP7 CLAMER's workshops, *Scientific Knowledge of Climate Change Impacts, Public Perception and Outreach Mechanisms*, series 2

25 November 2010, Brussels



36 EU FP7 MARCOM+ 1st Open Forum

Message from the Chair



It is my pleasure to present the 2010 Marine Board Annual Activity Report. When I look back over 2010, the breadth of the Board's activities, events and achievements seems vast. The Board ran five expert working groups, supported two topical

panels, published two strategic position papers and one vision document, held its 2nd biennial open Forum, participated in organizing two high-level strategic conferences, and much more. I am pleased to report that, through such activities, the Board's role as an independent think-tank, generating marine science foresight and science policy recommendations, is as effective and visible as ever before.

This was clearly illustrated in the role that the Marine Board played in organizing the EurOCEAN 2010 conference and in delivering a new declaration on behalf of the European marine science community. On 13 October 2010, more than 400 delegates at EurOCEAN 2010 in Ostend unanimously adopted the Ostend declaration and the message that:

"The Seas and Oceans are one of the Grand Challenges for the 21st Century".

The Ostend Declaration provides a blueprint for a holistic approach to marine and maritime challenges and its adoption was a major achievement for the Marine Board and its partners¹. Credit must go to the Ostend Declaration Drafting Group and the Marine Board Secretariat who worked hard over the months leading up to the Conference to deliver a broad consensus amongst the many and varied stakeholders on the key elements of the declaration.

The process of delivering the next in the Board's series of high-level *Navigating the Future* position papers also got underway in 2010. A specially convened Brainstorming Workshop in March

delivered a challenge-based architecture for *Navigating the Future IV* (NFIV) which reflects the economic, social and policy issues which marine science can and must address, such as sustainable supplies of food and energy, climate change, oceans and human health, the greening of maritime transport and safe and sustainable use of marine space. While the NFIV paper itself will not be published until early 2012, the challenges identified by the expert working group have already been used as the scientific themes for the EurOCEAN 2010 programme and in Marine Board policy documents.

These developments illustrate that, more than ever before, Europe's marine and maritime scientific communities accept that science has a crucial role in supporting policy, society and economy. In 2010, the EU delivered the Europe 2020 Strategy which sets out an ambitious agenda to create smart, sustainable and inclusive growth over the next decade. Marine and maritime science can contribute to the goals of Europe 2020 by supporting growth in new and existing maritime sectors. For example, the 2010 Marine Board position paper, *Marine Biotechnology: A New Vision and Strategy for Europe*, and vision document, *Marine Renewable Energy: Research Challenges and Opportunities for a New Energy Era in Europe*, illustrate very clearly the potential for growth and job creation in these rapidly developing, high-technology sectors. Yet, the Board must also champion the continuing need for basic science. Generating fundamental knowledge on marine environments, ecosystems and processes, and creating jobs and economic opportunities, need not be mutually exclusive goals.

Looking ahead to 2011, significant progress will be made on defining the structure of the next Framework Programme and on the development of the Joint Programming Initiative, *Healthy and Productive Seas and Oceans*. Important changes will also arise from the merger of ESF and EUROHORCs to form the new ScienceEurope organization. The Board must be ready to both

² The EurOCEAN 2010 conference was a Belgian EU Presidency event co-organized by The Flanders Marine Institute (VLIZ), the European Commission and the Marine Board.

influence and, where necessary, adapt to these developments in a proactive and strategic manner. At the same time, the Marine Board must continue to maintain the high quality of its outputs and the independence of its voice.

During 2010, the Marine Board welcomed one new member, The Finnish Environment Institute (SYKE), and received five further applications which should translate to new members in 2011. That the Board's membership continues to grow at a time when national budgets are under pressure, reflects a recognition of its increasing influence in Europe. We must continue to build on this momentum to ensure that the messages of the Ostend Declaration translate into actions and real progress in our efforts to address effectively the grand challenges presented by the oceans, seas and coasts.

This will be my last report as Chair of the Marine Board as I must step down having completed five years as Chair in May 2011. I fear I will suffer from withdrawal as I have enjoyed so much the Chair position and the work with the Marine Board. The member organizations, through the Delegates, have contributed in various and valuable ways and have been active and supportive throughout. The work of the Executive Committee has been excellent, and so truly has been the work of the Secretariat. Much credit goes to every one of the staff members, under the leadership of Dr Niall McDonough. A well functioning Secretariat is crucial. The Marine Board has one, and my successor will benefit from that. Thanks also goes to our many external partners which are too many to mention, with one exception. Excellent office facilities are important and my thanks go to our host VLIZ and to the Government of Flanders.

Lars Horn, Research Council of Norway



Chair, Marine Board

Executive Scientific Secretary's Report



On behalf of the Secretariat, I am pleased to present this 2010 Marine Board Annual Activity Report. 2010 again firmly placed the Board at the centre of a range of strategic activities aimed at providing a template for future European research

focused on oceans, seas and coasts. While there were numerous external activities and collaborations, the Board's own instruments and publications must always be a priority. In 2010, the Board delivered the following three high-level, strategic publications:

- *Science Dimensions of an Ecosystem Approach to Management of Marine Biotic Resources* (launched at European Maritime Day, Gijón, 19 May 2010)
- *Marine Biotechnology: A New Vision and Strategy for Europe* (launched at EuroCEAN 2010, Ostend, 13 October 2010)
- *Marine Renewable Energy: Research Challenges and Opportunities for a New Energy Era in Europe* (launched at EuroCEAN 2010, Ostend, 12 October 2010).

Three ongoing Working Groups on *Emerging Marine Pollutants* (WG POL), *Marine Protected Areas* (WG MPAs) and *Marine Microbial Diversity* (WG MICROCEAN) also made significant progress and will deliver position papers in 2011. Furthermore, topics for two new working groups, *Oceans and Human Health* and *Valuation of Marine Ecosystems*, were approved at the October plenary in Ostend. Work on these activities will begin in 2011. The proactive participation of Marine Board members, their nominated national experts and the Chairs of the Working Groups, are critical to achieving high-quality Marine Board publications. The selection of the right topics will also continue to be crucial and the Board members have an important role in identifying the best topics for

Marine Board activities. Meanwhile the Secretariat continues to improve the foresight approaches and communication strategies utilized for each Marine Board publication to ensure its maximum impact.

The 2nd Marine Board Forum, *Towards a European Network of Marine Observatories for Monitoring and Research*, held in Brussels in September, was also a major success. This oversubscribed event delivered an agreed vision statement (see p 18) which was taken forward to the EurOCEAN 2010 conference and embedded in the Ostend Declaration as part of the unanimous call for a coherent *European Ocean Observing System*.

A highlight of the year was the above-mentioned EurOCEAN 2010 conference in Ostend (12-13 October) and pre-event in the European Parliament (11 October). Through the Secretariat, the Marine Board took responsibility for developing and finalizing the conference Programme and the Ostend Declaration. The Declaration will provide a blueprint to underpin a more integrated marine science effort in Europe in the coming decade (see page 32). The Secretariat also organized a EurOCEAN 2010 Research Showcase which helped to attract the major marine Framework Programme projects and networks to the Conference and to provide a valuable space for networking and interaction. The very successful EurOCEAN 2010 events are further described on page 34 of this report.

2010 also saw the start-up of three new strategic FP7 projects in which the Board is participating. With EMAR²RES already underway since 2009, participation in MARCOM+, CLAMER and SEAS-ERA ensures that the Marine Board can continue to play an active role in key coordination actions focused on improving cooperation in marine and maritime sciences and in restructuring the basis for identifying future marine research priorities at European level (see page 21).

EXECUTIVE SCIENTIFIC SECRETARY'S REPORT

In 2010, plans to merge ESF and EUROHORCs really came on the agenda for the first time, and signal a change for the future of the ESF which will have implications for the Marine Board. Key decisions on the structure and role of the new ScienceEurope organization will be made in 2011 and the Board must examine, very carefully, its position and options for its future. At the centre of these considerations must be the goal of retaining an independent voice on behalf of its members and in the best interests of advancing marine science in Europe. This analysis can be aided by a timely ESF review of Expert Boards and Committees, due to be implemented in 2011. In October 2010, the Secretariat delivered a Marine Board Self-Evaluation Report as input to this review.

With all of these developments, it appears that 2011 will be just as busy and challenging as 2010 and there will undoubtedly be a necessary element of change management. However, as an influential European network with a strong reputation and partnerships, the Marine Board has always been flexible and dynamic in its approach. This is a key to its success and will continue to be so in 2011 and beyond.

I would like to acknowledge the contribution of my Secretariat colleagues. Their experience, dedication and enthusiasm continue to fuel the success of the Board and I thank them for their hard work to make 2010 such a successful year for the Board. I also thank our Chair, Lars Horn, for his commitment, enthusiasm and support in all Marine Board activities and for the work of the Secretariat. He and the Executive Committee members make an enormous contribution to the Board's success. I look forward to working with these colleagues in 2011 to deliver strong voice on behalf of our members for marine science in Europe.

Niall McDonough, Marine Board



Executive Scientific Secretary, Marine Board

ABOUT THE MARINE BOARD

ABOUT THE MARINE BOARD

Marine Board Objectives and Approaches

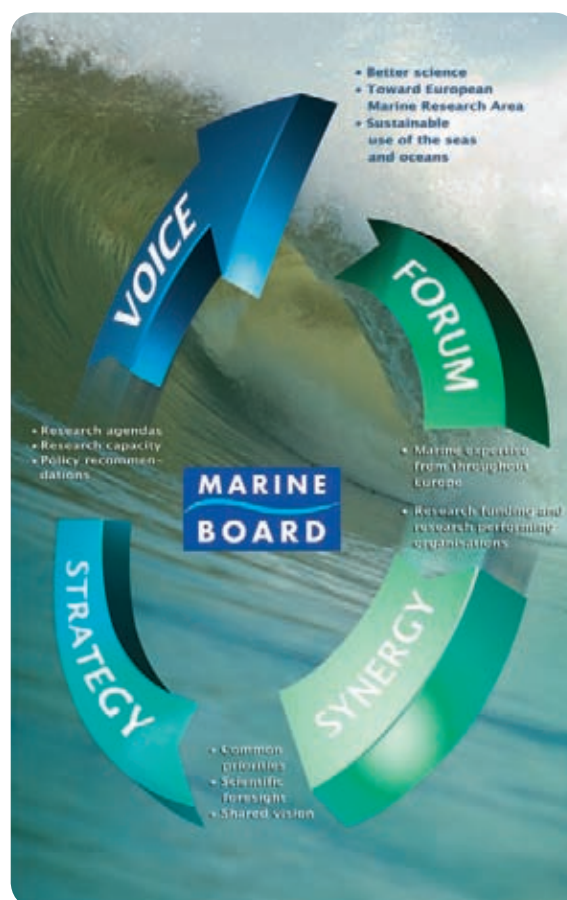
The Marine Board develops common positions on research priorities and strategies for European marine science, facilitating enhanced cooperation between stakeholders involved in supporting, delivering and using marine research and technology.

Marine Board stakeholders include the Board's members, partner European and international networks, policymakers, strategy developers and programme managers at national and European level as well as the marine and maritime science community at large.

As an independent non-governmental advisory body, the Marine Board provides the essential components for transferring knowledge from the scientific community to decision makers, promoting Europe's leadership in marine research and technology. Adopting a strategic role, the Board provides a unique forum to develop marine research foresight, initiating state-of-the-art analysis and studies and translating these into clear policy recommendations to national agencies and governments as well as to the European institutions.

The Marine Board operates via four principle approaches underpinning the Board's main objective of bridging the gap between science and policy:

- **Forum** – bringing together European marine research stakeholders to share knowledge, identify common priorities, develop common positions and collaborate;
- **Synergy** – fostering European added value to national programmes and infrastructures, and promoting collaboration with international programmes and organizations;
- **Strategy** – identifying scientific challenges and opportunities through analysis and studies, and providing high-level recommendations for European and national research funders and policymakers as well as the scientific community;
- **Voice** – expressing a collective vision of European marine research priorities to meet future science and societal challenges and opportunities.



Marine Board Principle Approaches

Marine Board Instruments

Where the Board identifies a topic of strategic interest as the basis for a new activity, it applies one of a range of instruments to deliver a tailored impact:

Working Groups / Position Papers are the principle foresight and priority-setting instrument of the Marine Board.

Working groups bring together leading European experts to deliver a multi-disciplinary analysis and to agree future research priorities on a topic of identified strategic importance at European level. A Working Group will normally prepare a strategic position paper.

Position papers provide a thorough analysis of the state-of-the art relevant to the topic at hand, and a roadmap with concrete recommendations for improving the European research effort in this area. Strategically focused at an identified target audience, European and national research programme managers, strategy developers, policymakers and the marine research community, Marine Board position papers drive future European and national marine research agendas, programmes and supporting actions and policies (see page 26).

Vision Groups / Vision Documents are tailored to give impetus to a strategically important topic by re-emphasising marine research priorities in a rapidly changing policy landscape. Vision documents are short and highly visual, written and designed with the primary aim of raising the profile and awareness of a topic among an identified target audience (see page 31).

The Marine Board Biennial Open Forum brings together a wide range of marine science stakeholders (scientists, European and national policymakers, pan-European and regional networks, etc) to discuss and develop a common position on a marine science topic of common concern. The forum bridges the gap between the scientific community and policymakers and prepares a joint vision and recommendations to advance the issue at hand (see page 18).

Marine Board Panels are open-ended operational pan-European networks of experts focused on a particular research support tool, facilitated by the Marine Board Secretariat (see page 20).

In addition to the above-mentioned instruments, the Marine Board employs a number of **other flexible mechanisms**, implemented on an *ad hoc* basis, to bridge the gap between science and policy, e.g. policy statements, workshops, conferences, etc.

ABOUT THE MARINE BOARD

Marine Board Structure and Governance

The Marine Board is a pan-European partnership of national organizations involved in marine research, consisting of research funding organizations, RFOs (e.g. research councils, ministries), research performing organizations, RPOs (e.g. national marine research institutes), and nationally-based consortia of third-level institutes.

Marine Board Members

The Marine Board's mixed membership of RPOs, RFOs and national university consortia, ensures its unique capacity to identify science policy priorities and to influence European marine research agendas.

Representing major organizations involved in marine research in Europe, the Board's delegates (i) provide a high-level overview of national science policy priorities, (ii) guarantee a multidisciplinary and high-quality scientific expertise for the Board's activities, and (iii) ensure a high-level uptake of the Board's strategic recommendations at national and European levels.

Marine Board delegates meet twice a year at plenary meetings to share knowledge, to define common priorities and to agree on activities and outputs which will drive or impact upon European and national marine research agendas.

Marine Board activities and the operation of its secretariat are funded through annual contributions from Marine Board member organizations and Marine Board external contracts.

In 2010, the Marine Board represented 31 organizations from 19 European countries (a list of Marine Board member organizations and delegates is provided in Annex I). The European Commission's Directorate-General for Maritime Affairs and Fisheries and Directorate-General for Research and Innovation have permanent observer status at Marine Board plenary meetings.

