

# PROJECT FINAL REPORT

**Grant Agreement number:** SCS2-GA-2012-314194-CSA

**Project acronym:** CSA OCEANS

**Project title:** CSA Healthy and Productive Seas and Oceans

**Funding Scheme:** SP1 –Cooperation; Coordination and support action; Support actions  
FP7-SST-2012-RTD-1

**Period covered:** from 01/09/2012 to 31/08/2015

**Name of the scientific representative of the project's co-ordinator<sup>1</sup>, Title and Organisation:**

Ms. Agnes Aune

NORGES FORSKNINGSRAD

JPI Oceans Secretariat

Rue du Trône 130

Brussels 1050

BELGIUM

**Tel:** +32 (0)2 626 16 62

**Fax:** +32 (0)2 626 16 61

**E-mail:** aau@rcn.no

**Project website address:** <http://www.jpi-oceans.eu/csa-oceans>

---

<sup>1</sup> Usually the contact person of the coordinator as specified in Art. 8.1. of the Grant Agreement.

## 1. Final publishable summary report

# CSA Oceans Report 2012 - 2015



#### Contributions:

Kathrine Angell-Hansen, Lourdes Armesto, Agnes Aune, Wendy Bonne, Florence Coroner, Willem De Moor, Fien De Raedemaeker, Fidel Echevarria, Jo Foden, Jan-Stefan Fritz, John Hanus, Susanna Hernandez, Jean-François Masset, David Mills, Pier Francesco Moretti, Ángel E. Muñiz Piniella, Teodoro Ramirez, Tom Redd, Svend Otto Remøe, Amelia Rubio, Simona Stoian, Josef F. Stuefer, Kristin Thorud, Viorel Vulturescu, Ulrich Wolf, Jacky Wood.

#### Publication editing:

Willem De Moor

#### Suggested reference:

CSA Oceans report 2012 - 2015. JPI Oceans, Brussels, Belgium. 2015.

#### Photo credit frontpage:

Thinkstock - Bert1123

#### Copyright:

This report is licensed under the Creative Commons Attribution 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0/>





# Table of Contents

CSA Oceans Report 2012 - 2015

	<b>Executive Summary</b>	<b>7</b>
<b>1</b>	<b>Summary description of project context and objectives</b>	<b>8</b>
<b>2</b>	<b>Description of main S &amp; T results/foregrounds</b>	<b>11</b>
	Mapping and Analysis	13
	Framework Conditions	16
	Strategic Research and Innovation Agenda Endorsed	19
	Support to JPI Oceans Pilot Actions	20
<b>3</b>	<b>Potential impact and main dissemination activities and exploitation results</b>	<b>26</b>
	Communication plan & video featuring Ministers and EU Commissioner	27
	New Website & Newsletter Launched	28
	First JPI Oceans & Final CSA Oceans Conference	29
	Publications & Outreach Materials	31
<b>4</b>	<b>Annexes</b>	<b>32</b>
	Annex I: Public Deliverables CSA Oceans	32
	Annex II: Website - Social Media Statistics	33

## List of Acronyms

**CSA Oceans**- A Framework Programme 7 funded Coordination & Support Action to support JPI Oceans in its start-up phase

**ExCom**- Executive committee of JPI Oceans

**IPlan**- Implementation Plan

**JPI**- Joint Programming Initiative

**JPI Oceans**- Joint Programming Initiative Healthy and Productive Seas and Oceans

**MB**- Management Board of JPI Oceans

**SRIA**- Strategic Research and Innovation Agenda

**StAB**- Strategic Advisory Board

## Executive Summary

The CSA Oceans project has supported the development of the JPI Oceans Strategic Research and Innovation Agenda (SRIA) and an Implementation Plan (IPlan) which provides the basis for joint trans-national actions within JPI Oceans. By combining existing practices and exploring new approaches the project has furthermore developed procedures and tools for transnational cooperation in the framework of the JPI.

Activities focused extensively on mapping the current marine and maritime research landscape. In order to do so, the CSA Oceans carried out a comprehensive stakeholder consultation which constituted the core of this mapping. This Europe-wide consultation included thematic workshops, an open web consultation and a consultation of the Member Countries' research and innovation strategies and policies. The outcomes of the consultation provided critical inputs to the SRIA and Implementation Plan.

In addition, bibliometry was explored as a specific and complementary tool for mapping and monitoring research output in defined areas. Furthermore, CSA Oceans supported the development of a number of pilot actions. Pilot actions are trials or test cases, limited in time and scope. They are implemented to demonstrate the added value of JPI Oceans as a coordinating and integrating platform. They test and provide potential templates for activities to be developed on the basis of the Strategic Research and Innovation Agenda. To facilitate the process of proposing, selecting and eventually implementing pilot actions, CSA Oceans prepared different documents, providing a working definition for pilot actions, a description of their general aims and purposes and developing evaluation criteria for pilot actions.

With regards to forward looking activities, CSA Oceans outlined a proposal for a programmatic foresight process for JPI Oceans. This proposal describes the structure, governance and procedures of a foresight exercise, providing a blueprint which JPI Oceans may apply to any given topic area. By applying this blueprint to the field of microplastics, CSA Oceans delineated how the process looks like in practice in the form of a CSA Oceans pilot foresight test run.

The Council conclusions on Joint Programming of 2 December 2008 encouraged Member States, with the support of the European Commission, to consider how to best find common approaches to a number of issues, usually referred to as 'Framework Conditions', thought to be essential for an effective development and implementation of Joint Programming in research. CSA Oceans gathered information and analysed existing procedures and best practices with regards to the framework conditions. This information was brought together in an online toolkit which is publicly available. The toolkit gathers templates and examples of joint actions which were conducted by different projects and initiatives. Consequently it aids JPI Oceans to select, implement and evaluate cross-border activities.

To aid in the communication activities of JPI Oceans, CSA Oceans developed a new fully responsive website with improved navigation and background information on JPI Oceans and its actions. The website was complemented by a new newsletter which has been sent out on a regular basis. A video featuring the European Commissioner for Research was also produced to explain the added value of the JPI. At the end of the project the first JPI Oceans and final CSA Oceans conference was organised to brief stakeholders on the results of the project and discuss the challenges ahead.

Thus, CSA Oceans facilitated the implementation of JPI Oceans. It provided and developed tools, procedures and structures for long-term governance and operational cooperation of the Joint Programming activities.



## CHAPTER 1

# Summary description of project context and objectives



CSA OCEANS KICK OFF MEETING - SEPTEMBER 2012

CSA Oceans was a FP7 project which facilitated the implementation of JPI Oceans in its startup phase. The project proposed tools, procedures and structures for long-term governance and operational cooperation of the Joint Programming activities. Furthermore CSA Oceans looked for best practices and innovative solutions to propose new ways of interaction between the member countries of JPI Oceans. The project was launched on 1 September 2012 and ran until 31 August 2015.

The overall aim of the CSA Oceans project was to provide dedicated support to JPI Oceans and its governing bodies to shorten the time required to reach its implementation phase. With the adoption of its Integrated Maritime Policy -including its environmental and research pillars, the Marine Strategy Framework Directive and the European Strategy for Marine and Maritime Research- the EU has made vast strides towards ensuring an integrated, multisectorial and multidisciplinary approach, but cooperation has still not reached its full potential.