Executive Committee

Marine Board operations are overseen by the Executive Committee (ExCom). The ExCom is composed of a Chair, six vice-Chairs and the Executive Scientific Secretary. ExCom members are elected by the Marine Board members for a three-year period, renewable once for two years upon re-election.



Marine Board delegates and invited speakers and guests at Spring 2010 Plenary Meeting (3-4 June 2010, Istanbul)

© MB

ABOUT THE MARINE BOARD

ExCom members and their mandates, as of December 2010:



Lars Horn - Chair
Research Council of Norway
(RCN), Norway
May 2006 - May 2011



Beatriz Morales-Nin
Spanish National Research
Council (CSIC), Spain
May 2009 - May 2012



Antoine Dosdat
French Institute for Exploitation
of the Sea (IFREMER), France
May 2007 - May 2012



Geoffrey O'Sullivan
Irish Marine Institute (MI),
Ireland
October 2008 - October 2011



Edward Hill
National Oceanography Centre
(NOC), United Kingdom
May 2007 - May 2012



Çolpan Polat-Beken
Scientific and Technological
Research Council of Turkey
(TUBITAK), Turkey
May 2009 - May 2012



Jan Mees
Flanders Marine Institute
(VLIZ), Belgium
May 2006 - May 2011



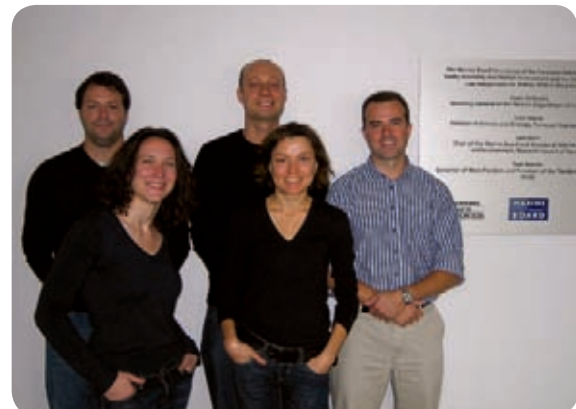
Niall McDonough
Marine Board Executive
Scientific Secretary and Head of
Marine Board Secretariat,
ex-officio member

The ExCom meets approximately four times per year to oversee implementation of the actions agreed by the Board at plenary meetings, make operational and financial decisions, and provide strategic guidance to the Board and Secretariat.

Secretariat

The strategic and operational decisions and activities proposed by the Marine Board and ExCom are implemented by the Secretariat. Based at the Marine Board offices in Ostend, the Secretariat is composed of five staff members, including three Science Officers, one Administrator and the Executive Scientific Secretary who is head of the Secretariat and a member of the ExCom.

The Secretariat works to support day-to-day operations of the Marine Board, advance Marine Board objectives and promote the Board's activities and outputs.



Marine Board Secretariat From left: Aurélien Carbonnière, Maud Evrard, Jan-Bart Calewaert (Science Officers), Dina Eparkhina (Administrator), and Niall McDonough (Executive Scientific Secretary).

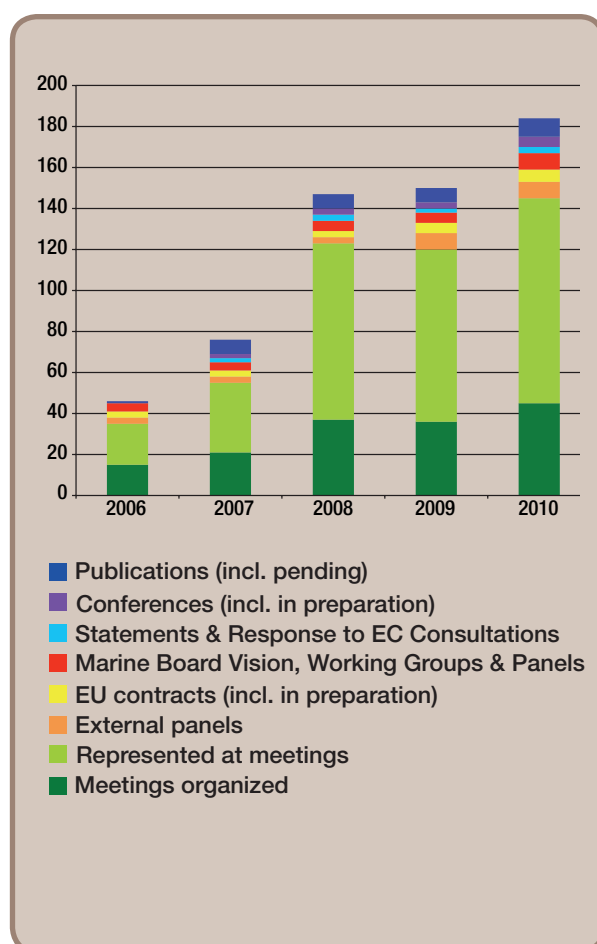
ABOUT THE MARINE BOARD

2010 IN A NUTSHELL

Marine Board Delivers with High Impact in 2010

- At **EuroOCEAN 2010**, organized by the Belgian EU Presidency, the European Commission and the Marine Board, marine science priorities for the next decade are agreed and adopted in the **Ostend Declaration** (p.34)
- **The 2nd Marine Board Forum Vision Statement** highlights the critical need for an integrated **European marine observatories network** (p.18)
- **European Marine Biotechnology** can become globally competitive by 2020, according to Marine Board Position Paper 15 proposing a **new Vision and Strategy for Europe** (p.28)
- **50 by 2050**: Marine Board Vision Document 2 states that Europe could source up to 50% of its electricity needs from **marine renewable energy** by 2050 (p.31)
- Marine Board Position Paper 14 identifies critical science needs to support implementation of the EU **Marine Strategy Framework Directive** (p. 27)

Marine Board Activities (2006-2010)



Marine Board 2010 in Figures

Member Organizations	31
Countries represented	19
Working / Vision Groups and Panels running	8
Experts of running Working / Vision Group and Panels	93
New Working / Vision Groups in preparation	3
Meetings organized (incl. jointly)	45
Presentations at meetings	48
Represented at meetings (total)	100
Represented at stakeholder panels	8
EC Framework Programme projects running (incl. one Associate Partnership)	5
Total partner organizations in Marine Board EC FP projects (excl. Marine Board)	60
Publications and leaflets prepared and published	8
Publications disseminated (approx.)	3,200
Booths at conferences and events	8
Secretariat staff	5

VOICE

FORUM

MARINE
BOARD

STRATEGY

SYNERGY

FORUM

The Marine Board brings together European marine research stakeholders, representatives of the marine science community, funding agencies and national and European science institutions, to advance research and to promote marine science in Europe and globally.

Marine Board Plenary Meetings

Marine Board plenary meetings, held twice a year in spring and autumn, gather Marine Board member organizations to reflect and agree on topical marine science and technology issues, and propose future strategic actions. During these meetings, the delegates benefit from interactions with each other, with invited speakers and guests, and with Marine Board observers from the European Commission's Directorate-General for Research and Innovation and Directorate-General for Maritime Affairs and Fisheries.

Spring 2010 Plenary Meeting 3-4 June 2010, Istanbul, Turkey

The Spring Plenary Meeting was hosted by the Scientific and Technological Research Council of Turkey (TUBITAK).

The meeting was attended by 20 Marine Board delegates and 11 invited speakers and guests (see list of participants in Annex II).



Marine Board Spring 2010 Plenary Meeting
(3-4 June 2010, Istanbul)

Key decisions and highlights of the Spring Plenary included:

Membership and operations

- The Board agreed on a membership expansion strategy to broaden the geographical coverage and to strengthen the reach and influence of the Board's strategic activities;
- The Board adopted a new membership contributions scheme. Under the new scheme, each member will pay a contribution regardless of the number of members from the same country. Also, a new, lower, contribution category was introduced to facilitate applications from less economically developed countries.

ExCom elections

As a result of ExCom elections, two Marine Board vice-Chairs Antoine Dosdat (IFREMER, France) and Edward Hill (NOC, United Kingdom) were each re-elected for a second (two-year) term.

Open Session

The open session of the meeting welcomed Marine Board collaborators, observers and partners. The following presentations were given:

- *Towards a European Strategy for Marine Biotechnology* by Adrianna Ianora, Stazione Zoologica 'Anton Dohrn', Italy / member of Marine Board Working Group on Marine Biotechnology (see also p. 28);
- *Marine Board European Scientific Diving Panel (MB ESDP)* by Jean Pierre Feral, CNRS Station Marine d'Endourne, France / MB ESDP Chair (see also p. 20);
- *FP7 EMAR²RES project updates* by Willem Laros, CESA / EMAR²RES Coordinator (see also p. 22);
- *Perspectives and Future Calls* by Ana-Teresa Caetano, European Commission DG Research and Innovation / permanent observer to the Board's plenary meetings.

Autumn 2010 Plenary Meeting 14 October 2010, Ostend, Belgium

The Autumn Plenary Meeting took place at the Marine Board Secretariat offices at the InnovOcean site, Ostend. The Research Council of Norway (RCN) hosted the official dinner of the plenary.

The meeting was attended by 23 Marine Board delegates and one guest (see list of participants in Annex II).

Key decisions and highlights of the Autumn Plenary included:

Membership and operations

- Finnish Environment Institute (SYKE) was accepted as a new Marine Board member;
- The Board agreed an addition to the Operational Guidelines, whereby consortia of third-level institutes, comprising of at least three institutes / universities from a specific country, can apply for a joint membership.

New activities

- Establishment of the **Working Group on Oceans and Human Health** (WG OHH)

This WG will aim to assess the European research capability and future science and policy needs for this emerging area in the next ten years. It will build on relevant international experience, particularly in Europe and the USA.



Marine Board Autumn 2010 Plenary Meeting
(14 October 2010, Ostend)

- Establishment of the **Working Group on Valuation of Marine Ecosystems** (WG VALMARE)

This WG will identify strategic (topical) areas for Europe in the realm of socio-economic research related to marine ecosystems and the valuation of the services they provide. It will provide recommendations to guide European research in the medium term (to 2020) towards development of standard methodologies/guidelines for valuation of marine ecosystem services and to improve European competitiveness in this field.

For further information on the working group developments, please visit:

<http://www.esf.org/marineboard/workinggroups>

- Establishment of the **Vision Group on Marine Biodiversity** (VG BIODIV)

This VG will prepare a short document representing a vision for European marine biodiversity research in the next decade. It will highlight recent international and EU achievements and outputs in this area and identify research and infrastructure needs to address the emerging environmental, scientific and policy challenges.

VG BIODIV started its activities at the end of 2010.

For further information on the vision group developments, please visit:

<http://www.esf.org/marineboard/visiongroups>

Marine Board Biennial Forum

The Marine Board Biennial Forum provides a platform for Marine Board members, partner organizations, individual scientists and European and national policymakers to interact on a particular topic or theme of strategic importance for European marine science.

For each selected topic or theme, the Marine Board Forum aims to:

- Provide a focal meeting point for discussion among individual scientists, policymakers and other relevant stakeholders;
- Facilitate the exchange of information and ideas and agree a common position;
- Enhance collaboration and reduce fragmentation and/or duplication in the European research effort.

The main messages, discussions and decisions from Marine Board fora are recorded and published as proceedings. Presentations and outputs of the fora are available on:

<http://www.esf.org/marineboard/forum>.

2nd Marine Board Forum: Towards a European Network of Marine Observatories for Monitoring and Research

The 2nd Marine Board Forum (16 September 2010, Brussels) addressed *in situ* marine observatories providing long-term time-series data, a critical component of the broad marine observation infrastructure. The forum emphasised that strategic *in situ* observatories provide the backbone of the ocean observation system, and the European Marine and Observation Data Network (EMODNET).



Long-term and consistent time-series data on key biological, chemical and physical parameters from the seas and oceans is essential. Such data are best delivered by stable and well supported marine observatories. Not only can this data underpin marine ecosystem analysis and environmental monitoring, but it also supports maritime activities and contributes to a wide range of societal and economic uses of the sea.



Speakers at the 2nd Marine Board Forum (16 September 2010, Brussels). Left: Mike Thorndyke (MARS network), Doug Wallace (IFM-GEOMAR, Germany) and Carlo Heip (NIOZ, Netherlands); above: Alan Edwards (Directorate Environment, EC DG Research and Innovation).

However, long-term observations are fragmented, located according to national, rather than pan-European or regional needs, deliver different measurements in different ways and are largely supported by inadequate funding mechanisms, making their future uncertain. Moreover, *observations for research* and *observations for management* purposes are not always well integrated.

The Forum discussed the technical challenges for an effective interoperability between systems, current observatories and projects in place and the critical gaps in coverage and measurements.

Furthermore, the Forum participants addressed how sustained funding schemes, efficient partnerships and innovative governing structures must be designed to best support a stable and unique European observatory network.

The 2nd Marine Board Forum featured sixteen presentations from the major European and international marine observation projects, networks and other relevant stakeholders, and attracted over 90 scientists and policymakers from over 50 organizations. The participants called on EU and Member State policymakers to deliver urgent actions towards securing long-term integrated monitoring of Europe's marine environment.

The **2nd Marine Board Forum Vision Statement** proposed a short list of high-level actions necessary to achieve this vision in the coming decade. Its recommendations were subsequently taken up in the Ostend Declaration adapted at the EuroOCEAN 2010 conference in October 2010.

Marine Board Statement

Towards a European Network of Marine Observatories



The Vision

The 2nd Marine Board Forum, held in Brussels on 16 September 2010, culminated in a unanimous call from its participants for the prioritization at national and EU level of actions to deliver:

*"A long-term, stable and integrated network of strategic marine observatories, installed and operated through multi-national cooperation and support, providing consistent *in situ* data from the seas and oceans in support of the EU Integrated Maritime Policy¹ and as a driver for smart, sustainable and inclusive growth in Europe (Europe 2020)²".*

What are marine observatories?

The ocean observing system consists of a combination of remote and *in situ* sensing platforms including satellites, research vessels, ships of opportunity, marine research stations, Argo floats and fixed monitoring buoys. The 2nd Marine Board Forum and this Vision Statement address one critical component of this broad observation infrastructure: strategic *in situ* observing capacities which provide long-term time-series data. These "marine observatories" provide the backbone of the ocean observation system and the EMODNET³.

Why do we need long-term time-series data?

Long-term time-series datasets from the marine environment are of critical importance to facilitate:

- Effective policy making and sustainable management of the seas and oceans
- Monitoring of the rate and scale of environmental change, including climate change and biodiversity loss
- Detection of hazards and events
- Understanding ocean, earth and climate system processes

The seas and oceans support maritime industries and provide goods and services which are of critical importance for human societies and economies. However, marine ecosystems are under considerable pressure from ocean acidification, global climate change as well as localised impacts from human activities such as fisheries, aquaculture, pollution, transport and marine renewable energy. To sustainably manage our interaction with the sea, and to meet policy and societal needs, requires knowledge of the marine environment and the ability to predict future changes. Long-term and consistent data on key biological, chemical and physical (including geological) parameters from the seas and oceans is, therefore, essential. Such data can only be obtained through a network of marine observatories.

What barriers must be overcome?

In Europe, approximately 90% of the annual investment on ocean observing and monitoring comes from Member States. Although several research infrastructures which could contribute towards a marine observatory network are listed on the ESFRI⁴ Roadmap (2008), only some elements of an observatory network are currently in place. Long-term observations are fragmented, located according to national (rather than pan-European or regional) needs, deliver different measurements in different ways and are largely supported by inadequate funding mechanisms, making their future uncertain. Moreover, observations for research and observations for management purposes are not always well integrated.

To achieve the vision of an inter-operable and stable network of observatories in European regional seas and oceans, which is integrated in the global observing systems, there are many barriers to overcome, including:

- A lack of coordination between EU and national investments in ocean observing infrastructures and activities;
- An over-reliance on short-term funding programmes and research projects to deliver essential operational oceanography data;
- Significant gaps in existing coverage (i.e. areas where there is no data);

¹ An Integrated Maritime Policy for the European Union (http://ec.europa.eu/maritimeaffairs/policy_documents_en.html)

² Europe 2020: A Strategy for Smart, Sustainable and Inclusive Growth (http://ec.europa.eu/eu2020/index_en.htm)

³ European Marine Observation and Data Network (http://ec.europa.eu/maritimeaffairs/emodnet_en.html#1)

⁴ European Strategy Forum on Research Infrastructures (http://ec.europa.eu/research/infrastructures/index_en.cfm?pg=esfri)

⁵ European Research Infrastructure Consortium (ERIC) (http://ec.europa.eu/research/infrastructures/index_en.cfm?pg=eric)

Extract from the 2nd Marine Board Forum Vision Statement (September 2010)



2nd Marine Board Forum participants (16 September 2010, Brussels)



*"A long-term, stable and integrated network of strategic marine observatories, installed and operated through multi-national cooperation and support, providing consistent *in situ* data from the seas and oceans in support of the EU Integrated Maritime Policy and as a driver for smart, sustainable and inclusive growth in Europe (Europe 2020)".*

Marine Board Panels

Marine Board Panels are established on an open-end basis to address operational issues in areas where the panel members, and by extension their institutions, benefit from interacting with each other and with the Marine Board.

Active Marine Board Panels in 2010 included:

Marine Board Communications Panel (MBCP)

Established in 2002, this panel brings together professional science communicators from a number of Marine Board member organizations, to promote and discuss best practice in marine science communication across Europe.

In 2010, the MBCP included 15 members from 11 countries. Facilitated by the Marine Board Secretariat, the panel meets regularly to:

- Exchange ideas on events, communication methods and best practice;
- Organize dedicated sessions at marine science conferences;
- Advise the Marine Board on communication and dissemination of its outputs.



Members of the Marine Board Communications Panel visiting the UK National Oceanography Centre inshore catamaran *Callista*, during their meeting in Southampton (29-30 March 2010).

Marine Board European Scientific Diving Panel (MB ESDP)

Established in 2008, this panel aims to improve networking and exchange of knowledge and best practice in the field of scientific diving, promoting diving as an important tool in marine research.

In 2010, the panel included eight members from eight countries. MB ESDP aims to:

- Promote best practice in scientific diving in Europe for improved observation and monitoring of the coastal environment;
- Initiate and develop synergies with other operational scientific networks, exchanging knowledge and facilitating a pan-European dialogue;
- Promote links with interdisciplinary research and industry;
- Promote international collaboration.

In addition to its regular meetings, facilitated by the Marine Board Secretariat, MB ESDP organized a joint Marine Board-COST workshop in September 2010 entitled, *Strengthening Synergy and Excellence in Diving-Supported Science across Europe*. The workshop brought together 26 experts from 20 countries to prepare a set of strategic and operational recommendations towards meeting governance (top-down) and scientific (bottom-up) needs in scientific diving.

Information on the Marine Board panel membership can be found in Annex IV.

Further information on Marine Board panels is available on the website at:

<http://www.esf.org/marineboard/panels>



Participants at Marine Board ESDP - COST Workshop, *Strengthening Synergy and Excellence in Diving-Supported Science across Europe* (27-28 September 2010, Brussels).

SYNERGY

The Marine Board works to enhance interactions and collaborations among European marine and maritime research stakeholders, exchange knowledge and expertise, promote joint identification of priorities and shared use of infrastructures, and avoid duplication of efforts.

Framework Programme Projects

CLAMER: *Climate Change Impacts on the Marine Environment: Research Results and Public Perception*

Type: EC FP7 CSA
Duration: 18 months (April 2010-Sept.2011)
Budget: € 1M
Consortium: 17 partners from 10 countries
Coordinator: NIOZ, Netherlands
Website: <http://www.clamer.eu>
Marine Board is a Work Package Leader



Climate change affects everyone. But how much do the public and decision makers actually know about climate change impacts and their socio-economic consequences? CLAMER aims to investigate the gap between the scientific knowledge of climate change impacts and that of policymakers and public. The project is based on the clear understanding that this gap must be reduced in order to facilitate potentially difficult future decisions on appropriate and sustainable adaptation strategies.

In CLAMER, the Marine Board synthesizes scientific knowledge on climate change impacts on the marine environment from past and ongoing European research efforts, through a number of publications and reports.

Key CLAMER Outputs and Impacts

- Assessment and summary of the state-of-the-art scientific knowledge and public perception of climate change impacts on the marine environment, including the socio-economic consequences;
- An international conference to promote and exploit EU research results related to climate change impacts on the marine environment and address public perception;

- Outreach events and activities to obtain widespread and balanced information and participation from European countries and beyond.

CLAMER in 2010

The project held its kick-off meeting in March 2010. The CLAMER consortium subsequently met for two series of topical workshops and several management meetings. Preparation of a synthesis report and science policy briefing on climate change research results outcomes and priorities for the future were advanced in 2010.

The Marine Board co-organized two workshop series to identify climate change research issues and priorities on several levels: global, pan-European, regional and national. The Board facilitated a Scientific Expert Panel, to advise on thematic issues and priorities and to identify research and knowledge gaps.

To prepare a solid ground for these discussions and to help in developing a strategic vision on European marine climate change research, the Board conducted an inventory of all EU-funded projects related to marine climate change research and their results, dating back to the beginning of the 5th Framework Programme (1998).

The consortium also began preparations for an international conference on climate change and marine ecosystem research, *Science and Perception of Climate Change in European Seas and Coastal Areas*, to take place in Brussels on 15 September 2011.

EMAR²RES: Cooperation between the Communities of European MARine and MARitime REsearch and Science

Type: EC FP7 CSA
Duration: 28 months (Nov. 2009-Feb. 2012)
Budget: € 0.5M
Consortium: 5 pan-European partners
Coordinator: Community of European Shipyards' Associations (CESA)
Website: <http://www.waterborne-tp.org/index.php/emar2es>
Marine Board is a Work Package Leader



EMAR²RES involves the European associations representing major waterborne R&D stakeholders and the Marine Board, as a key representative of the marine science research community. The project aims to identify common research needs to develop long-term cooperation between the marine and maritime research communities. In coordination with another partnership project, MARCOM+ (see below), EMAR²RES will propose a structure for an efficient and durable cooperation on research focused on sustainable maritime activities.

In this project, the Marine Board works to bridge the gap between marine and maritime science communities via topical workshops on areas of common concern. The Board's activities contribute to the broader aim of fostering marine and maritime stakeholder dialogue, specifically through facilitation of a project Policy Interface Panel.

EMAR²RES Outputs and Impacts

- Identify areas of common concern, e.g. underwater noise, bio-mimetics, ballast waters, etc;
- Deliver a *joint vision* on marine and maritime research priorities and science support issues;
- Propose a future durable cooperation structure for the two communities;
- Inform EU policies, e.g. implementation of the Marine Strategy Framework Directive.

EMAR²RES in 2010

In 2010, EMAR²RES delivered an inventory of marine and maritime stakeholder organizations (prepared by ECMAR and the Marine Board) and prepared a report on linking the visions of the marine and maritime research communities (Marine Board and CESA).

In addition, in 2010, the Marine Board organized two series of workshops on areas of common concern, dealing with the following topics:

- Impact of maritime transport on the marine environment (biological, chemical and physical);
- Marine environment monitoring and the benefits of metocean data to maritime transport and climate change research; and
- Impacts of climate change on maritime transport.

The Policy Interface Panel, facilitated by the Marine Board, met twice to inform and advise the project partners on strategic matters.

MARCOM+: Towards an Integrated Marine and Maritime Science Community

Type: EC FP7 CSA
Duration: 24 months (Jan. 2010-Dec.2011)
Budget: € 1M
Consortium: 10 partners
Coordinator: ICES
Website: <http://www.marinemaritimescienceforum.eu>
Marine Board is a Work Package Leader



MARCOM+ brings together representatives of marine and maritime science communities to test mechanisms for a European marine and maritime partnership. A partnership approach will improve governance - research interactions and facilitate collaboration with industry.

In MARCOM+, the Marine Board provides strategic expertise to achieve a sustainable dialogue between relevant marine and maritime stakeholders.

MARCOM+ Outputs and Impacts

- Develop a structure for a sustainable European Marine and Maritime Science and Technology Forum;
- Develop collaboration mechanisms to strengthen cross-sectoral and interdisciplinary research in the European Research Area; and
- Contribute to the implementation of the Integrated Maritime Policy for the European Union.

MARCOM+ in 2010

Since its start in January 2010, the MARCOM+ project reviewed EU policy setting and regional research governance frameworks. The partners tested collaborative mechanisms through MARCOM+ panels and cross-sector platforms for research and industry.

The Marine Board conducted an inventory of representative marine research organizations, and identified their commonalities.

In addition, the Marine Board facilitated a targeted dialogue between stakeholders by organizing the 1st MARCOM+ Open Forum. The Forum delivered recommendations on the development of an effective collaborative structure which would then be taken up in subsequent MARCOM+ activities (further information on the MARCOM+ Forum can be found on p. 36).

SEAS-ERA: Towards Integrated Marine Research Strategy and Programmes

Type: EC FP7 ERA-NET
Duration: 48 months (May 2010-April 2014)
Budget: € 2M
Consortium: 21 partners in 18 countries
Coordinator: MICINN, Spain
Website: <http://www.seas-era.eu>
Marine Board is a Work Package Leader



The vast majority of publicly funded research investment in Europe is made at Member State level. The SEAS-ERA project is designed to foster cooperation and integration between national marine research

funding agencies in Europe. Building on progress made by a number of FP6 marine ERA-NETs (MarinERA, AmpERA and MariFISH), SEAS-ERA will facilitate the establishment of a stable and durable structure to strengthen marine research across European sea basins.

In SEAS-ERA, the Marine Board is leading activities on strategic analysis and ensures that past achievements are integrated in future developments.

SEAS-ERA Outputs and Impacts

- Sustained process enabling the delivery of an integrated European marine research strategies at regional (sea basin) and pan-European level;
- Building cross-sectoral, multi-national and interdisciplinary research partnerships;
- Development of scientific and technological capacity to strengthen the knowledge-based economy; and
- Planning, funding and shared use of critical marine infrastructures on a pan-European level.

SEAS-ERA in 2010

Since its start in June 2010, SEAS-ERA has developed an approach towards reconciling regional and pan-European activities to be developed in the course of the project. SEAS-ERA will also feed the development of the Joint Programme Initiative *Healthy and Productive Seas and Oceans*.

In 2010, the Marine Board prepared an inventory of existing national and regional science and technology plans and strategies. In addition, the Board contributed to elaboration of sea basin strategic research agendas.

EUROFLEETS: Towards an Alliance of European Research Fleets

Type: EC FP7 I3
Duration: 48 months (Sept. 2009–Aug. 2013)
Budget: € 7.2M
Consortium: 24 partners in 16 countries
Coordinator: IFREMER, France
Website: <http://www.eurofleets.eu>
Marine Board is an Associate Partner



EUROFLEETS aims to define a common strategic vision for European research fleets and associated heavy equipment. By bringing together marine exploration fleet owners, EUROFLEETS is enhancing coordination between fleets and promoting the cost-effective use of their facilities. These coordinating activities will ultimately support the efficient provision of necessary research services for monitoring and sustainable management of seas and oceans. Among its activities, EUROFLEETS supports outstanding research projects via fully-funded ship time on a range of European research vessels.

EUROFLEETS was developed directly from the recommendations of Marine Board Position Paper 10, *Ocean Research Fleets - Towards a Common Strategy and Enhanced Use* (March 2007), in accordance with the EurOCEAN 2007 Aberdeen Declaration (June 2007), developments within the FP6 ERA-NET, MarinERA, and the European Research Vessels Operators, ERVO.

In EUROFLEETS, the Marine Board provides advice and support on scientific matters, e.g. identification of scientific experts, maintaining interactions with other marine and maritime research organizations and disseminating project information and outputs.

Other Framework Programme Projects

In 2010, the Board also provided support to two further FP7 projects as a non-partner, including:



Hotspot Ecosystem Research and Man's Impact on European Seas, HERMIONE (FP7 IP, April 2009 -

March 2012): Marine Board is a Member of the Science Policy Panel. Website: <http://www.eu-hermione.net/>; and



Marine Ecosystem Evolution in a Changing Environment, MEECE (FP7 IP, Sept. 2008 - Aug. 2012): Marine Board is a Member of the User Advisory Group. Website: <http://www.meece.eu/>.

The Marine Board is also involved in other stakeholder collaborations, see p. 39.

InnovOcean Site

Established by the Flemish Government, Belgium, as a hub for marine and maritime science and development in the harbour of Ostend, the InnovOcean site houses seven organizations, including UNESCO International Oceanographic Commission's project office for International Oceanographic Data and Information Exchange (IODE), the Flanders Marine Institute (VLIZ) and the Marine Board.

The organizations located at the InnovOcean site not only share use of meeting facilities and infrastructure but also benefit from an increased pool of expertise and a regular exchange of information and best practice. In 2010, the Marine Board collaborated with the InnovOcean colleagues on several activities and events.

The Marine Board meeting facilities at the InnovOcean site allow it to frequently organize or host pan-European meetings, e.g. Framework Project meetings, thematic workshops, fora, etc.



Niall McDonough, Marine Board Executive Scientific Secretary, presents the Marine Board and the Secretariat to EU Deputy Permanent Representatives (COREPER I) during their visit of the InnovOcean site as part of the Belgian EU Presidency activities (14 July 2010, Ostend).



Marine Board delegates in front of the InnovOcean site, at the Marine Board Autumn 2010 Plenary Meeting (14 October 2010, Ostend).