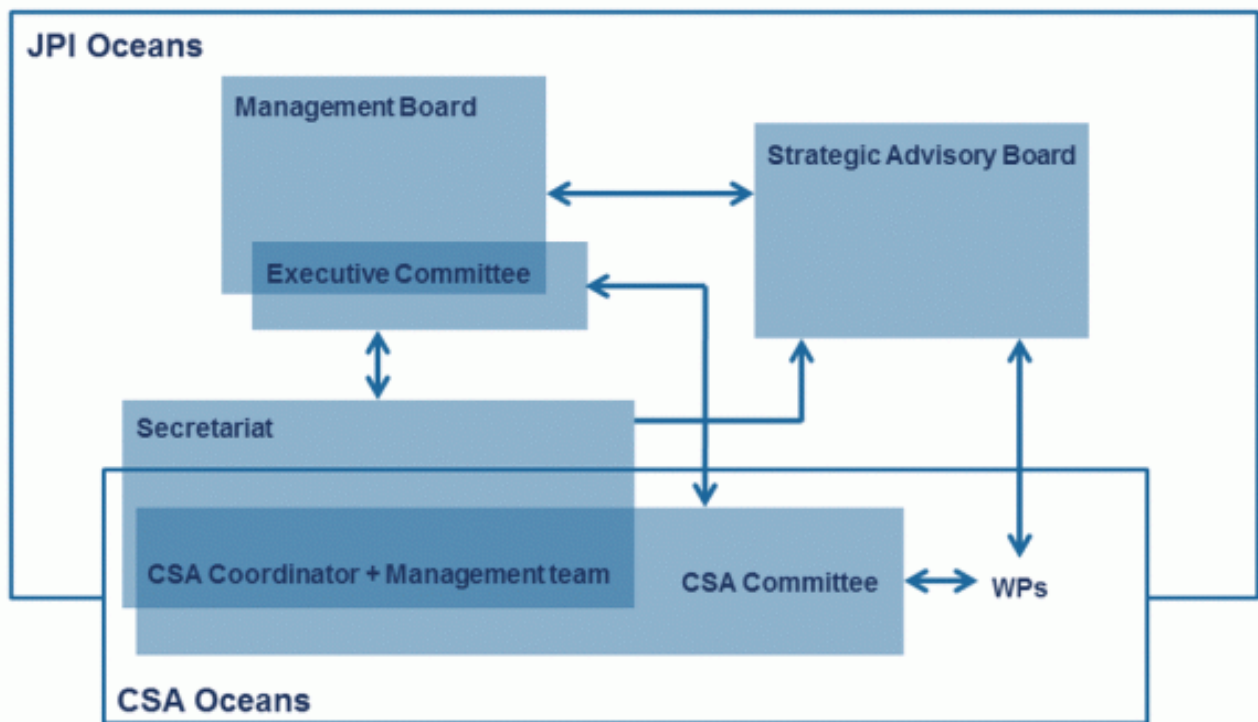
Therefore the project has provided input to facilitate the development of a Strategic Research and Innovation Agenda and an Implementation Plan according to the vision and goals of JPI Oceans. Furthermore, CSA Oceans assessed the governance structures of JPI Oceans and made proposals for improvements accordingly.

CSA Oceans responded to the following objectives:

- Further elaborate and consolidate the governance structures and procedures in JPI Oceans;
- Map and analyse the marine and maritime research and innovation landscape in order to identify the gaps, overlaps and needs in four key areas: (i) Scientific gaps and overlaps; (ii) Barriers to Innovation; (iii) Science to Policy Mechanism; (iv) Observations, Infrastructures and Capacity building;
- Identify better ways of governance of EU marine and maritime research in support of the European maritime economy and related policies in particular in the implementation of the Marine Strategy Framework Directive;
- Develop a coherent Strategic Research and Innovation Agenda (SRIA) and Implementation Plan (IPlan) on the basis of the mapping and gap analyses;
- Develop effective and efficient methods of collaboration and joint activities and actions, peer review procedures, evaluation of joint programmes, cross-border funding.

- Make proposals for cross-border activities and initiate pilot actions based on the established framework conditions;
- Design a foresight process to be used by JPI Oceans beyond the lifetime of the CSA Oceans project;
- Develop and implement communication and dissemination activities and products for the CSA Oceans project towards relevant end-users (science, industry and civil society) and the general public, in particular to increase the visibility and profile of JPI Oceans and raise awareness about the benefits and opportunities it provides.

To ensure that CSA Oceans activities supported the long-term objectives of JPI Oceans, the deliverables and proposals from the CSA Oceans project were directly embedded into the discussions and decisions to be made by JPI Oceans governance bodies (see figure below).



RELATION BETWEEN CSA OCEANS AND JPI OCEANS GOVERNANCE STRUCTURE



## CHAPTER 2

# Description of main S & T results/foregrounds

## Mapping and Analysis



CSA OCEANS CONSULTATION WORKSHOP

### Consultation Process

The CSA Oceans project supported JPI Oceans in the development of its Strategic Research and Innovation Agenda (SRIA) and Implementation Plan. The development of the SRIA was preceded by a broad consultation process conducted by CSA Oceans throughout 2013 and 2014. The consultation consisted of 3 parts:

#### 1. Questionnaire – aimed at Research Funding Agencies

This part of the mapping was particularly important, not only to get the input of RFAs/ministries on needs and gaps, but also as a baseline for assessment at a later stage if JPI Oceans contributes to aligning the European landscape in the long-term.

#### 2. Consultation Workshops – aimed at European and global stakeholders in marine and maritime sector

Over 60 stakeholders took part in six workshops organised according to different stakeholder groups and interests. The participants were asked to fill in a pre-workshop questionnaire to prepare their input on potential needs/actions/tools to achieve the JPI Ocean goals. The input was discussed and debated during the workshops which allowed to highlight a number of commonalities between stakeholders' views. The workshops were important in identification of both common denominators between stakeholders and where they see that JPI Oceans can play a role and add value to the crowded landscape of Marine and Maritime research. This was a reflection of the first Strategic Advisory Board meeting discussions about discovering whether a pattern would appear based

on the consultations. After the workshops, an extended questionnaire was sent at the end of June 2013 to participants and invited organisations. This questionnaire was divided into 4 sections: (1) JPI added value to the ERA landscape; (2) Research, technology development (RTD) and innovation; (3) Infrastructure & human capacity; and (4) Science to policy.

#### 3. Web consultation – open to the general public

An open online consultation was announced on the JPI Oceans webpage, inviting responses from individuals, organisations and projects. This part of the consultation was particularly important to ensure that the process was inclusive and that organisations without a European dimension, such as organisations at national level, could provide their input. In total, 49 responses have been received from the open stakeholder consultation and extended questionnaire combined coming from individuals and organisations.

The inputs provided by research funding agencies/ministries and stakeholders in this consultation process were analysed by CSA Oceans and the outcomes of the analysis of this information together with additional information from other sources has been used to identify needs and gaps and produce several reports on science, innovation, science to policy, infrastructures and human capacity. All this collaborative work has been fundamental to develop the SRIA of JPI Oceans.

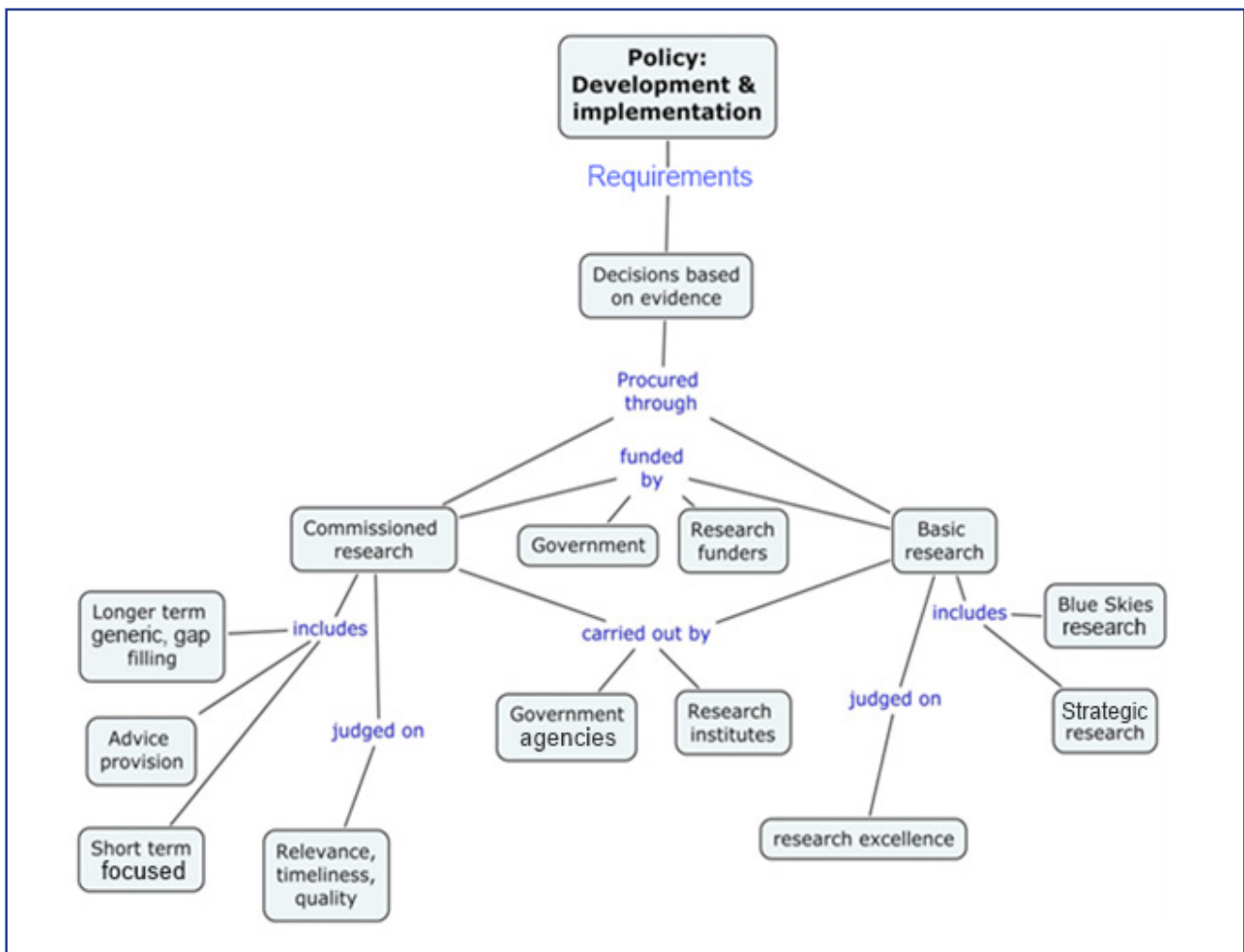
Analysis of policy needs

During 2014 CSA Oceans completed its preliminary analysis of policy needs. The public [deliverable](#) reports on the current status of marine and maritime policies relevant to JPI Oceans and identifies examples of science to policy mechanisms. This deliverable was a first step to address the need of the research community to be informed and understand the requirements of policy-makers.

The report uses stakeholder input to identify the needs of different policies to fulfil their objectives. One of the underlying issues is thought to be the lack of integration between marine and maritime activities. It was suggested that new technologies, integrated systems and greater data sharing and co-design of research activities could be the key to developing more holistic management strategies.

Stakeholders also identified several examples of effective science to policy mechanisms which include ICES, the IPCC assessment, and science-policy activities of the European Marine Board. It was also thought that the European Union lacks a single focus point to engage with international science to policy mechanisms. The report further highlighted the importance of co-design and engagement of stakeholders throughout the research planning process.

In a next phase CSA Oceans published its recommendations to JPI Oceans on how to improve science-policy interfaces in Europe. The [report](#) presents five examples of science-policy mechanisms to explore how they work and what makes them effective.



HOW SCIENCE IS USED TO INFORM AND IMPLEMENT ENVIRONMENTAL POLICIES. THE FIGURE SHOWS THE DIFFERENT SOURCES OF RESEARCH AND HOW THIS IS FUNDED.

## Main Science and Technology Results

It also investigates new technologies, methodologies and approaches which could be used by JPI Oceans to improve science-policy interfaces. Finally, it discusses actions which could be initiated by JPI Oceans to add value and avoid duplication of what already exists.

By using specific examples of existing projects and initiatives, this deliverable aims to provide JPI Oceans with both the theoretical and practical aspects of the science-policy interface. It should also encourage JPI Oceans to use and develop innovative tools and approaches when it considers how best to bridge the gap between scientists and policy makers.

### Marine Research Infrastructure and Human Capacity Building

The CSA Oceans project delivered a [report](#) on marine research infrastructures and human capacity building. Over recent years, many initiatives have been launched to better coordinate the development and use of marine research infrastructures at EU level. The aim being, to create lasting cost-efficiency in marine and maritime data collection and management, use of the different research infrastructures, provision of appropriate capacity building services, supporting models for knowledge-based policy-

decisions and development of the maritime economy. However, in Europe these initiatives have traditionally been fragmented, which often lead to; duplication and overlap of efforts and support fading after a short-time. This left important gaps unattended and a systemic lack of long term planning and funding.

Therefore as a first step, CSA Oceans integrated mapping efforts conducted over the last few years into one single [repository](#) on marine research infrastructure in collaboration with EurOcean. The repository gathers all information on infrastructures related to marine and maritime research activities and will ensure the long term storage of the data. In addition a procedure will be set up to allow the responsible people to update the information regularly.

Building on this mapping exercise and with the input of stakeholder consultations and existing initiatives (EURO-Argo, GROOM, EMSO, FIX03, JERICO, EUROFLEETS, EMBRC, AQUAEXCEL, MARINET, SEADATANET, MyOcean, EMODNET, WISE Marine, EuroGOOS, Euromarine, SEAS-ERA, etc.), CSA Oceans conducted a preliminary analysis of marine research infrastructures and human capacity building. This preliminary analysis was followed up by a [needs and gaps analysis](#) which was used to further develop the SRIA.

**eurOcean** MARINE RESEARCH INFRASTRUCTURES DATABASE

EurOcean\_RID  
CONTRIBUTE YOURSELF TO UPDATE THE DATABASE

If you are aware of any Infrastructure that is not yet in this infobase or any other updates please contact EurOcean or insert yourself a new record and updates

SEARCH

NAME

COUNTRY

OPERATOR

MRI CATEGORY

MRI SUBCATEGORY

MRI TYPE

OPERATING AREAS

DISCIPLINES

DISPLAY RESULTS ON THE MAP

DISPLAY RESULTS ON A TABLE

RESET

About the database  
Search tips  
Technical Notes  
Disclaimer

Sources of Information:  
CSA OCEANS  
JPI Oceans support team

Seas-eraj  
EUROPEAN MARITIME INFRASTRUCTURE

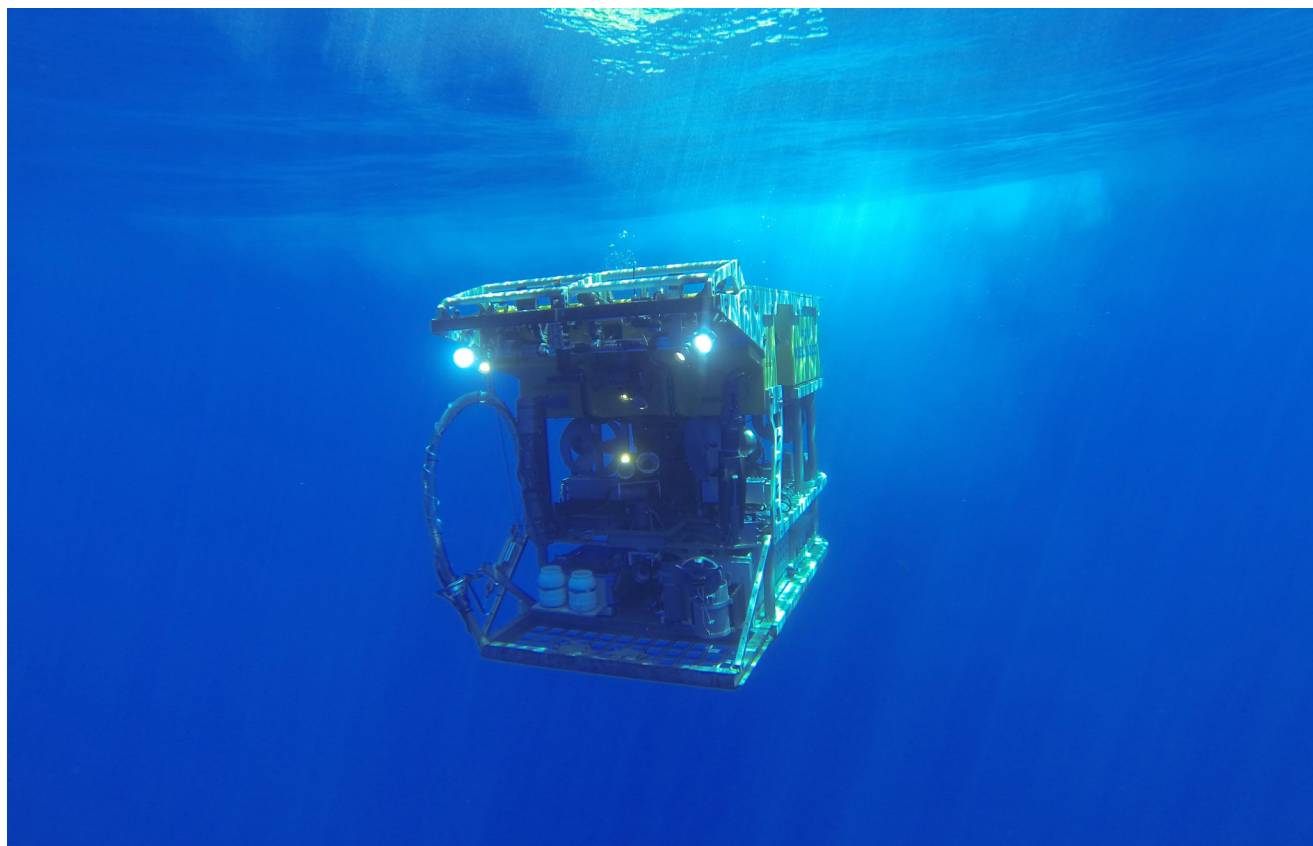
eurOcean

### REPOSITORY ON MARINE RESEARCH INFRASTRUCTURE DEVELOPED IN COLLABORATION WITH EUROCEAN

### Identification of technologies and solutions to boost blue growth

In the first phase CSA Oceans delivered the report "Mapping of maritime research and innovation strategies and funding". Following up on that the second [report](#) highlights needs and gaps to reach the first strategic goal of JPI Oceans: "Enable the advent of a knowledge based maritime economy, maximising its value in a sustainable way". It identifies the need for cross-sectoral cooperation on enabling technologies and relevant procedures and sources for future scoping and analysis to enable JPI Oceans to boost blue growth. The numerous gaps and needs calls for improved joint programming and coordination of research and innovation strategies in Europe and the strengthening of the interface between industry and research. Finally, a set of recommendations was included in the last section of the report.