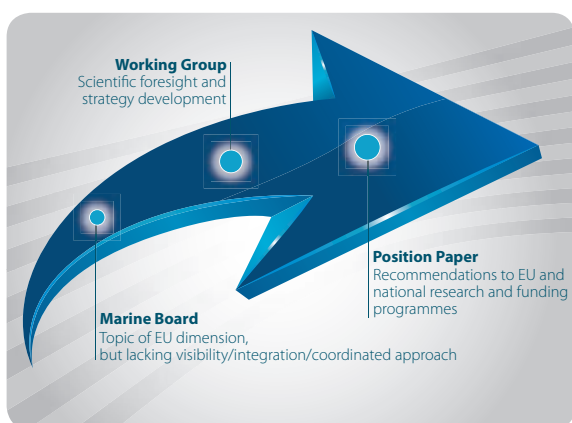
STRATEGY

The Marine Board delivers its strategic vision and science foresight through high-level publications and statements, targeted both at the research community and policymakers.

Marine Board publications bridge science and policy by:

- Highlighting urgent marine science issues, challenges and opportunities and identifying the corresponding research priorities and policy needs necessary to address them;
- Providing high-level recommendations ready to be taken up by programme developers and policymakers;
- Proposing a vision and strategy for the topic at hand to guide the scientific community and EU decision makers towards delivering the goals of the European Research Area through increased excellence, coordination and competitiveness of European marine science.

Full list of Marine Board publication is provided in Annex X.



Marine Board Position Papers

Position papers are Marine Board's primary science foresight and priority-setting instrument. They are prepared by international experts and address critical matters of strategic importance for marine science and technology as well as society at large.

A working group is set up, facilitated by the Marine Board Secretariat, to implement scientific foresight on a marine research area or topic strategic importance for Europe but lacking support, coordination and/or visibility at European level. The outcome of working group activities is a position paper, containing high-level research and policy recommendations and a strategic plan, ready to be taken up by both EU and national research funding programmes.

Marine Board position papers directly impact European research agendas, bridging the gap between scientific priorities and policy requirements. Marine Board position papers have influenced Framework Programme Work Programmes and calls as well as national marine research programmes and initiatives.

To date (2010), the Marine Board has published 15 position papers on a wide variety of marine research related topics (a full list is available in Annex X).

In 2010, the Marine Board published two position papers and launched two new working groups:

Position Paper 14: *Science Dimensions of an Ecosystem Approach to Management of Biotic Ocean Resources, SEAMBOR, April 2010*

Working Group Acronym: WG SEAMBOR

Membership: 11 experts from 9 countries

Duration: April 2008 - April 2010

Output: Position Paper 14, *Science Dimensions of an Ecosystem Approach to Management of Biotic Ocean Resources, SEAMBOR* (April 2010)



Implementation of an Ecosystem Approach to Management (EAM) is a critical challenge in achieving the requirements of the European Marine Strategy Framework Directive (MSFD). EAM

is a key management principle for sustainable maritime development, involving all human activity domains: environmental, social and economic. This multi-scale and multidisciplinary challenge requires a common understanding and action plan to efficiently involve the vast majority of stakeholders across disciplines and sectors.

The Marine Board WG SEAMBOR, jointly established with the International Council for Exploration of the Sea (ICES) and the European Fisheries and Aquaculture Research Organization (EFARO), emphasized that to allow for EAM implementation and achievement of Good Environmental Status (GES) required by the MSFD, research gaps between the natural, social and economic sciences must be closed.

The position paper proposes a set of high-level research and policy recommendations to inform and facilitate stakeholders both at Member State and European levels. Furthermore, the paper proposes a comprehensive workplan, indicating immediate actions necessary to attain the EAM requirements in the medium-term (to 2020).

The position paper recommends:

- Delivering tools for integrated policy evaluation;
- Improving knowledge on the goods and services provided by marine ecosystems;
- Assessing socio-economic consequences of the ecosystem change; and
- Ensuring scientific support for strategic environmental assessments and ecosystem conservation policies.

Impact

Since its launch during the 2010 European Maritime Day Stakeholder Conference in Gijon, the SEAMBOR position paper has informed European and national policymakers and wider scientific community on the EAM's scientific challenges and opportunities. The paper's recommendations have been taken up by the EC topical working groups on GES descriptors and in the design of national and European projects focused on ecosystem approach to management.



Official launch of the Position Paper SEAMBOR at the European Maritime Day Stakeholder Conference in Gijon (19/05/2010). From left: Andrew Kenny (Cefas, UK / WG SEAMBOR Member), A. Dosdat (IFREMER, France / EFARO), Aurélien Carbonnière (Marine Board), Adi Kellermann (ICES), Ana-Teresa Caetano (EC DG Research and Innovation) and Niall McDonough (Marine Board)

Position Paper 15: *Marine Biotechnology: A New Vision and Strategy for Europe*, September 2010

Working Group Acronym: WG BIOTECH
Membership: 12 experts from 11 countries
Duration: September 2009-September 2010
Output: Marine Board Position Paper 15 *Marine Biotechnology: A New Vision and Strategy for Europe* (September 2010)

Marine Board Position Paper 15, *Marine Biotechnology: A New Vision and Strategy for Europe*, developed by WG BIOTECH, gives a renewed impetus to marine biotechnology research in Europe. It stresses that the field's strategic importance for Europe is largely underestimated, and its possibilities underexploited. However, according to the paper, European Marine Biotechnology has the potential to become a truly integrated and globally competitive sector by 2020.



Targeted at policymakers, scientists and stakeholders involved in marine research and the interacting fields of health, food, environment and energy, the position paper provides a new strategy and a set of concrete actions to achieve the 2020 Marine Biotechnology vision. In its recommendations, each of them underpinned with a set of actions, the paper calls for:

- Raising the profile of European Marine Biotechnology research, e.g. through creating a central European information portal;
- Developing research strategies and programmes for Marine Biotechnology aligned at both national, regional and pan-European levels, e.g. through creation of a (virtual) European Marine Biotechnology Institute;
- Improving technology transfer pathways for proactive collaboration between academic research and industry, e.g. through harmonization of EU funding frameworks; and
- Improving training and education to support Marine Biotechnology in Europe.

The new strategy, proposed by the position paper, should enable the critical research priorities to be addressed through advanced, collaborative and interdisciplinary projects and programmes, meeting the objectives of the EC *Innovation Union*.

Impact

Marine Board Position Paper 15 will inform the new comprehensive goal-oriented vision and action plan that the European Commission is preparing to build a sustainable and innovative bio-economy by 2020. This message was highlighted by Maive Rute, EC DG for Research and Innovation Director for Biotechnologies, Agriculture and Food, at EurOCEAN 2010. Furthermore, the publication aims to inform Member State policy developments in the field of biotechnology in general and marine biotechnology in particular. A number of initiatives and research programmes in Europe have already taken up the position paper's recommendations.



Marine Board Position Paper 15 was formally launched and handed over to Maive Rute (Director of Directorate E - Biotechnologies, Agriculture, Food, EC DG RTD) during EurOCEAN 2010. From left: Adriana Ianora (Stazione Zoologica A. Dohrn, Italy / WG BIOTECH Member), Catherine Boyen (CNRS, France / WG BIOTECH Member) and Maive Rute (Director, Biotechnologies, Agriculture and Food Directorate, EC DG for Research and Innovation), 13 October 2011, Ostend.

The position paper was developed in parallel with other Marine Board activities in the field of marine biotechnology (pp. 36 and 39).

Working Group on Risk Assessment and Monitoring of Marine Chemical Pollutants

Working Group Acronym: WG POL
Membership: 14 experts from 10 countries
Duration: January 2008-May 2011
Output: Strategic Position Paper
(publication foreseen: May 2011)

Measures to manage and reduce anthropogenic pressures and impacts on the marine environment are being established and refined over time, e.g. the EU Marine Strategy Framework Directive. However, regulatory frameworks and large international programmes designed to monitor and control marine pollution, are not always based on the most recent scientific knowledge and developments.

This Marine Board working group will deliver a science-based evaluation of the risks posed by chemicals to marine and coastal systems, for an efficient and truly ecosystem-based implementation of relevant EU Directives and regional monitoring Programmes. The resulting position paper will make recommendations on improved monitoring procedures for established and emerging chemical pollutants, and identify future research needs in this area.

The WG POL aims to:

- Review existing knowledge on the environmental effects and risks posed by man-made chemicals in the marine environment;
- Identify new and emerging chemicals to be addressed in existing and future monitoring and assessment schemes; and
- Identify future R&D needs and propose procedures for improved monitoring of the impact and risks of chemicals in marine systems.

Working Group on Marine Microbial Diversity

Working Group Acronym: WG MICROCEAN
Membership: 12 experts from 10 countries
Duration: March 2010-October 2011
Output: Strategic Position Paper
(publication foreseen: October 2011)

Life on earth originated from microbes in the sea. Moreover, recent scientific research illustrates that marine microbes represent the most important and diverse biological grouping on earth. As a result, marine microbial biomass contributes significantly to all global cycles of matter and energy.

A number of major European and international projects have made significant progress in addressing marine microbial diversity, e.g. FP6 Networks of Excellence, Marine Genomics Europe (MGE) and Marine Biodiversity and Ecosystem Functioning (MarBEF) as well as the Census of Marine Life (CoML) and the International Census of Microbes (ICoMM). The Marine Board has brought together leading European experts to translate the current state-of-the-art in marine microbial research into concrete research priorities and science policy recommendations.

The WG MICROCEAN aims to:

- Re-emphasise the importance and role of microbes in the marine environment;
- Identify strategic areas for Europe in the realm of marine microbial diversity research, with specific reference to ecosystem functioning, biogeochemical cycling and environmental change; and
- Provide recommendations and a roadmap to guide European research in the medium term (to 2020) in response to the global change, improving the European competitiveness in this field.

Working Group on *Marine Protected Areas*

Working Group Acronym: WG MPAs
Membership: 10 experts from 9 countries
Duration: March 2010-December 2011
Output: Strategic Position Paper
(publication foreseen: December 2011)

Marine Protected Areas (MPAs) are instituted to protect or conserve ecologically sensitive areas and endangered species. MPAs are critical to obtain sustainable management of all types of human activities, including fisheries, research, education and recreation. Therefore, MPAs constitute a strong management tool and a key starting point to pave the way for an ecosystem-based management of the marine environment.

However, no common European framework exists for setting up clear priorities and management mechanisms for MPAs. Such a framework is urgently needed to efficiently respond to increasing anthropogenic uses of the sea and of its seabed as well as expanding industry interests, in a sustainable way. Marine Board WG MPAs responds to this immediate policy need, urging a strong legal status for MPAs to secure their long-term protection and operation. Furthermore, the WG will profile and consider requirements for the establishment of a strategic network of MPAs throughout Europe.

The WG MPAs aims to:

- Build a research framework to inform, engage and empower stakeholders in MPA planning; and
- Provide a list of key research priorities and recommendations to European research programme managers, MPA planners and EU and national decision makers to facilitate development of an MPA network in Europe.

Information on the Marine Board working group membership can be found in Annex III.

Further information is available on the website:
<http://www.esf.org/marineboard/workinggroups>



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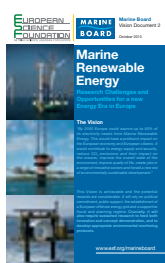
Marine Board Vision Documents

Marine Board vision documents aim to secure critical marine research priorities in a rapidly changing policy landscape. They deliver a strategic vision on the topic or area at hand and propose high-level approaches towards its implementation. Vision documents are drafted by vision groups, established for a short period (approx. six months). Vision groups work to distil complex science and policy issues and extract a clear message and a set of high-level recommendations targeted at European and national policymakers, research funders and the European science community.

To date (2010), the Marine Board has published two vision documents (see publications list in Annex X.) Late in 2010, work began on development of a new vision document on *Marine Biodiversity*.

Vision Document 2: *Marine Renewable Energy: Research Challenges and Opportunities for a New Energy Era in Europe*, October 2010

The European Parliament and Council have agreed on a package that will transform Europe into a low-carbon economy and increase its energy security. The EU is committed, by 2020, to reduce its overall emissions to at least 20% below 1990 levels, and to increase the share of renewable energy use to 20%.



Marine renewable energy can be a significant contributor towards a low-carbon economy. Not only can it help to substantially reduce our greenhouse gas emissions but it can also offer compelling results in terms of energy security and job creation.

Despite these promising rewards, the potential for marine renewable energy is still underestimated. Marine Board Vision Document 2, *Marine Renewable Energy: Research Challenges and Opportunities for a New Energy Era in Europe*, provides a vision for European policymakers,

industry and the research community, showing that this area can truly benefit the European economy in the next decade.

The publication stresses that, with increased and coordinated marine renewable energy research, integrated environmental protocols and policy support, Europe can reach ambitious low-carbon economy objectives by 2050.

Impact

Marine Board Vision Document 2 was launched at a dedicated side event during EurOCEAN 2010. The document informed decision makers at the highest political level, of the significant energy capacity of the oceans which, if harness through technologies, could provide a major contribution towards solving Europe's electricity needs. Its high-level recommendations have been taken up in policy statements by some Member States. Furthermore, industry representatives from the European Ocean Energy Association (EU-OEA) welcomed the document as a pan-European technology vision which can act as a guide to policymakers and stakeholders.

Information on the Marine Board vision group membership can be found in Annex III. Further information is available on the website: <http://www.esf.org/marineboard/visiongroups>



Lars Horn (Marine Board Chair) presents the Vision Document on *Marine Renewable Energy* to Manuela Soares (Director, Environment Directorate, EC DG Research and Innovation), 12 October 2010, Ostend.

The Ostend Declaration

“As an impetus for new ideas to boost marine research to innovate and address the challenges presented by our seas and oceans [...] the Ostend Declaration recommendations will feed into the preparation of the Framework Programme 8”.

Máire Geoghegan-Quinn, EU Commissioner for Research, Innovation and Science, EurOCEAN 2010.

The Ostend Declaration was endorsed by the 400-strong audience during the closing session of the EurOCEAN 2010 conference. Representing the united voice of the European marine and maritime science communities, the Ostend Declaration asserts that, *The Seas and Oceans are one of the Grand Challenges for the 21st Century*. Acknowledging the significant progress already made and the constructive European policy Framework now in place, the Declaration highlights the importance of the following key elements as the basis for a coherent approach to research focused on oceans, seas and coasts in the next decade:

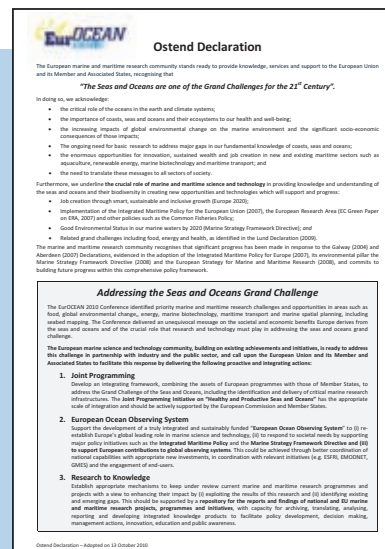
- Joint Programming;
- European Ocean Observing System;
- Research to Knowledge.

Furthermore, the Declaration highlights the need for enhanced innovation and commercialization of marine and maritime research outputs, improved training and career development for future marine scientists and technicians, and an increased effort to develop synergistic international (beyond Europe) collaboration to address global scientific and societal challenges.