Likewise a [report](#) was drafted on "Technological and legal barriers - Intellectual Property Rights". The objective was to gather and analyse existing information on barriers that hinder innovation, the growth and competitiveness of European industry in marine and maritime activities. The report also addresses the main administrative, legal and technological barriers for some key sectors of the blue economy. The document further provides an overview of Intellectual Property Rights at European and national level and gives guidance and recommendations on how to protect IPR. Finally the report provides an overview of public-private partnerships and recommendations for the identification and management of PPPs, with a view to the possible implementation of this type of instrument to support some of the actions of JPI Oceans.



ROV KIEL 6000 ON THE INDEX2013 EXPEDITION ON RV SONNE © ROV-TEAM GEOMAR HELMHOLTZ-ZENTRUM FÜR OZEAN-FORSCHUNG KIEL

EU Programmes	Number of marine/maritime projects funded (2007-2013)	Total funding (in million EUR)	EU funding (in million EUR)
Framework Programme 7	1,310	3,690	2,727
Territorial Cooperation and Networking (Including INTERREG, ENPI, IPA, ESPON and URBACT II)	668	1,318	865
LIFE+	117	270	141

**NUMBER OF PROJECTS WITH A MARINE-MARITIME COMPONENT FUNDED BY DIFFERENT EU PROGRAMMES OVER 2007-2013 AND THE CORRESPONDING OVERALL FUNDING ALLOCATED TO THESE PROJECTS**

**Mapping of the marine science landscape and analysis of needs and gaps**

CSA Oceans provided a broad overview of the marine science landscape in Europe. A comprehensive mapping of marine - maritime related projects funded by pan-European and regional programmes and initiatives over the period 2007-2013 was conducted. The outcomes of this mapping have been included in the [report](#) "Mapping of science landscape and preliminary analysis". A total of 1310 marine and maritime related projects funded by FP7 have been mapped and the EU funding allocated by FP7 to marine - maritime related projects was close to EUR 2,727 million. In addition, a total of 668 projects with a marine - maritime component was found to be funded by Territorial Cooperation Programmes (TCP) (including INTERREG, ENPI, IPA and the EU networking programmes ESPON and URBACT II) and the corresponding EU funding allocated by these programmes was close to EUR 865 million. As to the marine/maritime projects funded by LIFE+, 117 projects were mapped and the corresponding EU funding was close to EUR 141 million. The report also provides an inventory of marine - maritime related COST Actions and relevant marine/maritime ERANETS and Art. 185 initiatives, including the calls and projects funded these initiatives over the period 2007-2013. Likewise, it provides information on relevant marine research organizations at regional and pan-European level and includes an overview of national RTD systems and national research strategies and programmes linked to marine and maritime issues, as well as an inventory of relevant national research institutions.

Based on the analysis of the information collected through a comprehensive consultation process, including consultation with national research funding agencies & ministries, stakeholder workshops and an open web consultation, CSA Oceans identified the main science needs and gaps relevant for JPI Oceans and developed the report "Needs and gaps analysis in marine sciences to feed the SRIA". This report presents the outcomes of this analysis and identifies a total of 15 key topics (grouped in 5 different broad areas according to the nature of each topic) relevant for JPI Oceans. The report also includes information on other science strategies developed or priorities identified by relevant pan-European and regional marine research organizations and initiatives. The outcomes of the mapping of science needs and gaps and the topics identified were presented to the Strategic Advisory Board (StAB) of JPI Oceans in a joint CSA Oceans - StAB meeting that took place on 8 July 2014, in Madrid. The StAB concluded that all the topics identified were relevant for JPI Oceans. The information provided by the report has been essential to feed Strategic Research and Innovation Agenda (SRIA) of JPI Oceans, complementing thus the information provided by the other CSA Oceans reports mentioned above.

## Framework Conditions

### Toolkit

The Council conclusions on Joint Programming of 2 December 2008 encouraged Member States, with the support of the European Commission, to consider how to best find common approaches to a number of issues, usually referred to as 'Framework Conditions', thought to be essential for an effective development and implementation of Joint Programming in research. CSA Oceans gathered information and analysed existing procedures, best practices and novel procedures with regards to the framework conditions. This information was gathered in an online toolkit which is publicly available to facilitate the selection, design, implementation and evaluation of joint actions.

The toolkit provides guidelines, templates and examples of joint actions which were conducted by different projects and initiatives. It does not only focus on joint calls but rather on a wider range of activities for crossborder cooperation. This is the case because JPI Oceans seeks to make use of a broad range of tools to implement its actions, including national research funding, institutional investments, human resources, existing infrastructure, structural funds, networking, and research alliances. For the implementation of these activities, the toolkit also lists criteria, guidelines for evaluation.

The toolkit content is designed to be dynamic, allowing quick modifications and updates by the JPI Oceans secretariat.

### Evaluation

To support the JPI Oceans Management Board CSA Oceans produced a set of recommendations for selecting, evaluating and monitoring different kind of joint actions in the JPI was developed. The report represents the final deliverable in a series of six that gradually builds up a knowledge base and keen understanding of the JPI Oceans' tools and mechanisms for steering, learning and

implementation. To support its development a workshop on selecting, evaluating and monitoring different types of actions was held on the 13 March 2014. The report from the workshop developed several approaches and guidelines for evaluating not only joint actions as such, but JPI Oceans as an initiative to transform and align the policy systems of the JPI partnership. In sum, guidelines and recommendations are thought of as a two-level system of actions, where the JPI policy level is the most demanding, with multiple challenges relating to identifying and evaluating actions and impacts.

In the final report the typical actions are spelled out with corresponding recommendations for evaluation and monitoring taken forward by JPI Oceans. These are grouped in two: Actions related to the "process" or JPI level as such, and actions related to dedicated initiatives to induce changes on the given parameters. At the actual stage of JPI Oceans, these last actions are referred to as pilot actions and meant as tests for new modes of cooperation. In the report, some examples from the pilot actions are spelled out to visualize if the recommendations may find their way into concrete cases, while issues on monitoring and organization of information flows and procedures are discussed.

The recommendations developed in the report include a number of possible indicators on the various dimensions that have been identified for the evaluation of JPI Oceans. Hence, the intention was not to develop a final set of measurable indicators, but rather lay out a broad set that represents a flexible toolbox. Concrete suggestions for measuring these indicators will have to be developed by the evaluator(s) responsible for the different kinds of evaluations.



MICROPLASTICS FORESIGHT WORKSHOP - NOVEMBER 2013

### Foresight

The CSA Oceans project developed a recommendation for a foresight process in JPI Oceans – another framework condition – that would support the strategy-making and guide the implementation of joint activities. As foresight has been applied in many different ways in the past, the project first defined the concept of foresight and reviewed existing processes in the European marine and maritime landscape. This [report](#) aimed served to create a common and shared understanding among the CSA Oceans partners and JPI Oceans members and provided a basis for discussion about the type of foresight JPI Oceans could be willing and able to coordinate.

On this basis, the project recommended to the JPI Oceans Management Board to implement a [two-pronged foresight approach](#) that addresses the needs of JPI Oceans. First, JPI Oceans needs a strategic foresight process to support strategy-making in JPI Oceans, in particular the update of the Strategic Research and Innovation Agenda. By creating a forum for critical debate about the long-term strategic orientation of marine and maritime research in Europe, where the research and policy-making communities together with industry and civil society can openly discuss and devise integrated strategies for Europe, JPI Oceans could place itself at the centre of debate about European marine and maritime research and technology development. Moreover, a strategic foresight process can strengthen JPI Oceans both internally and externally, by generating buy-in from its member countries as well as from important stakeholder communities. For this to happen, the strategic foresight needs to have a clear procedure, be centrally rooted in the interests of the JPI Oceans member countries, and build up strategic partnerships with central

stakeholders. CSA Oceans, therefore, recommends an operationalisation of this approach in the future, which should seek to establish a structured relationship with key players in the European landscape, in particular, with the European Marine Board.

Second, thematic foresight exercises should be implemented to further develop specific topic areas. Such exercises could be launched by the Management in order to develop (a) implementation plans for strategic areas of the SRIA, (b) embed existing actions (e.g. pilot actions) in a longer-term strategy and broader debate, or (c) explore newly emerging issues and make recommendations for transnational cooperation activities.

During the CSA Oceans Project, an operational 6-step procedure was developed and tested in the field of microplastics, thus helping to shape and implement the JPI Oceans Pilot Action "Ecological aspects of microplastics in the marine environment". In particular, the test run identified scientific priority areas which were subsequently (partially) addressed in a joint call for proposals. Moreover, the foresight process produced discussion papers for an international experts' workshop and contributed to the establishment of a scientific network in microplastics which, for instance, applied for a Marie Skłodowska-Curie network. A more detailed report of the experiences with the test exercise can be found [here](#).

Due to the success of the test foresight exercise, the CSA Oceans project recommended to implement further thematic foresight exercises in the future and use the developed procedures as a blueprint.

## Strategic Research and Innovation Agenda Endorsed



### MANAGEMENT BOARD MEETING TRIESTE - DECEMBER 2014

The CSA Oceans project supported JPI Oceans in the development of its Strategic Research and Innovation Agenda (SRIA) and Implementation Plan. Based on the broad mapping and the work developed under WPs 3, 4, 5, and 6, CSA Oceans develop a draft Strategic Research and Innovation Agenda (SRIA) for JPI Oceans and also a Draft Implementation plan (IPlan). After the consultation process the SRIA was further developed in close cooperation with the Strategic Advisory Board and input of the Management Board. A gap analysis was presented at the joint Management Board and Strategic Advisory Board meeting taking place in March in Oslo.

This was followed up by a workshop with the Strategic Advisory Board in which the Board identified 10 strategic areas with very high relevance for JPI Oceans. Throughout the summer months the CSA Oceans consortium, secretariat and StAB collaborated to further elaborate the text on the ten strategic areas.

In parallel the work started on the Implementation Plan (IPlan). The Draft IPlan is intended to serve as a menu for Management Board of JPI Oceans to choose actions on an annual or semi-annual basis in order to be published in a more detailed action plan e.g. JPI Oceans 2015-16 Operational Plan.

The 10 strategic areas identified in the JPI Oceans' SRIA are:

1. Exploring Deep Sea Resources
2. Technology and Sensor Developments

3. Science Support to Coastal and Maritime Planning and Management
4. Linking Oceans, Human Health and Wellbeing
5. Interdisciplinary Research for Good Environmental Status
6. Observing, Modelling and Predicting Oceans State and Processes
7. Climate Change Impact on Physical and Biological Ocean Processes
8. Effects of Ocean Acidification on Marine Ecosystems
9. Food Security and Safety Driving Innovation in a Changing World
10. Use of Marine Biological Resources through Development and Application of Biotechnology

The JPI Oceans Management Board endorsed the Strategic Research and Innovation Agenda and draft Implementation Plan at its meeting on 11-12 December 2014 in Trieste.

## Support to JPI Oceans Pilot Actions

At an early stage in the development of JPI Oceans it became clear that one or a few pilot actions should be initiated apart from engaging in the process leading to the development of the SRIA. The added values of pilot actions are manifold, but the two most important reasons for developing pilot actions can be summarised as follows:

1. To show to stakeholders (and members of JPI Oceans) that the coordination platform JPI Oceans is able to plan, prepare and execute joint actions;
2. To engage in a process of "learning by doing" with respect to new ways and means of collaborating and coordinating actions according to the principles of Joint Programming.

The different bodies of JPI Oceans, including the Management Board (MB) and the Strategic Advisory Board (StAB) adopted the idea of pilot actions with enthusiasm and asked CSA Oceans for a framework in terms of definition and evaluation criteria. In spite of having received a reasonably high number of ideas and proposals, the MB decided to launch a limited number of pilot actions with a restricted scope and temporal extent, considering their main aims as stated above. Nonetheless, this experience showed that member countries and their institutions have a very positive attitude towards joint actions and are willing to engage in activities coordinated by JPI Oceans.

When deciding to implement the pilot actions, the MB also tasked one member country (lead country) to take responsibility for the further development of each of the pilot actions. Having a committed leader (i.e., a JPI member country) was put forward as one of the main criteria and

pre-requisites for adopting pilot actions in the context of JPI Oceans. The countries in charge of the pilot actions (The Netherlands, Ministry for Economic Affairs; Germany, Ministry for Education and Research) agreed to implement the pilot actions in collaboration with partners inside and outside JPI Oceans.

In the meantime different countries and representatives within JPI Oceans have put forward new ideas for pilot actions, substantiating the view that joint actions are well-appreciated and that countries and institutions have growing confidence in Joint Programming as a suitable and fruitful platform to coordinate research efforts with a trans-national dimension.

To facilitate the process of proposing, selecting and eventually implementing pilot actions, different documents were prepared by CSA Oceans providing a working definition for pilot actions, a description of their general aims and purposes. In collaboration with the Strategic Advisory Board of JPI Oceans, criteria to select the most relevant pilot actions were developed as well. These criteria as well as general thoughts on aims and purposes served as a basis for developing conceptual and procedural frameworks for full-fledged actions of JPI Oceans in the future. In this way these preparatory documents and discussions leading to the fulfilled aim (2) as stated above. By engaging in this process all partners and JPI-bodies accumulated valuable knowledge and experience on collaborative actions.

These aspects were further discussed and synthesised in the report "[Proposal for procedures for design and management of joint actions](#)". An overview of all pilot actions can be found on the following [pages](#).



PHYTOPLANKTON CULTURES IN LABORATORY FLASKS | CREDIT: THINKSTOCK - ROB

### Intercalibration exercise for the EU Water Framework Directive

The pilot action "joint funding of the scientific intercalibration exercise for the EU Water Framework Directive coastal and transitional waters in the North-East Atlantic", was proposed by the Belgian delegation in JPI Oceans and approved at the JPI Oceans Management Board meeting in Oslo in March 2014.

This JPI Oceans pilot action adds value by:

- finding experienced scientific expert leads to perform required analyses for phytoplankton and benthic invertebrate fauna in the most cost-efficient way;
- reducing fragmentation (of comparison calculation efforts) and increase efficiency in relation to the Water (and Marine Strategy) Framework Directive;
- increasing experience with joint data collection and analysis;

- testing a mechanism for joint funding from 10 environmental authorities of 9 member countries (BE, DE, DK, FR, IE, NL, NO, SE, UK), surpassing the traditional model of joint calls, to obtain performance improvements. This mechanism included the creation of a commonly agreed specific work programme with a result obligation for the expert leads, included in a Memorandum of Understanding. The MoU led to the development of a real common funding pot that was governed by a research funding body which contracted the four expert leads. These were selected through a specifically designed selection process.

In doing so, the JPI Oceans pilot action enables a long-term dialogue between environmental authorities and the scientific community of Member States to jointly solve remaining scientific challenges. Furthermore, as comparable environmental assessments are of crucial importance for industry, research on scientifically sound and comparable environmental assessment can be a competitive advantage for Europe.

### The EU Water Framework Directive

The EU Water Framework Directive (WFD) was adopted in 2000, the purpose being establishment of a framework for protection of inland surface waters, transitional waters, coastal waters and groundwater. The overall aim for these surface and groundwater 'water bodies' is to achieve good chemical and ecological status by 2015. The WFD is the legislation tool with strongest emphasis on regional cooperation and comparability and underwent a scientifically underpinned intercalibration exercise. Significant gaps still exist despite two phases of intercalibration for coastal and transitional waters.