Work on formulating the Declaration began more than six months prior to the EurOCEAN 2010 conference. At the centre of this effort was an eight-member Ostend Declaration Drafting Group which was supported by the Marine Board Secretariat (see Annex V for a list of the Drafting Group members). During the preparation phase, the main elements of the Declaration were communicated to a broad “consultation group” representing communities of European marine and maritime science stakeholders. A draft of the Declaration was also posted on the EurOCEAN 2010 website and an open call for comments and input launched during the weeks leading up to the conference.

The advanced draft produced as a result of this extensive consultation process was discussed by the conference delegates and high-level speakers during the course of the EurOCEAN 2010 conference. Finally, an agreed text of the Declaration was unanimously adopted at the conference closing session and was warmly welcomed by Máire Geoghegan-Quinn, EU Commissioner for Research Innovation and Science, and Wim De Vos, representative of the Belgian EU Presidency (from the Cabinet of Sabine Laruelle, Belgian Federal Minister for SMEs, Independents, Agriculture and Science).

The Ostend Declaration can be found on the EuroCEAN 2010 website and will be published as part of the EurOCEAN 2010 conference report: www.eurocean2010.eu



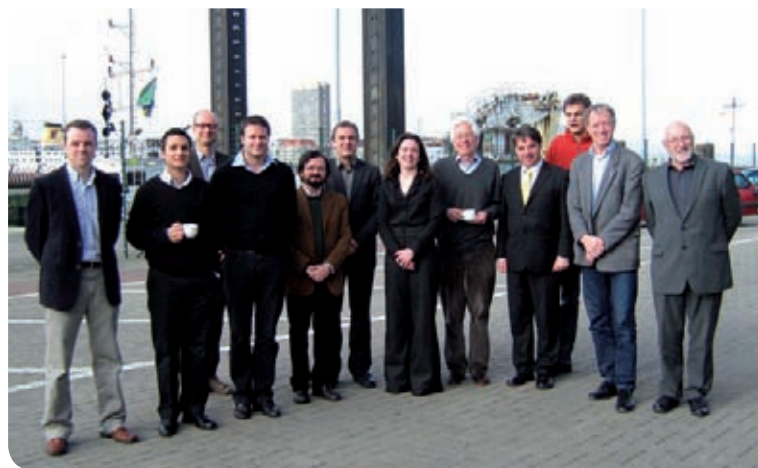
Navigating the Future

Since 2001, the Marine Board has published three high-level position papers under its *Navigating the Future* banner. The *Navigating the Future* series has been recognized, both by researchers and science policymakers, as providing critical periodic foresight and recommendations on emerging marine science topics and needs, and associated societal challenges and opportunities.

Navigating the Future IV

In 2010, the Board began the process of preparing its *Navigating the Future IV* position paper. The publication will provide a detailed strategic overview of the focused and multidisciplinary marine science approaches needed to address critical challenges related to the coasts, seas and oceans and the interaction of Europe with its marine environments. *Navigating the Future IV* will deliver high-level recommendations to advance marine science and influence science policy agendas at Member State and European level for the next decade.

In March 2010, the Marine Board Secretariat organized a two-day brainstorming workshop, bringing together European experts in several marine research disciplines, with in-depth experience in pan-European cooperation and science policy. As a result of this workshop, a shortlist of critical challenges for sustainable interaction with the seas and oceans was prepared. The Workshop outputs provided the overall structure and approach to the *Navigating the Future IV* and were also used to structure the Programme of the EurOCEAN 2010 conference (see also p. 34).



Participants at the Marine Board *Navigating the Future IV* Brainstorming Workshop at the Marine Boards offices in Ostend (3-4 March 2010). From left: Niall McDonough (Marine Board Executive Scientific Secretary / Workshop facilitator), Baris Salihoglu (IMS-METU, Turkey), Jan-Bart Calewaert and Aurélien Carbonnière (Marine Board Secretariat), Antonio Bode (IEO, Spain), Jan Mees (VLIZ, Belgium), Maud Evrard (Marine Board Secretariat), Reidar Torensen (IMR, Norway), Edward Hill (NOC, United Kingdom), Thomas Brey (AWI, Germany), Hein de Baar (NIOZ, Netherlands) and Geoffrey O'Sullivan (MI, Ireland).

VOICE

One of Marine Board's core objectives is to forge a collective vision on the future direction of European marine science and technology. The Marine Board facilitates its members and external stakeholders to voice their common vision via science policy conferences, joint statements and high-impact communication strategies.

Conferences

EurOCEAN 2010: Grand Challenges for Marine Research in the Next Decade



EurOCEAN 2010 (12-13 October 2010, Ostend) was jointly organised by the 2010 Belgian Presidency of the

European Union, the European Commission and the Marine Board.

EurOCEAN 2010 came at a crucial time for the European marine science community to influence how science focused on the coasts, seas and oceans is supported in the coming decade. High-level speakers presented the major advances and state-of-the-art in marine and maritime research and technology against a list of high-level societal themes, outlining their proposals for Europe's 'blue future'.

Over 400 international marine and maritime scientists unanimously agreed that the *Seas and Oceans are one of the Grand Challenges for the 21st Century*. This message is the headline of the Ostend Declaration which was adopted on the second day of the conference (13 October 2010), following a broad consultation with the marine and maritime research community and relevant stakeholders across Europe in the months leading up to the conference.

The Ostend Declaration aims to reinforce the importance of marine science in effective maritime policy making and its key role in delivering innovation and contributing to economic development in Europe (see also page 32).

Further information is available on the EurOCEAN 2010 website: www.eurocean2010.eu

The Marine Board coordinated the EurOCEAN 2010 conference programme and co-organized the conference and its side-events:

Pre-event at the European Parliament

A high-level EurOCEAN 2010 pre-event (11 October 2010, Brussels) was organized in the European Parliament to promote the importance of marine science and technology in addressing key societal challenges at the core of European policy-making. Among the attendees were Members of the European Parliament, marine science and policy experts, and representatives from the European Commission and relevant European and Member State agencies.

Research Showcase

The Marine Board initiated and organized a Research Showcase (exhibition) at the EurOCEAN 2010 conference venue (12-13 October 2010, Ostend). Forty-three exhibitors took part in the Showcase, including ten national institutes involved in marine research, ten pan-European networks, nineteen EU Framework Programme projects, and four inter-governmental organizations. The Showcase was an integral part of the conference, providing a platform for profiling a wide range of marine research and for networking amongst the conference participants.

Poster series

A poster series was developed for the conference to illustrate ten key marine science and technology research priorities and challenges for the next decade. The posters were developed from the challenge-based themes previously identified at the Marine Board *Navigating the Future IV* Brainstorming Workshop (see page 33). The poster exhibition was displayed at the EurOCEAN 2010 conference and the high-level pre-event in the European Parliament. The conference organizers also published a leaflet featuring the poster series (available for download from: www.eurocean2010.eu/downloads).

EurOCEAN 2010 Highlights

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Poster series illustrating a selection of ten grand challenges and priorities for marine research in the next decade (identified at the Marine Board *Navigating the Future IV* Brainstorming Workshop) was presented at the EurOCEAN 2010 high-level pre-event at the European Parliament and at the conference.



Maria Damanaki, EU Commissioner for Maritime Affairs and Fisheries, expresses hope that the Ostend Declaration will underpin delivery of the EC Integrated Maritime Policy.

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EurOCEAN 2010 was attended by over 400 participants, representatives of over 140 major stakeholder groups and research organizations, including the EU Commissioners for Maritime Affairs and Fisheries, and for Research Innovation and Science, national authorities, coordinators of EC projects, heads of pan-European marine research networks and directors of national marine research institutes and research councils as well as marine scientists from across Europe and beyond..



Máire Geoghegan-Quinn, Commissioner for Research, Innovation and Science, claims that marine science and technologies have much to contribute to the [societal] challenges. Pictured Lars Horn, Marine Board Chair, presents the Ostend Declaration to Máire Geoghegan-Quinn at the end of EurOCEAN 2010.

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Forty-three organizations participated in the EurOCEAN 2010 Research Showcase (organized by the Marine Board), representing the diversity of stakeholders: from inter-governmental organizations, to pan-European networks, EC projects and national research institutes.



Marine Biotechnology: Future Challenges

In parallel with the activities of the Marine Board Working Group on Marine Biotechnology (see p. 28), the Marine Board organized, in partnership with the European Science Foundation (ESF) and COST Office, a high-level scientific conference, entitled *Marine Biotechnology: Future Challenges* (20-25 June 2010, Aquafredda di Maratea, Italy).

The conference aimed to provide leading European researchers in the field of marine biotechnology with a platform to:

- Present state-of-the-art marine biotechnology research;
- Discuss current scientific understanding, recent developments, and research and knowledge gaps; and
- Identify the priorities for future research and infrastructure needs.

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Participants at the Marine Board-ESF-COST scientific conference *Marine Biotechnology: Future Challenges* (20-25 June 2010, Aquafredda di Maratea, Italy).

The conference drew from a broad range of scientific and technological disciplines and areas, including (but not limited to) algae and seaweed biomass, aquaculture, bioprospecting, human and environmental health, enzymes, marine bionanotechnology and biomaterials, marine models, marine –‘omics’, pollution and bioremediation, bioinformatics and research infrastructures.

Furthermore, the conference provided an opportunity for young researchers to present their work in short talks and through a poster exhibition and competition.

Information on the conference and its outputs is available on Marine Board conference webpage: <http://www.esf.org/marineboard>

1st MARCOM+ Open Forum

As part of its role in the EC FP7 MARCOM+ project (see p. 22), the Marine Board organized the 1st MARCOM+ Open Forum in Brussels on 25 November 2010. The forum presented the project's objectives and progress to EC programme managers and scientific stakeholders. Furthermore, the forum organized a brainstorming on three pillars relevant to the future marine and maritime collaboration to be delivered by MARCOM+: *science for policy*, *science strategy* and *science for innovation*.

The MARCOM+ Forum proceedings are available for download on the project's website: <http://www.marinemaritimescienceforum.eu>



Brainstorming session on *Science for Policy* at the 1st MARCOM+ Open Forum (25 November 2010, Brussels).

Other Stakeholder Collaborations

In 2010, the Marine Board took part in a number of other major marine science stakeholder meetings and events, some of which are outlined below.

European Maritime Day Stakeholder Conference 2010

Several Marine Board strategic activities related to, among others, marine data and observation, implementation of the Marine Strategy Framework Directive and marine and maritime science collaboration, were highlighted in conference presentations by Marine Board collaborators and representatives of the Board's members, at the European Maritime Day Stakeholder Conference 2010 in Gijón (19-20 May 2010). In addition, the Board was asked to organize a conference workshop on Ocean Sustainability.

Chaired by Niall McDonough, Marine Board Executive Scientific Secretary, the workshop discussed the challenges of achieving an ecosystem approach to management of marine environments and science needs towards meeting the goals of European Marine Strategy Framework Directive.



Andrew Kenny (Cefas, UK) presents recommendations of the Marine Board-ICES-EFARO position paper on *Science Dimensions of an Ecosystem Approach to Management of Biotic Ocean Resources*, SEAMBOR, European Maritime Day Stakeholder Conference 2010 (19 May 2010, Gijón).

The workshop highlighted the need for:

- Holistic (ecological and socio-economic) modelling approaches to facilitate accurate forecasting and scenario building, essential for decision making and sustainable management;
- Observations and data systems for integrated assessments, accurate modelling and analysis of environmental change; and
- Improved communication capacity to transfer scientific knowledge to decision makers, stakeholders and the public, and to fill the gap between disciplines.



Spanish EU Presidency Event: EUROMARES 2010

Organized back to back with the European Maritime Day Stakeholder Conference 2010 in Gijon, EUROMARES brought together high-level policymakers and science community representatives. Lars Horn, Marine Board Chair, presented the conference conclusions, voicing a marine research community vision and advice on the future research priorities and science policy developments, which had been delivered during the EUROMARES conference.

All-Embracing Stakeholder Platform for the Integrated Maritime Policy

The Marine Board was one of the two organizations representing marine research on the steering committee of the All-embracing Stakeholder Platform (also known as the 'Group of Ten'), which was established in 2009 and continued in 2010.

In 2010, within the activities of the platform, the Marine Board submitted an open letter to Commissioner for Maritime Affairs and Fisheries representing its members' joint vision of the marine research priorities for the future development of the Integrated Maritime Policy (IMP). The Marine Board requested urgent action from the Commission to deliver:

- A seabed habitat mapping for Europe; and
- Support for expanded and sustained long-term observations of Europe's seas and oceans.

The Marine Board open letter to Commissioner Damanaki is available on:

<https://webgate.ec.europa.eu/maritimeforum/node/950>

Among other 2010 activities of the stakeholder platform, was the organization of a round table on *Future Directions for the EU's Integrated Maritime Policy* at the European Maritime Day Stakeholder Conference 2010 in Gijon (picture above).



Lars Horn presents joint Marine Board member organizations' perspectives on the future directions of the Integrated Maritime Policy at the dedicated European Maritime Day Round Table, organized by the All-embracing Stakeholder Platform (19 May 2010, Gijon).

Marine Board submission to the Commissioner for Maritime Affairs and Fisheries As part of the Hearing with All-Embracing Stakeholder Platform for the Integrated Maritime Policy Brussels, 28 April 2010.



The Marine Board is a partnership of major national marine science research and funding organisations which was established in 1995 to facilitate cooperation and coordination in marine science in Europe. According to its mission, the Board:

"provides a pan-European platform for its member organisations to develop common priorities, to advance marine research and to bridge the gap between science and policy in order to meet future marine science challenges and opportunities"

As of 2010, the Marine Board has 30 Member Organisations from 19 countries.

With reference to the future direction of the European Integrated Maritime Policy, the Marine Board calls on The Commissioner and Directorate General for Maritime Affairs and Fisheries to recognise:

- the critical importance of marine science in the ongoing development of sustainable maritime activities and in support of effective marine and maritime policy making and management actions;
- the critical lack of awareness among European citizens of the importance of the European Seas and Oceans to their health and well-being;
- the considerable knowledge deficit that exists in relation to the functioning of marine ecosystems; knowledge which is essential to allow us to sustainably manage our marine environment and to continue to benefit from marine products and services;
- the considerable opportunities which exist for Europe to further benefit from existing and novel products and services derived from the marine environment, contributing to our future food, energy and health needs; and
- The consequent need for continued support for science-based approaches and solutions to marine and maritime challenges and opportunities.

Recognising the significant progress made in European marine science policy and the broader maritime policy since publication of the Aberdeen Declaration (2007), including:

- Adoption (Oct 2007) of the Integrated Maritime Policy for Europe
- Coming into force (July 2008) of the Marine Strategy Framework Directive
- Adoption (September 2008) of the European Strategy for Marine and Maritime Research
- Launch by the DG RTD of Framework Programme calls as concrete implementation actions for the European Strategy for Marine and Maritime Research, resulting in the launch of the MARCOM+ and EMARRES projects (underway in late 2009/early 2010 respectively);

Pan-European Initiatives and Networks

The Marine Board is represented on scientific panels or acts as an observer in a number of European initiatives, aiming to promote joint identification of priorities and avoid duplication of efforts.