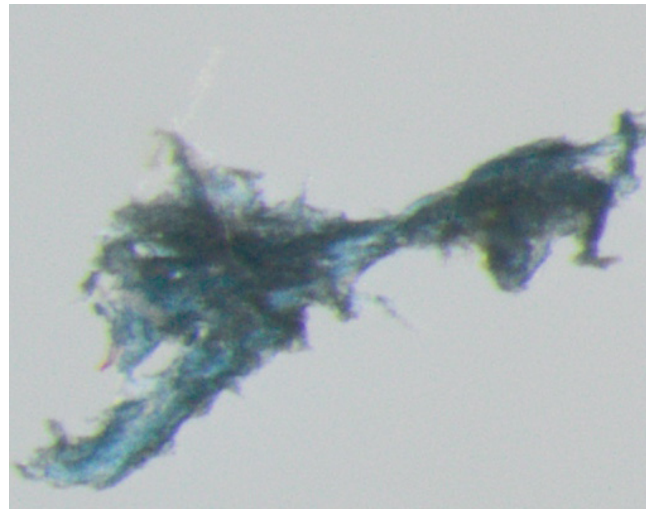
### Ecological Aspects of Microplastics

Microplastics are persistent, ubiquitous and their high potential to cause physical harm and toxicological effect is being highlighted in various studies. Modes and mechanisms of microplastic toxic action have been indicated for different biological systems, and microplastics have been identified as an artificial substrate which can affect ecological processes, biodiversity and facilitate transport of invasive species as well as pathogens.

However, the knowledge about the origin, size, range, abundance and spatial variability of microplastics in marine systems is still limited. The toxicological and ecological effects on marine organisms and ultimately on human health is also insufficiently studied. Hence, for the protection of marine habitats and the safety of marine resources and seafood the JPI Oceans Management Board decided that a transdisciplinary European research initiative was necessary. Under the lead of Germany, four different measures were taken forward:

#### 1. Bibliometric Study

In the framework of the pilot action, a bibliometric study was conducted which revealed a map of strong national research clusters connected in international and global networks. The study was performed as a scoping tool connected to the JPI Oceans' activities on marine microplastics pollution, a research field which receives increasing attention. The bibliometric study confirmed important roles of European researchers in the global networks of microplastics research, involving North- and South America, Asia and Australia. Leading institutions were mapped, and altogether the report provides a baseline setting for further monitoring of the expanding research field. As JPI Oceans is broad and addresses cross-cutting issues, the use of bibliometry for mapping and monitoring of broader or narrower research fields was tested as a method to identify new and emerging technologies and fields. This in order to avoid time consuming mapping exercises in which stakeholders are consulted through questionnaires and surveys.



**MICROPLASTIC PARTICLE EXTRACTED FROM MARINE SEDIMENTS IN BELGIUM. CREDIT: LISBETH VAN CAUWENBERGHE, GHENTOLAB, UGENT**

#### 2. Foresight exercise test run on microplastics

In order to support the development of the pilot action, the CSA Oceans project conducted a thematic [foresight exercise in microplastics](#) which was completed in early 2014. The aim of the exercise was to develop a roadmap for microplastics research for Europe. The exercise identified four research areas, which were used to inform the scientific orientation of the pilot action and in particular, the joint call.

#### 3. Best practice guidelines

Microplastics is a relatively new and emerging field of research. Therefore, analytical methods and research methodologies vary quite considerably between different research groups providing policy advice across Europe. This results in a lack of comparable data and differences in the way environmental pressures are perceived.

In order to address this issue, Ghent University, with the support of the Department of Economy, Science and Innovation of the Flemish Government (Belgium) and on behalf of JPI Oceans, hosted an international scientific experts workshop on microplastics in January 2015. The aim of the workshop was to review the current state of science and discuss ways forward. In particular, the workshop will look at best practices (for methodologies). The results of this workshop will be summarized in a report on current best practices and the future of microplastic research.

### 4. Joint Call on microplastics

Ten member countries of JPI Oceans (BE, DE, ES, FR, IE, IT, NL, NO, PT, SE) decided to allocate funds to a joint call on microplastics to be launched in January 2015. The call, which has a budget of 7.5 million Euro, comprises three main themes:

- Validation and harmonisation of analytical methods (interlaboratory study)
- Identification and quantification of microplastics
- Eco-toxicological effects of microplastic – impact on marine organisms

Projects funded under this call planned to receive funding from 1 December 2015 for a period of up to 36 months. The funding partners will each finance the participation of national researchers in the projects (virtual common pot model).

Researchers from other countries are encouraged to participate in consortia, however, they will need to bring their own funding with them.

### Ecological Aspects of Deep Sea Mining

JPI Oceans member country representatives together with nationally nominated scientific experts decided that the principal aim of this pilot action will be the study of the long-term ecological effects of deep-sea mining in order to provide robust scientific advice to policy makers. To realise this aim, the German Federal Ministry of Education and Research (BMBF) offered up 90 days for on-site research on the recently inaugurated RV Sonne (plus an additional 18 days for vessel transit) for a cruise in the Pacific in early 2015.

A group of international scientists under the lead of Matthias Haeckel (GEOMAR) and Pedro Martinez (German Centre for Marine Biodiversity Research - Senckenberg institute) subsequently developed a common scientific proposal for this cruise. Following a positive evaluation of the cruise proposal by both the JPI Oceans Strategic Advisory Board and international reviewers, member countries have endorsed the cruise proposal.

A three-legged cruise is visiting the DISCOL (DISturbance and re-COLonization experiment) area off the coast of Peru where a sea-floor disturbance experiment was carried out in the 1980s as well as the various claims of European countries in the Clarion-Clipperton Fracture Zone in the Pacific Ocean.



**DECISIONS ON THE FIRST THREE PILOT ACTIONS WERE TAKEN AT THE JPI OCEANS MANAGEMENT BOARD MEETING DUBLIN - FEBRUARY 2013**

## Main Science and Technology Results

On this cruise as well as in subsequent shore-based analyses, researchers from eleven countries (BE, DE, FR, IT, NL, NO, PL, PT, RO, SE, UK):

- assess the scale of recovery, the ecosystem status, and the biogeochemical situation of the DISCOL site by comparing disturbed with adjacent undisturbed sites.
- test a range of modern rapid assessment methods and monitoring techniques for defining the ecosystem status and for improving our understanding of dynamics of abyssal environments before and after anthropogenic disturbances.
- conduct a comparative ecological genetic baseline study as well as a comparative geochemical and hydrodynamic investigation. This will strengthen baseline studies that must be undertaken by European holders of exploration licences from the International Seabed Authority.
- predict the ecological, biogeochemical and hydrodynamic consequences of a mining impact as well as an assessment of the footprint and the nature of the temporal evolution towards a (new) equilibrium.
- communicate the results to stakeholders, policymakers to initiate the revision of ISA regulations, where appropriate, and a discussion on how to minimise the ecological impacts of future deep-sea mining activities.

As such the pilot action will enable scientists and policy makers to better assess the impact of deep sea mining activities. In the long term this will then allow policy makers to define a better legal framework for deep sea mining activities.