In 2010, the Board actively contributed to the following initiatives and networks:

European Consortium for Ocean Drilling Research, ECORD Council – as observer;



Waterborne Technology Platform – as observer;



Expert Group on Marine Research Infrastructures (established by the EC DG for Research and Innovation) – as observer;



Collaborative Working Group on Marine Biotechnology (established by the EC DG for Research and Innovation) – as observer;



European Marine Observation and Data Network, EMODNET (established by the EC DG for Maritime Affairs and Fisheries) – as member of Biological Lot Coordination Board



Communication Output

The Marine Board recognizes the crucial importance of efficient communication to profile the Board's strategic objectives and outputs, promoting marine research priorities. Marine Board communication and dissemination activities are guided and by an internal communication and impact strategy, developed in 2009.

The following tools are used to maximise the targeted transmission of the Board's messages and outputs:

General information and profile



The Marine Board homepage is located at <http://www.esf.org/marineboard>

Dissemination

- **Marine Board publications webpage** features all the Marine Board publications since 2000 available for download, free of charge: <http://www.esf.org/marineboard/publications>
- **Marine Board publications booths** are regularly organized at relevant events (see Annex VIII);
- **Postage** of new Marine Board publications is organized to targeted stakeholders.

Further information about the Marine Board and hard copies of its publications can be requested by email: marineboard@esf.org



Marine Board publication booths. From top: 2nd Marine Board Forum (16 September 2010, Brussels) and EurOCEAN 2010 Research Showcase (12-13 October 2010, Ostend).

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MARINE BOARD FINANCES 2010

The Marine Board annual budget is based on:

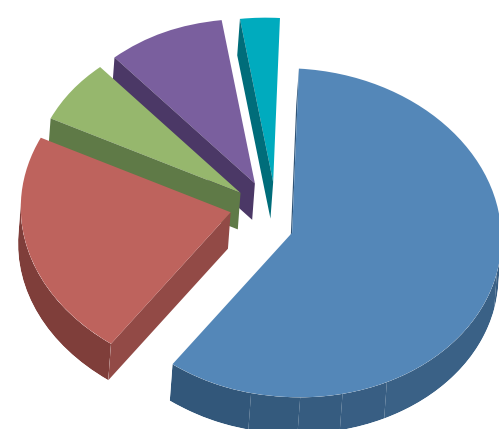
- Member Organizations contributions;
- Special contributions (towards some Marine Board activities); and
- External contracts, e.g. EC FP7 projects.

The Flemish Government (Belgium) provides an in-kind contribution to the Board through the provision of office space and equipment at the Ostend InnovOcean site and the employment cost of the Marine Board Administrator.

Member Organizations also provide in-kind contribution through support for participation of national experts in Marine Board activities, i.e. travel and subsistence costs to attend meetings.

Available Funds 2010*

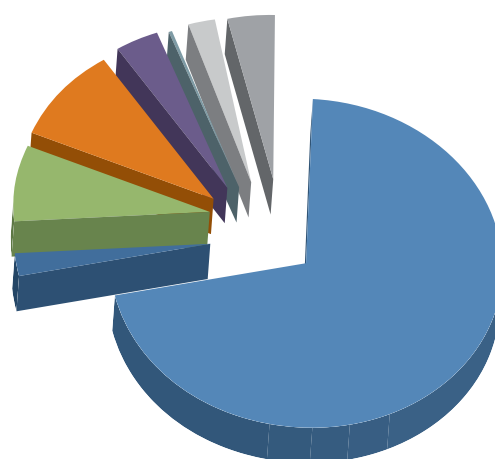
Member contributions Core Marine Board activities, Secretariat staffing and office consumables	€ 327.5K
FP drawdown on employment costs (estimate) Secretariat activities and staff time related to the external projects	€ 123.5K
Special contributions Support towards Working Group on <i>Chemical Pollutants</i> from RCN, Norway	€ 35K
Carry over from 2009 Contingency fund	€ 50.7K
Other Provisions for outstanding payments	€ 16K
Total*	€ 552.7K



- Member contributions
- FP drawdown on employment costs (estimate)
- Special contributions
- Carry over (contingency fund)
- Other (provisions)

Expenditure 2010*

Secretariat employment costs	€ 343.7K
Other staffing costs	€ 10.9K
Meetings Secretariat staff travel and meeting logistics	€ 37.3K
Publications and dissemination	€ 45.2K
Office Consumables and equipment	€ 17.1K
Staff training	€ 1.7K
Provision for doubtful debts	€ 10.8K
Overheads to the ESF	€ 18.1K
Total*	€ 484.8K



- Employment costs
- Other employment costs
- Meetings
- Publications and dissemination
- Office
- Staff training
- Provision for doubtful debts
- Overheads to the ESF

* The final figures are subject to the general ESF financial 2010 closure and audit, which was not complete at the time of publication. The final figures are reported to the Marine Board at the Marine Board Spring 2011 Plenary Meeting.

ANNEXES

Annex I. Marine Board Member Organizations and Delegates 2010

BELGIUM

- **Fonds National de la Recherche Scientifique (FNRS)**
National Fund for Scientific Research
Jean-Marie Beckers
- **Fonds voor Wetenschappelijk Onderzoek - Vlaanderen (FWO)**
Fund for Scientific Research - Flanders
Jan Mees (Marine Board vice-Chair)

CYPRUS

- **Ωκεανογραφικού Κέντρου Κύπρου**
Cyprus Oceanography Center
Georgios Georgiou
George Zodiatis

DENMARK

- **Det Frie Forskningsråd | Natur og Univers (FNU)**
The Council for Independent Research | Natural Sciences
Kirsten Christoffersen

ESTONIA

- **Eesti Teaduste Akadeemia**
Estonian Academy of Sciences
Tarmo Soomere

FINLAND

- **Suomen Akatemia**
Academy of Finland
Kyösti Lempä
- **Suomen Ympäristökeskus**
Finnish Environment Institute
Markku Viitasalo

FRANCE

- **Centre National de la Recherche Scientifique (CNRS)**
National Centre for Scientific Research
Jean-Marie Flaud
- **Institut Français de Recherche pour l'Exploitation de la Mer (IFREMER)**
French Research Institute for Exploitation of the Sea
Antoine Dosdat (Marine Board vice-Chair)

GERMANY

- **Deutsche Forschungsgemeinschaft (DFG)**
German Research Foundation
Bodo von Bodungen
- **Hermann-von-Helmholtz-Gemeinschaft deutscher Forschungszentren (HGF)**
Association of National Research Centres
Karin Lochte
- **Leibniz-Institut für Meereswissenschaften an der Universität Kiel (IFM-GEOMAR)**
Leibniz Institute of Marine Sciences at the Christian-Albrechts Universität zu Kiel
Peter Herzig

GREECE

- **Ελληνικό Κέντρο Θαλάσσιων Ερευνών**
Hellenic Centre for Marine Research (HCMR)
Kostas Nittis

IRELAND

- **Foras na Mara**
Marine Institute
Geoffrey O'Sullivan (Marine Board vice-Chair)

ITALY

- **Consiglio Nazionale delle Ricerche (CNR)**
National Research Council
Guiseppe Cavarretta
- **Istituto Nazionale di Oceanografia e di Geofisica Sperimentale (OGS)**
National Institute of Oceanography and Experimental Geophysics
Alessandro Crise

NETHERLANDS

- **Koninklijke Nederlandse Akademie van Wetenschappen (KNAW)**
Royal Netherlands Academy of Arts and Sciences
Carlo Heip
- **Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO)**
Netherlands Organisation for Scientific Research
Josef F. Stuefer

NORWAY

- **Havforskningsinstituttet**
Institute of Marine Research
Tore Nepstad
Erlend Moksness
- **Norges Forskningsradet**
The Research Council of Norway
Lars Horn (Marine Board Chair)
- **Universitetet i Bergen (UiB)**
University of Bergen
Peter Haugan

POLAND

- **Instytut Oceanologii Polskiej Akademii Nauk (IO-PAN)**
Institute of Oceanology of the Polish Academy of Sciences
Slawomir Sagan

PORTUGAL

- **Centro de Investigação Marinha e Ambiental (CIMAR)**
Centre of Marine and Environmental Research
Joao Coimbra
- **Fundação para a Ciência e a Tecnologia (FCT)**
Science and Technology Foundation
Mario Ruivo
Ricardo Santos

ROMANIA

- **Institutul National de Cercetare - Dezvoltare Marina "Grigore Antipa"**
National Institute for Marine Research and Development "Grigore Antipa"
Vasile Patrascu

SPAIN

- **Consejo Superior de Investigaciones Científicas (CSIC)**
Spanish National Research Council
Beatriz Morales-Nin (Marine Board vice-Chair)

- **Instituto Espanol de Oceanografia (IEO)**
Spanish Institute of Oceanography
Gregorio Parrilla (until September 2010);
Demetrio de Armas (from October 2010)

SWEDEN

- **Havsmiljöinstitutet**
Swedish Institute for the Marine Environment
Michael Thorndyke

TURKEY

- **Türkiye Bilimsel ve Teknik Arastırma Kurumu (TÜBİTAK)**
The Scientific and Technological Research Council of Turkey
Colpan Polat-Beken (Marine Board vice-Chair)

UNITED KINGDOM

- **Natural Environment Research Council (NERC)**
Mike Webb
- **National Oceanography Centre (NOC)**
Edward Hill (Marine Board vice-Chair)
Jacky Wood

MARINE BOARD OBSERVERS

- **European Commission DG Research and Innovation**
- **European Commission DG Maritime Affairs and Fisheries**

Up-to-date information on the Marine Board Members is available from:
www.esf.org/marineboard/about

Annex II Marine Board Plenary Meetings 2010

Marine Board Spring 2010 Plenary Meeting, 3-4 June 2010, Istanbul, Turkey List of Participants

Marine Board

Name	Organisation	Email
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Soomere, Tarmo	Estonian Academy of Sciences, Estonia	soomere@cs.ioc.ee

Marine Board Observers

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Laros, Willem Speaker To Open Session	Waterborne Technology Platform	wl@cesa.eu

Invited Speakers to the Open Session

Representative	Organisation	Email
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Ianora, Adriana	Ecophysiology Laboratory Stazione Zoologica "A. Dohrn", Italy	ianora@szn.it

Invited Guests to the Open Session

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Marine Board Autumn 2010 Plenary Meeting, 14 October 2010, Oostende, Belgium

List of Participants

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Soomere, Tarmo	Estonian Academy of Sciences, Estonia	soomere@cs.ioc.ee
Stuefer, Josef	Netherlands Organisation for Scientific Research (NWO), Netherlands	j.stuefer@nwo.nl
Thorndyke, Michael	Swedish Institute for the Marine Environment, Sweden	mike.thorndyke@marecol.gu.se
Viitasalo, Markku	Finnish Environment Institute (SYKE), Finland	marrku.viitasalo@ymparisto.fi
Von Bodungen, Bodo	German Research Foundation (DFG), Germany	bodo.bodungen@io-warnemuende.de
Wood, Jacky	Natural Environment Research Council (NERC), United Kingdom	jkwo@noc.soton.ac.uk
Zodiatis, George	Cyprus Oceanography Centre, Cyprus	gzodiac@ucy.ac.cy

Invited Guest

Representative	Organisation	Email
Heppener, Marc	European Science Foundation (ESF)	mheppener@esf.org

Marine Board Secretariat

Representative	Organisation	Email
McDonough, Niall Executive Scientific Secretary	Marine Board Secretariat	nmcdonough@esf.org
Calewaert, Jan-Bart	Marine Board Secretariat	jbcalewaert@esf.org
Carbonnière, Aurélien	Marine Board Secretariat	acarbonniere@esf.org
Eparkhina, Dina	Marine Board Secretariat	deparkhina@esf.org
Evrard, Maud	Marine Board Secretariat	mevrard@esf.org

Annex III: Marine Board Working and Vision Group Members 2010

Working Group Science Dimensions of Ecosystem Approach to Management of Biotic Ocean Resources (WG SEAMBOR)

Members:

- Jake Rice, Fisheries and Oceans Canada, Canada - working group co-Chair
- Ricardo Santos, Foundation for Science and Technology (FCT), Portugal - working group co-Chair
- Fatima Borges, National Research Institute for Agriculture and Fisheries (IPIMAR), Portugal
- Anthony Grehan, National University of Ireland (NUI), Ireland
- Andrew Kenny, Centre for Environment, Fisheries and Aquaculture Science (CEFAS), United Kingdom
- Harald Loeng, Institute of Marine Research (IMR), Norway
- Francesc Maynou, Spanish National Research Council (CSIC), Spain
- Hein Rune Skjoldal, Institute of Marine Research (IMR), Norway
- Olivier Thébaud, French Research Institute for Exploitation of the Sea (IFREMER), France
- Vasiliki Vasilopoulou, Hellenic Centre for Marine Research (HCMR), Greece
- Filip Volckaert, University of Leuven, Belgium

Marine Board support:

- Science officer: Aurélien Carbonnière
- Manager: Niall McDonough

Working Group Marine Biotechnology – A European Strategy for Marine Biotechnology (WG BIOTECH)

Members:

- Joel Querellou, French Research Institute for Exploitation of the Sea (IFREMER), France – working group Chair
- Torger Børresen, National Institute for Aquatic

Resources (DTU Aqua), Denmark

- Catherine Boyen, Station Biologique de Roscoff, National Centre for Scientific Research (CNRS), France
- Alan Dobson, University College Cork (UCC), Ireland
- Manuel Ferrer, Spanish National Research Council (CSIC), Spain
- Manfred Höfle, Helmholtz Center of Infection Research, Germany
- Adrianna Ianora, Stazione Zoologica “A. Dohrn” Naples, Italy
- Marcel Jaspars, University of Aberdeen, United Kingdom
- Anake Kijjoa, University of Porto, Portugal
- Jan Olafsen, University of Tromsø, Norway
- George Rigos, Hellenic Centre for Marine Research (HCMR), Greece
- Rene Wijffels, Wageningen UR Wageningen UR (University & Research centre), Netherlands

Marine Board support:

- Science officer: Jan-Bart Calewaert
- Manager: Niall McDonough

Working Group Risk Assessment and Monitoring of Existing and Emerging Chemicals in the European Marine and Coastal Environment (WG POL)

Members:

- Colin Janssen, Ghent University, Belgium – working group co-Chair
- Patrick Roose, Management Unit of the North Sea Mathematical Models and the Scheldt estuary (MUMM), Belgium - working group co-Chair
- Joan Albaiges, Spanish National Research Council (CSIC), Spain
- Maria João Bebianno, University of Algarve, Portugal
- Kees Camphuysen, Royal Netherlands Institute for Sea Research (NIOZ), Netherlands