RV SONNE, GERMAN RESEARCH VESSEL USED IN THE PILOT ACTION | CREDIT: M. WESSELS, MEYER WERFT



POURQUOI PAS? IV, FRENCH RESEARCH VESSEL | CREDIT: MICHEL GOUILLOU, IFREMER

### Multi-use of Infrastructure for Monitoring in the North Sea

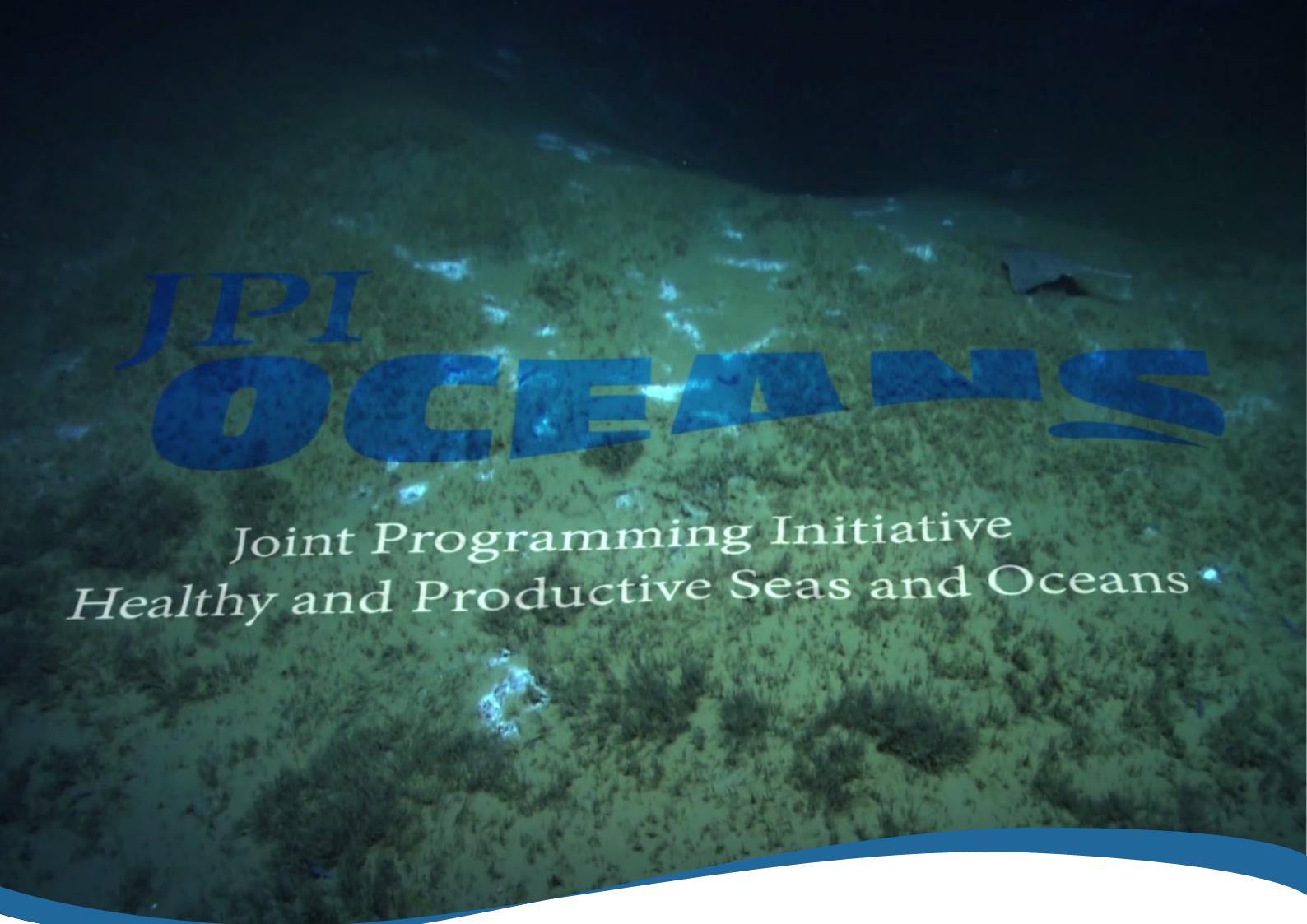
The pilot action "Multi use of Infrastructure for Monitoring in the North Sea" was proposed by The Netherlands in the Management Board meeting of October 2012. The action picked a number of indicators that require monitoring activities, to evaluate the feasibility of being added to current (fish stock) monitoring programmes. The intention was to develop pilot studies to test these on current monitoring activities as soon as possible. The process of organising the pilot, the needs (budgets, equipment, time) and the limitations (vessels, crew, permits) were of more interest than the actual data collected at sea. Such information was brought on as useful input for the project of the Directorate-General for the Environment, European Commission to be able to calculate costs and design an efficient integrated monitoring programme.

The overall approach of the pilot action was directed towards the following three components: (1) setting up integrated monitoring surveys, (2) enhancing integration of monitoring efforts and (3) promoting data sharing and integrated information systems. The pilot action focused

on integrated surveys but considered the requirements of the other components during implementation. The basic requirements for the approach were as follows:

- Design future (fish stock) monitoring surveys to incorporate both the needs of the CFP (Common Fisheries Policy) through the EU (Data Collection Framework) within the frame of the European Maritime and Fisheries Fund (EMFF) and the MSFD (Marine Strategy Framework Directive) to enable cost savings;
- Incorporate flexible, adaptive elements to the approach, allowing for the implementation of future needs as they emerge;
- Coordinate survey planning at the international level and at the scale of sea basins.

As such the pilot action incorporated monitoring for MSFD descriptors in the current ICES International Bottom Trawl Survey (IBTS). The IBTS survey was coordinated internationally by experts from Germany, France, England, Scotland, the Netherlands, Denmark, Sweden and Norway, executed twice a year covering the Greater North Sea.

An underwater photograph showing a vibrant coral reef with various species of coral and small fish swimming around. The lighting is blue and green, creating a serene and natural atmosphere.

# JPI OCEANS

*Joint Programming Initiative  
Healthy and Productive Seas and Oceans*

## CHAPTER 4

# **Potential impact and main dissemination activities and**

## Communication plan & video featuring Ministers and EU Commissioner



**ELISABETH ASPAKER, NORWEGIAN MINISTER OF FISHERIES**

As part of the CSA Oceans, the communication plan was developed to organise and plan the communication and outreach activities of JPI Oceans. The plan lists the communication objectives and priorities of JPI Oceans and outlines the tools and planned actions. In addition criteria were defined to identify the JPI Oceans stakeholders which were subsequently mapped and taken up in a contact list which is included in the communication plan. Based on this list which was approved by the Management Board and Strategic Advisory Board of JPI Oceans, the stakeholders were invited for workshops which were organized under the lead of WP1 to gather input for the development of the Strategic Research and Innovation Agenda of JP Oceans.

A JPI Oceans' [video](#) was developed and is available for viewing online. The video is a deliverable of the FP7 funded CSA Oceans support action and features Máire Geoghegan-Quinn, European Commissioner for Research, Innovation and Science, Ingrid Lieten, Flemish Minister for Innovation, Public Investment, Media and Poverty Reduction and Elisabeth Aspaker, Norwegian Minister of Fisheries talking about the role and importance of JPI Oceans in the marine and maritime landscape. The intent behind the video is to increase understanding of the role that JPI Oceans has within the landscape, and to raise awareness to assist the growth of JPI Oceans' network. The video was embedded by various partners of JPI Oceans and is featured under the about section of the JPI Oceans website.

## New Website & Newsletter Launched



### JPI OCEANS

The Joint Programming Initiative Healthy and Productive Seas and Oceans (JPI Oceans) is a high-level strategic platform to provide a long-term integrated approach to marine and maritime research and technology development in Europe.



The newly published website was developed after a thorough process in which the needs and structure of a new webpage was discussed and agreed upon. It features new sections highlighting the strategy development of JPI Oceans, the progress of its pilot actions and an updated overview of national marine and maritime research policies and strategies.

Furthermore the new site offers an updated overview of European and global policies and strategies. Based on the work conducted in the CSA Oceans project the webpage also integrated the [Marine Research Infrastructures \(MRI\) Database](#) developed in cooperation with EurOcean. Through the project mapping efforts conducted over the last years, a wide variety of infrastructures were brought together into one single repository, gathering information on more than 785 facilities. This Marine Research Infrastructures (MRI) Database provides the first level of knowledge and characteristics for each facility, as well as the links and contact to access the

further details provided by the operator.

As a whole, the new website has improved navigability facilitating the viewer to access the most visited pages through quick links and well-ordered drop-down menus. The pages are fully responsive to provide an optimal viewing on different devices. To simplify the search for the latest publications and outreach material of JPI Oceans a new [library](#) was created enabling users to search for publications according to year of publication and predefined keywords. In addition a [photo gallery](#) was created and more emphasis was put on visual content.

To complement the novel website the newsletter was redesigned as well. In addition the social media channels, LinkedIn, Twitter and Facebook proved to be efficient communication means for outreach. The channels saw a significant increase in group members and followers during the CSA Oceans project.

## First JPI Oceans & Final CSA Oceans Conference



### FIRST JPI OCEANS & FINAL CSA OCEANS CONFERENCE

The first edition of the JPI Oceans conference was a success with 175 participants from 29 different countries. The event was opened by the Chair of JPI Oceans' Management Board, Caron Montgomery. After welcoming all participants she gave the floor to Belgian State Secretary Bart Tommelein. The State Secretary presented himself as a man of the ocean, born by the sea and still living at the sea. He highlighted the role of Belgium in the initiative and especially looked forward to joint initiatives on marine spatial planning.

After the intervention of the Belgian State Secretary, Norwegian State Secretary Dilek Ayhan underlined the potential and complexity of the oceans. She argued that "Nations need to cooperate to maximize the oceans potential". She presented JPI Oceans as a part of the solution in order to achieve a stronger cooperation between nations.