- Margot Cronin, Marine Institute, Ireland
- Jan de Leeuw, Royal Netherlands Institute for Sea Research (NIOZ), Netherlands
- Geir Wing Gabrielsen, Norwegian Polar Institute, Norway
- Tom Hutchinson, Plymouth Marine Laboratory, United Kingdom
- Ketil Hylland, University of Oslo, Norway
- Bo Jansson, Stockholm University, Sweden
- Munro Bjørn Jenssen, Norwegian University of Science and Technology (NTNU), Norway
- Detlef Schulz-Bull, Baltic Sea Research Institute-Warnemuende, Germany
- Piotr Szefer, Medical University of Gdansk, Poland

Marine Board support:

- Science officer: Jan-Bart Calewaert
- Manager: Niall McDonough

Working Group Marine Microbial Diversity Role in Ecosystem Functioning and Environmental Change (WG MICROCEAN)

Members:

- Frank Oliver Glöckner, Max Planck Institute for Marine Microbiology, Germany – working group Chair
- Adriano Bordalo, Centre of Marine and Environmental Research (CIIMAR) and of the Institute of Biomedical Sciences of Abel Salazar (ICBAS), University of Porto, Portugal
- Josep Maria Gasol, Mediterranean Marine and Environmental Centre (CMIMA) of the Spanish National Research Council, Spain
- Åke Hagström, Swedish Institute for the Marine Environment, Sweden
- Francisco Hernandez, Flanders Marine Data Centre (VMDC), Belgium
- Mathias Labrenz, Leibniz Institute for Baltic Sea Research, Germany
- Fergal O’Gara, National University of Ireland Cork (UCC), Ireland

- Pitta, Paraskevi, Hellenic Centre for Marine Research (HCMR), Greece
- Ruth-Anne Sandaa, University of Bergen (UiB), Norway
- Lucas J. Stal, Institute of Ecology of the Royal Netherlands Academy of Arts and Sciences (NIOO-KNAW), Netherlands
- Elena Stoica, National Institute for Marine Research and Development “Grigore Antipa”, Romania
- Marta Varela Rozados, Spanish Institute of Oceanography (IEO), Spain

Marine Board support:

- Science officer: Jan-Bart Calewaert
- Manager: Niall McDonough

Working Group Use of Marine Protected Areas for Ecosystem-Based Management (WG MPAs)

Members:

- Esben Olsen, Institute of Marine Research (IMR), Norway – working group Chair
- Enrique Macpherson, Spanish National Research Council (CSIC), Spain
- Raquel Goñi, Spanish Oceanography Institute (IEO), Spain
- Dominique Pelletier, French Sea Research Institute for Exploitation of the Sea (IFREMER), France
- Marijn Rabaut, Ghent University, Belgium
- Stelios Katsanevakis, Hellenic Centre for Marine Research (HCMR), Greece
- Tania Zaharia, National Institute for Marine Research and Development “Grigore Antipa”, Romania
- Britas Klemens Eriksson, University of Groningen, Netherlands
- Phil Weaver, National Oceanography Centre, United Kingdom
- Marta Chantal Ribeiro, University of Porto, Portugal

Marine Board support:

- Science officer: Aurélien Carbonnière
- Manager: Niall McDonough

Vision Group *Marine Renewable Energy* (VG MRE)

Members:

- Marc Le Boulluec, French Research Institute for Exploitation of the Sea (IFREMER), France – vision group Chair
- Augusto Barata da Rocha, Institute of Mechanical Engineering and Industrial Management (INEGI), Portugal
- Cibran Cambra Rey, Acciona Energia, Spain
- John Dalen, Institute of Marine Research (IMR), Norway
- Henry Jeffrey, Energy Research Council, United Kingdom
- Finn Gunnar Nielsen, Statoil and University of Bergen, Norway
- Geoffrey O'Sullivan, Irish Marine Institute, Ireland
- Nathalie Rousseau, European Ocean Energy Association (EU-OEA)
- Eoin Sweeney, Sustainable Energy Ireland, Ireland
- Joduth Wolf, National Oceanography Centre (NOC), United Kingdom

Marine Board support:

- Science officer: Maud Evrard
- Manager: Niall McDonough

Annex IV: Marine Board Panel Members 2010

Marine Board Communications Panel (MBCP)

Members:

- Jan Seys, Flanders Marine Institute (VLIZ), Belgium – panel Chair
- Myriam Altius, French Research Institute for Exploitation of the Sea (IFREMER), France
- Jan Boon, Royal Netherlands Institute for Sea Research (NIOZ), Netherlands
- Anne Ditlefsen, Research Council of Norway, Norway
- Géraldine Fauville, Sven Lovén Center - Kristineberg, University of Gothenburg, Sweden
- Albert Gerdes, Centre for Marine Environmental Sciences (MARUM), Germany
- John Joyce, Marine Institute, Ireland
- Chloe Kembery, European Science Foundation
- Kim Marshall Brown, National Oceanography Centre (NOC), United Kingdom
- Kjartan Mæstad, Institute of Marine Research (IMR), Norway
- Gregorio Parrilla, Spanish Institute of Oceanography (IEO), Spain – until June 2010
- Margarete Pauls, Alfred Wegener Institute for Polar and Marine Research (AWI), Germany – since March 2010
- Slawomir Sagan (until October 2010) and Joanna Piwowarczyk (since November 2010), Institute of Oceanology of the Polish Academy of Sciences (IO-PAN), Poland
- Yianna Samuel-Rhoads, Cyprus Oceanography Centre, Cyprus
- Cristina Serra, National Institute of Oceanography and Experimental Geophysics (OGS), Italy – since November 2010
- Andreas Villwock, Leibniz Institute of Marine Sciences at the Christian-Albrechts Universität zu Kiel (IFM-GEOMAR), Germany

Marine Board support:

- Science officer: Maud Evrard
- Manager: Niall McDonough

Marine Board European Scientific Diving Panel (MB ESDP)

Members:

- Jean-Pierre Féral, Institut national des sciences de l'Univers (INSU) of the French National Centre for Scientific Research, France – panel Chair
- Martin Sayer, Scottish Association for Marine Science (SAMS), United Kingdom – panel deputy Chair
- Philipp Fischer, Alfred Wegener Institute for Polar and Marine Research (AWI), Germany – panel deputy Chair
- Georgio Caramanna and Carlo Cerrano, Italian Association of Scientific Divers, Italy
- Pirkko Kekalainen, Finnish Scientific Diving Committee, Finland
- Roger Lindblom, University of Gothenburg, Sweden
- Alain Norro, Management Unit of the North Sea Mathematical Models and the Scheldt estuary (MUMM), Belgium
- Dan Tchernov, Interuniversity Institute for Marine Sciences (IUI), Israel

Marine Board support:

- Science officer: Aurélien Carbonnière
- Manager: Niall McDonough

Annex V: Ostend Declaration Drafting Group Members

Members:

- Kostas Nittis, Hellenic Centre for Marine Research (HCMR), Greece – Drafting Group Chair
- Giuseppe Cavarretta, National Research Council (CNR), Italy
- Antoine Dosdat, French Research Institute for Exploitation of the Sea (IFREMER), France
- Niall McDonough, Marine Board
- Jan Mees, Flanders Marine Institute (VLIZ), Belgium
- Geoffrey O’Sullivan, Marine Institute, Ireland
- Waddah Saab, European Commission Directorate General for Research and Innovation
- Michael Thorndyke, Swedish Institute for the Marine Environment, Sweden
- Jacky Wood, National Marine Coordination Office, United Kingdom

Marine Board support:

- Jan-Bart Calewaert - Facilitator

Annex VI: Meetings and Events Organised by the Marine Board Secretariat in 2010 (incl. jointly)¹

19/01/2010	Marine Board Executive Committee Meeting (Brussels)
29/01/2010	Marine Board Vision Group on Marine Renewable Energy (VG MRE) Kick-off Meeting (Paris)
04-05/02/2010	Marine Board-ESF-COST Conference on Marine Biotechnology Strategic Meeting (Brussels)
17/02/2010	Marine Board Working Group on Marine Microbial Diversity (WG MICROCEAN) Kick-off Meeting (Brussels)
03-04/04/2010	Marine Board Navigating the Future IV Brainstorming Workshop (Ostend)
16/03/2010	Marine Board Working Group on Marine Protected Areas (WG MPAs) Kick-off Meeting (Brussels)
18-19/03/2010	Marine Board Working Group on Marine Biotechnology (WG BIOTECH) Meeting (Brussels)
23/03/2010	Marine Board Vision Group on Marine Renewable Energy (VG MRE) Meeting (Brussels)
29-30/03/2010	Marine Board Communications Panel (MBCP) Meeting (Southampton)
05/05/10	EU FP7 EMAR ² RES Panel of Experts Meeting (Brussels)
19/05/10	Launch of Marine Board Position Paper 14 <i>Science Dimensions of an Ecosystem Approach to Management of Biotic Ocean Resources</i> , SEAMBOR (back to back with the European Maritime Day Stakeholder Conference 2010, Gijon)
27/05/10	EU FP7 EMAR ² RES Policy Interface Panel Meeting (Brussels)
02/06/10	EurOCEAN 2010 Ostend Declaration Drafting Group Meeting (Istanbul)
02/06/10	Marine Board Executive Committee Meeting (Istanbul)
03-04/06/10	Marine Board Spring 2010 Plenary Meeting (Istanbul)
15/06/10	Marine Board European Scientific Diving Panel (MB ESDP) Meeting (Brussels)
17/06/10	Marine Board Vision Group on Marine Renewable Energy (VG MRE) Wrap-up Meeting (Brussels)
21-25/06/10	Marine Board-ESF-COST High-level Conference, <i>Marine Biotechnology: Future Challenges</i> (Aquafredda di Maratea, Italy)
29-30/06/10	EU FP7 EMAR ² RES Workshops, Series 1 (Ostend)
06-07/07/10	EU FP7 CLAMER Workshops, Series 1 (Ostend)
20/07/10	Meeting with Director Robert Nigmatulin and Management Board of the P.P. Shirshov Institute of Oceanology, Russian Academy of Sciences (Moscow)
02-03/09/10	Marine Board Working Group on Marine Microbial Diversity (WG MICROCEAN) Meeting (Brussels)
16/09/10	2 nd Marine Board Forum, <i>Towards A European Network of Marine Observatories for Monitoring and Research</i> (Brussels)
27-28/09/10	Marine Board European Scientific Diving Panel (MB ESDP) - COST Workshop, <i>Strengthening Synergy and Excellence in Diving-Supported Science across Europe</i> (Brussels)
04-05/10/10	Marine Board Working Group on Marine Protected Areas (WG MPAs) Meeting (Paris)
11/10/11	Marine Board Executive Committee Meeting (Brussels)
11/10/11	EurOCEAN 2010 High-level Pre-event at the European Parliament (Brussels)
12-13/10/10	EurOCEAN 2010 High-level Marine Science Policy Conference, <i>Grand Challenges for Marine Research in the Next Decade</i> (Ostend)

¹ This list includes only formal meetings and events involving multiple stakeholders

ANNEXES

19/01/2010	Marine Board Executive Committee Meeting (Brussels)
29/01/2010	Marine Board Vision Group on Marine Renewable Energy (VG MRE) Kick-off Meeting (Paris)
04-05/02/2010	Marine Board-ESF-COST Conference on Marine Biotechnology Strategic Meeting (Brussels)
17/02/2010	Marine Board Working Group on Marine Microbial Diversity (WG MICROCEAN) Kick-off Meeting (Brussels)
03-04/04/2010	Marine Board Navigating the Future IV Brainstorming Workshop (Ostend)
16/03/2010	Marine Board Working Group on Marine Protected Areas (WG MPAs) Kick-off Meeting (Brussels)
18-19/03/2010	Marine Board Working Group on Marine Biotechnology (WG BIOTECH) Meeting (Brussels)
23/03/2010	Marine Board Vision Group on Marine Renewable Energy (VG MRE) Meeting (Brussels)
29-30/03/2010	Marine Board Communications Panel (MBCP) Meeting (Southampton)
05/05/10	EU FP7 EMAR ² RES Panel of Experts Meeting (Brussels)
19/05/10	Launch of Marine Board Position Paper 14 <i>Science Dimensions of an Ecosystem Approach to Management of Biotic Ocean Resources</i> , SEAMBOR (back to back with the European Maritime Day Stakeholder Conference 2010, Gijon)
27/05/10	EU FP7 EMAR ² RES Policy Interface Panel Meeting (Brussels)
02/06/10	EurOCEAN 2010 Ostend Declaration Drafting Group Meeting (Istanbul)
02/06/10	Marine Board Executive Committee Meeting (Istanbul)
03-04/06/10	Marine Board Spring 2010 Plenary Meeting (Istanbul)
15/06/10	Marine Board European Scientific Diving Panel (MB ESDP) Meeting (Brussels)
17/06/10	Marine Board Vision Group on Marine Renewable Energy (VG MRE) Wrap-up Meeting (Brussels)
21-25/06/10	Marine Board-ESF-COST High-level Conference, <i>Marine Biotechnology: Future Challenges</i> (Aquadredda di Maratea, Italy)
29-30/06/10	EU FP7 EMAR ² RES Workshops, Series 1 (Ostend)
06-07/07/10	EU FP7 CLAMER Workshops, Series 1 (Ostend)
20/07/10	Meeting with Director Robert Nigmatulin and Management Board of the P.P. Shirshov Institute of Oceanology, Russian Academy of Sciences (Moscow)
02-03/09/10	Marine Board Working Group on Marine Microbial Diversity (WG MICROCEAN) Meeting (Brussels)
16/09/10	2 nd Marine Board Forum, <i>Towards A European Network of Marine Observatories for Monitoring and Research</i> (Brussels)
27-28/09/10	Marine Board European Scientific Diving Panel (MB ESDP) - COST Workshop, <i>Strengthening Synergy and Excellence in Diving-Supported Science across Europe</i> (Brussels)
04-05/10/10	Marine Board Working Group on Marine Protected Areas (WG MPAs) Meeting (Paris)
11/10/11	Marine Board Executive Committee Meeting (Brussels)
11/10/11	EurOCEAN 2010 High-level Pre-event at the European Parliament (Brussels)
12-13/10/10	EurOCEAN 2010 High-level Marine Science Policy Conference, <i>Grand Challenges for Marine Research in the Next Decade</i> (Ostend)

12-13/10/10	EurOCEAN 2010 Research Showcase (Ostend)
12/10/10	Launch of Marine Board Vision Document 2, <i>Marine Renewable Energy – Research Challenges and Opportunities for a New Energy Era in Europe</i> (back to back to EurOCEAN 2010, Ostend)
13/10/10	Launch of Marine Board Position Paper 15, <i>Marine Biotechnology: A New Vision and Strategy for Europe</i> (back to back to EurOCEAN 2010, Ostend)
14/10/10	Marine Board Autumn 2010 Plenary Meeting (Ostend)
03-04/11/10	EU FP7 EMAR ² RES Workshops, Series 2 (Ostend)
16-18/11/10	EU FP7 CLAMER Workshops, Series 2 (Amsterdam)
25/11/10	EU FP7 MARCOM+ 1 st Open Forum (Brussels)
29-30/11/10	Marine Board Communications Panel (MBCP) Meeting (Lisbon)

Annex VII: Presentations to Meetings by Marine Board Executive Committee Members and Secretariat in 2010²

Date	Event	Speaker(s)
12/01/2010	EU FP7 MARCOM+ Kick-off Meeting (Copenhagen)	Niall McDonough
29/01/2010	Marine Board Vision Group on Marine Renewable Energy (VG MRE) Kick-off Meeting (Paris)	Niall McDonough Maud Evrard
17/02/2010	Marine Board Working Group on Marine Microbial Diversity (WG MICROCEAN) Kick-off Meeting (Brussels)	Jan-Bart Calewaert
03-04/04/2010	Marine Board Navigating the Future IV Brainstorming Workshop (Ostend)	Niall McDonough
15-16/03/2010	EU FP7 CLAMER Kick-off Meeting (Brussels)	Niall McDonough Jan-Bart Calewaert
16/03/2010	Marine Board Working Group on Marine Protected Areas (WG MPAs) Kick-off Meeting (Brussels)	Niall McDonough Aurélien Carbonnière
29-30/03/2010	Marine Board Communications Panel (MBCP) Meeting (Southampton)	Maud Evrard
10/05/10	EU FP7 MARCOM+ Steering Committee Meeting (Venice)	Niall McDonough Maud Evrard
18-19/05/10	2010 Spanish EU Presidency Conference EUROMARES (Gijon)	Lars Horn
19-20/05/10	2010 European Maritime Day Stakeholder Conference (Gijon)	Lars Horn Niall McDonough
27/05/10	EU FP7 EMAR ² RES Steering Committee Meeting (Brussels)	Niall McDonough Aurélien Carbonnière
27/05/10	EU FP7 EMAR ² RES Policy Interface Panel Meeting (Brussels)	Niall McDonough Aurélien Carbonnière
15/06/10	Marine Board European Scientific Diving Panel (MB ESDP) Meeting (Brussels)	Aurélien Carbonnière
21-25/06/10	Marine Board-ESF-COST High-level Conference, <i>Marine Biotechnology: Future Challenges</i> (Aquafredda di Maratea, Italy)	Niall McDonough Jan-Bart Calewaert
29-30/06/10	EU FP7 EMAR ² RES Workshops, Series 1 (Ostend)	Aurélien Carbonnière
29-30/06/10	EU FP7 SEAS-ERA kick-off Meeting (Madrid)	Niall McDonough Maud Evrard
06-07/07/10	EU FP7 CLAMER Workshops, Series 1 (Ostend)	Niall McDonough Jan-Bart Calewaert
14/07/10	EU Ambassadors visit to the InnovOcean site (Ostend)	Niall McDonough
20/07/10	Meeting with Director Robert Nigmatulin and Management Board of the P.P. Shirshov Institute of Oceanology, Russian Academy of Sciences (Moscow)	Jan-Bart Calewaert

² This list includes only presentations given at formal meetings to multiple stakeholders

16/09/10	2 nd Marine Board Forum (Brussels)	Lars Horn Edward Hill
23/09/10	ESF Chairs Meeting (Frankfurt)	Lars Horn Niall McDonough
23/09/10	EU FP7 EMAR ² RES Steering Committee Meeting (Brussels)	Aurélien Carbonnière
27-28/09/10	Marine Board European Scientific Diving Panel (MB ESDP) - COST Workshop, <i>Strengthening Synergy and Excellence in Diving-Supported Science across Europe</i> (Brussels)	Aurélien Carbonnière
29-30/09/10	ESF Governing Council Meeting (Frankfurt)	Lars Horn
11/10/11	EurOCEAN 2010 High-level Pre-event at the European Parliament (Brussels)	Lars Horn
12-13/10/10	EurOCEAN 2010 High-level Marine Science Policy Conference, <i>Grand Challenges for Marine Research in the Next Decade</i> (Ostend)	Lars Horn Edward Hill Geoffrey O'Sullivan
12/10/10	Launch of Marine Board Vision Document 2, <i>Marine Renewable Energy – Research Challenges and Opportunities for a New Energy Era in Europe</i> (back to back to EurOCEAN 2010, Ostend)	Lars Horn
19/10/10	EuropaBio Forum for Industrial Biotechnology (Edinburg)	Jan-Bart Calewaert
26/10/10	Meeting with Research Programmes Director at the Australian Strategic Policy Institute (Ostend)	Maud Evrard
03-04/11/10	EU FP7 EMAR ² RES Workshops, Series 2 (Ostend)	Niall McDonough Aurélien Carbonnière
16-18/11/10	EU FP7 CLAMER Workshops, Series 2 (Amsterdam)	Niall McDonough Jan-Bart Calewaert
25/11/10	EU FP7 MARCOM+ 1 st Open Forum	Niall McDonough Maud Evrard
29-30/11/10	Marine Board Communications Panel (MBCP) Meeting (Lisbon)	Maud Evrard
14/12/10	EU FP7 MARCOM+ Steering Committee Meeting (Trondheim)	Niall McDonough
15/12/10	EU FP7 CSA BIOTECH Preparatory Meeting (Cambridge)	Niall McDonough Jan-Bart Calewaert
16-17/12/10	EU FP7 SEAS-ERA Mediterranean Workshop (Athens)	Maud Evrard
16/12/10	EU FP7 EMAR ² RES Steering Committee and Policy Interface Panel Meetings (Brussels)	Niall McDonough Aurélien Carbonnière

Annex VIII: Participation in Conference and Meeting Exhibitions in 2010

Conferences and Events

1. European Maritime Day Stakeholder Conference 2010, 19-21 May 2010, Gijon, Spain
2. Marine Board Spring 2010 Plenary, 3-4 June 2010, Istanbul
3. 2nd Marine Board Forum, *Towards a European Network of Marine Observatories for Monitoring and Research*, 16 September 2010, Brussels, Belgium
4. EurOCEAN 2010 High-level Pre-Event at the European Parliament, 11 October 2010, Brussels, Belgium
5. EurOCEAN 2010, 12-13 October 2010, Ostend, Belgium
6. 1st MARCOM+ Open Forum, 25 November 2010, Brussels, Belgium
7. European Forum for Industrial Biotechnology 2010, 19-20 October 2010, Edinburg, Scotland
8. European Science Foundation General Assembly 2010, 17-18 November 2010, Strasbourg, France

A permanent publication booth at the Secretariat offices in the InnovOcean site, Ostend, Belgium, has been attended during all the meetings organized or hosted by the Secretariat, totaling (at least) six meetings and five formal visits (see Annexes VI and VII).

Annex IX: Marine Board Member Contributions 2010

Member Organisation	Country	Contribution 2009
National Fund for Scientific Research, FNRS	Belgium	6,500
Fund for Scientific Research – Flanders, FWO	Belgium	6,500
Cyprus Oceanography Centre	Cyprus	8,000
The Danish Council for Independent Research Natural Sciences, FNU	Denmark	13,000
Estonian Academy of Sciences	Estonia	8,000
Academy of Finland	Finland	13,000
Finnish Environment Institute, SYKE*	Finland	0
National Centre for Scientific Research, CNRS	France	15,500
French Research Institute for Exploitation of the Sea, IFREMER	France	15,500
German Research Foundation, DFG	Germany	15,500
Association of National Research Centres, HGF	Germany	15,500
Leibniz Institute of Marine Sciences Kiel, IFM-GEOMAR	Germany	15,500
Hellenic Centre for Marine Research, HCMR	Greece	9,000
Marine Institute, MI	Ireland	10,000
National Research Council, CNR	Italy	15,500
National Institute of Oceanography and Experimental Geophysics, OGS	Italy	15,500
Royal Netherlands Academy of Arts and Sciences, KNAW	Netherlands	10,000
Netherlands Organisation for Scientific Research, NWO	Netherlands	10,000
University of Bergen, UiB	Norway	10,000
Research Council of Norway, RCN (+Institute of Marine Research, IMR)	Norway	20,000
Institute of Oceanology - Polish Academy of Sciences, IO-PAN	Poland	8,000
Science and Technology Foundation, FCT	Portugal	4,000
Centre of Marine and Environmental Research, CIMAR	Portugal	4,000
National Institute for Marine Research and Development “Grigore Antipa”	Romania	7,000
Spanish Institute of Oceanography, IEO	Spain	10,000
Council for Scientific Research, CSIC	Spain	10,000
Swedish Institute for the Marine Environment	Sweden	13,000
Scientific and Technological Research Council of Turkey, TÜBİTAK	Turkey	8,000
Natural Environment Research Council, NERC (+National Oceanography Centre)	United Kingdom	31,000
Total		327,500

*Members joining at the Autumn Plenary Meeting are not requested to pay the annual contribution for this year.

Annex X: Full List of Marine Board Publications

Marine Board Position Papers:

- Querellou J. *et al.* **Marine Biotechnology: A Vision and New Strategy for Europe. Marine Board Position Paper 15.** McDonough N., Calewaert J-B. (Eds.). Marine Board-ESF, Ostend, Belgium. 2010. ISBN 978-2-918428-26-8, 94pp.
Contributing authors: Torger Borresen, Catherine Boyen, Alan Dobson, Manfred Hofle, Adrianna Ianora, Marcel Jaspars, Anake Kijjoo, Jan Olafsen, Joel Querellou, George Rigos, Rene Wijffels. Special contributions: Chantal Compere, Michel Magot, Jeanine Olsen, Philippe Potin, Filip Volckaert.
- Rice J. *et al.* **Science Dimensions of an Ecosystem Approach to Management of Biotic Ocean Resources, SEAMBOR. Marine Board Position Paper 14.** McDonough N., Carbonnière A. (Eds.). Marine Board-ESF, Ostend, Belgium. 2010. ISBN 978-2-918428-10-7, 90pp.
Contributing authors: Maria de Fátima Borges, Anthony Grehan, Andrew Kenny, Harald Loeng, Francesc Maynou, Jake Rice, Ricardo Serrão Santos, Hein Rune, Skjoldal, Olivier Thébaud, Vassiliki Vassilopoulou, Filip Volckaert. External contributions: Olivier Curtil, Harold Levrel.
- Boyd I. *et al.* **The Effects of Anthropogenic Sounds on Marine Mammals. Marine Board Position Paper 13.** Connolly N., Calewaert J-B. (Eds.). Marine Board-ESF, Ostend, Belgium. 2008. ISBN 2-912049-85-7, 94pp.
Coordinating authors: Ian Boyd, Bob Brownell, Doug Cato, Chris Clark, Dan Costa, Peter Evans, Jason Gedamke, Roger Gentry, Bob Gisiner, Jonathan Gordon, Paul Jepson, Patrick Miller, Luke Rendell, Mark Tasker, Peter Tyack, Erin Vos, Hal Whitehead, Doug Wartzok, Walter Zimmer.
- Robinson I.S. *et al.* **Remote Sensing of Shelf Sea Ecosystems. Marine Board Position Paper 12.** Connolly N., Walter N., Calewaert J-B. (Eds.). Marine Board-ESF, Strasbourg, France. 2008. ISBN 2-912049-77-6, 62pp.
Contributing authors: David Antoine, Mirosław Darecki, Patrick Gorringe, Lasse Pettersson, Ian S. Robinson, Kevin Ruddick, Rosalia Santoleri, Herbert Siegel, Patrick Vincent, Marcel R. Wernand, Guy Westbrook, Giuseppe Zibordi.
- Connolly N. *et al.* (Eds.). **Marine Board Responses to the European Commission's Green Papers:**
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Annex XI: Glossary

AmpERA	FP6 ERA-NET Project <i>European Concerted Action to Foster Prevention and Best Response to Accidental Marine Pollution</i>
CESA	Community of European Shipyards Associations
CLAMER	FP7 CSA <i>Climate Change Impacts on the Marine Environment: Research Results and Public Perception</i>
CNRS	National Center for Scientific Research (France)
COST	European Cooperation in the Field of Scientific and Technical Research
CSA	Coordination Support Action (EU FP Scheme)
DG	Directorate General (European Commission)
EAM	Ecosystem Approach to Management
EC	European Commission
ECMAR	European Council for Maritime Applied R&D
EFARO	European Fisheries and Aquaculture Research Organizations
EMAR²RES	FP7 CSA <i>Cooperation between the Communities of European MARine and MARitime REsearch and Science</i>
ERA	European Research Area
ERA-NET	European Research Area Network (EC FP scheme)
ESF	European Science Foundation
EU	European Union
EUROFLEETS	FP7 I3 <i>Towards an Alliance of European Fleets</i>
ExCom	Marine Board Executive Committee
FP	EU Framework Programme for Research and Technological Development
I3	Integrated Infrastructure Initiative (EU FP scheme)
ICES	International Council for the Exploration of the Sea
IEO	Spanish Institute of Oceanography
IFM-GEOMAR	Leibniz Institute of Marine Sciences at the University of Kiel (Germany)
IFREMER	French Research Institute for Exploitation of the Sea
IMR	Institute of Marine Research (Norway)
IMS-METU	Institute of Marine Sciences of the Middle East Technical University (Turkey)
IP	Integrated Project (EU FP scheme)
MarBEF	Marine Biodiversity and Ecosystem Functioning (EU Network of Excellence)
MARCOM+	FP7 CSA <i>Towards an Integrated Marine and Maritime Science Community</i>
MariFISH	FP6 ERA-NET Project <i>Strengthening the links between European marine fisheries science and fisheries management</i>
MarinERA	FP6 ERA-NET Project <i>Facilitating Cooperation between National Marine RTD Programmes in Europe</i>
MARS	The European Network of Marine Research Institutes and Stations
MB ESDP	Marine Board European Scientific Diving Panel
MBCP	Marine Board Communications Panel
MI	Marine Institute (Ireland)
MSFD	Marine Strategy Framework Directive

NIOZ	Royal Netherlands Institute for Sea Research
NOC	National Oceanography Centre (United Kingdom)
R&D	Research and Development
RCN	Research Council of Norway
SEAS-ERA	FP7 overarching marine ERA-NET (proposal)
UNESCO	United Nations Educational, Scientific and Cultural Organization
VG BIODIV	Marine Board Vision Group on Marine Biodiversity
VG	Vision Group (Marine Board Instrument)
VLIZ	Flanders Marine Institute (Belgium)
WG	Working Group (Marine Board Instrument)
WG BIOTECH	Marine Board Working Group <i>Marine Biotechnology - A European Strategy for Marine Biotechnology</i>
WG MICROCEAN	Marine Board Working Group <i>Marine Microbial Diversity and its Role in Ecosystem Functioning and Environmental Change</i>
WG MPAs	Marine Board Working Group <i>Use of Marine Protected Areas for Ecosystem-Based Management</i>
WG OHH	Marine Board Working Group <i>Oceans and Human Health</i>
WG POL	Marine Board Working Group <i>Risk Assessment and Monitoring of Existing and Emerging Chemicals in the European Marine and Coastal Environment</i>
WG SEAMBOR	Marine Board Working Group <i>Science Dimensions of Ecosystem Approach to Management of Biotic Ocean Resources</i>

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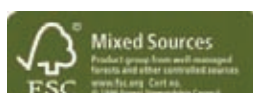
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