The opening session was concluded by Director General Robert-Jan Smits who stated that the JPI Oceans Vision document and the Strategic Research and Innovation Agenda have made a significant contribution to the Blue Growth agenda of the European Commission and that it is now time to focus on implementation.

At the end of the session the first copies of the Strategic

Research and Innovation Agenda were handed by Caron Montgomery to Norwegian State Secretary Dilek Ayhan, Belgian State Secretary Bart Tommelein and, Director General of DG Research and Innovation, European Commission Robert-Jan Smits.

In the subsequent sessions, the SRIA and Implementation Plan of JPI Oceans were further presented and panel discussions took place on blue growth and forward looking activities. A comprehensive [report](#) of the conference is available on the JPI Oceans website in addition to the videos, presentations and pictures of the event.



**PETER HERZIG AND SIGI GRUBER AT THE FIRST JPI OCEANS CONFERENCE**



### Pre-event Conference: Belgian Premiere Jean-Michel Cousteau's Secret Ocean 3D

The conference was preceded by the Belgian premiere of Jean-Michel Cousteau's Secret Ocean 3D. The film offered a breakthrough look at a secret world within the ocean. As the son of ocean pioneer Jacques Cousteau explains: "We are used to seeing the big marine animals such as whales, dolphins and sharks, and many have focused on protecting these great animals. But these represent only the top of the food chain. With "Secret Ocean" we understand that the most important is the bottom of the food chain on which everything else in the ocean depends.", says Cousteau.

Narrated by renowned oceanographer Dr. Sylvia Earle, "Jean-Michel Cousteau's Secret Ocean 3D" introduces audiences to over 30 species, illuminating behaviors captured for the first time on film thanks to the development of new tools that allow underwater filming in 3D, ultra-HD and takes them to remarkable and vibrant environments such as the Bahamas, Fiji, and Bimini.

In a video message for the event Mr. Cousteau stressed the importance of the ocean and the opportunities it offers in numerous economic areas. He encouraged the participants of the conference to collaborate and work on new recycling technologies to, among others, prevent waste entering our seas.



## Publications & Outreach Materials



### FIRST JPI OCEANS & FINAL CSA OCEANS CONFERENCE

At the start of the project a template was developed for the publication of CSA Oceans deliverables. The template was used by project partners in order to maintain a uniform communication style. For the publication and printing of the Strategic Research and Innovation Agenda endorsed by the JPI Oceans Management Board a specific template was developed optimised for professional printing.

To prepare for the conference a new and updated brochure was created which highlighted the strategic areas agreed upon by the JPI Oceans Management Board in the Strategic Research and Innovation Agenda. In addition fact sheets and posters of the four pilot actions were created:

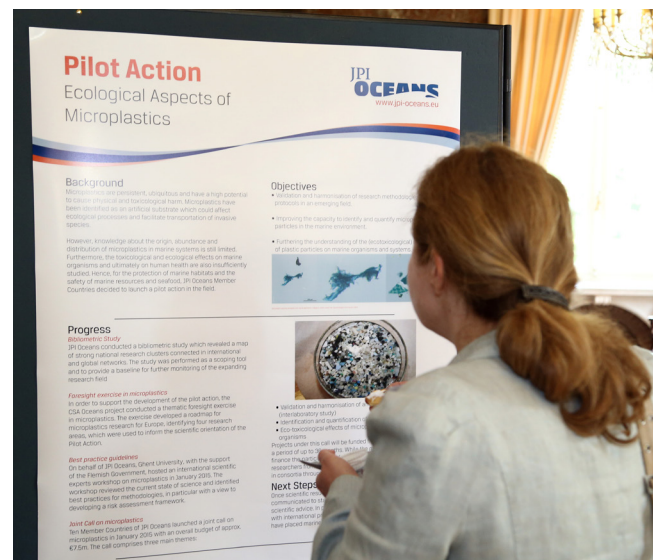
- [Multi-use of infrastructures for monitoring](#)
- [Ecological aspects of micro-plastics in the marine environment](#)
- [Ecological aspects of deep-sea mining](#)
- [Intercalibration for the EU Water Framework Directive](#)

Posters and factsheets were on display for conference participants and are available on the JPI Oceans website.

After the conference a news release was sent to a list of selected contacts and Management Board and StAB members.

To complement the printed outreach materials a new PPT presentation was developed in which the Strategic Research and Innovation Agenda and Implementation Plan are presented.

With the tools created within the CSA Oceans project, a new Annual Report of JPI Oceans was produced as well. The [report](#) is available both in print and online.



## Address of project public website and relevant contact details

<http://www.jpi-oceans.eu/csa-oceans>

JPI Oceans  
Rue du Trône 130  
BE-1050 Brussels  
Belgium

Tel: +32 (0) 626 16 60  
e-mail: [jpioceans@rcn.no](mailto:jpioceans@rcn.no)

## 2. Use and dissemination of foreground

### Section A

Scientific (peer reviewed) publications relating to the foreground of the project has not fallen within the remit of CSA Oceans.

However we find it worth mentioning that a shortened version of the draft Strategic Research and Innovation Agenda has been written and made available for the wider public both as an online document and as a printed document. Members of the JPI Oceans secretariat with the assistance of Management Board (MB) members joined forces on request by the MB to have a short version for internal and external communication. Members of the MB stressed the need to ensure that the process of shortening the document still ensured to capture the content of the original version.

LIST OF DISSEMINATION ACTIVITIES								
NO.	Type of activities	Main leader	Title	Date/Period	Place	Type of audience	Size of audience	Countries addressed
1	Organisation of conference	Vlaams Institute voor de Zee VZW	First JPI – CSA Oceans conference	07/05/2015	Brussels	Scientific community (higher education, research); Industry; Civil society; Policy makers	175	Afghanistan; Belgium; Denmark; Estonia; Faroe Islands; Finland; France; Germany; Greece; Iceland; India; Ireland; Italy; Lithuania; Monaco; the Netherlands; New Zealand; Norway; Poland; Portugal; Romania; Slovakia; Spain; Sweden; Switzerland; Turkey; United Kingdom
2	Organisation of workshops	Vlaams Institute voor de Zee VZW	CSA Oceans	20/03/2015	Brussels	Scientific community (higher education, research); Policy makers	26	Belgium; Estonia; France; Germany; Greece; the Netherlands; Norway; Poland; Portugal; Spain; Sweden; United Kingdom
3	Flyers	Vlaams Institute voor de Zee VZW	Updated JPI Oceans brochure	07/05/2015	Brussels	Scientific community (higher education, research); Industry; Civil society; Policy makers; Medias		EU and FP7 associated countries interested in participating in JPI Oceans

NO.	Type of activities	Main leader	Title	Date/Period	Place	Type of audience	Size of audience	Countries addressed
4	Posters	Vlaams Institute voor de Zee VZW	Poster Pilot action Ecological Aspects Microplastics	07/05/2015	Brussels	Scientific community (higher education, research); Industry; Civil society; Policy makers; Medias		EU and FP7 associated countries interested in participating in JPI Oceans
5	Posters	Vlaams Institute voor de Zee VZW	Poster Pilot action Ecological Aspects Deep-sea Mining	07/05/2015	Brussels	Scientific community (higher education, research); Industry; Civil society; Policy makers; Medias		EU and FP7 associated countries interested in participating in JPI Oceans
6	Posters	Vlaams Institute voor de Zee VZW	Poster Pilot action Multi use of Infrastructure for Monitoring in the North Sea	07/05/2015	Brussels	Scientific community (higher education, research); Industry; Civil society; Policy makers; Medias		EU and FP7 associated countries (interested in) participating in JPI Oceans
7	Posters	Vlaams Institute voor de Zee VZW	Poster Pilot action Join funding of the Scientific Intercalibration exercise for the EU Water Framework Directive	07/05/2015	Brussels	Scientific community (higher education, research); Industry; Civil society; Policy makers; Medias		EU and FP7 associated countries (interested in) participating in JPI Oceans
8	Films	Vlaams Institute voor de Zee VZW	JPI Oceans video	27/02/2014	Brussels	Scientific community (higher education, research); Industry; Civil society; Policy makers; Medias		EU and FP7 associated countries (interested in) participating in JPI Oceans
9	Web sites/Applications	Vlaams Institute voor de Zee VZW	New JPI Oceans website	27/08/2014	Brussels	Scientific community (higher education, research); Industry; Civil society; Policy makers; Medias		EU and FP7 associated countries (interested in) participating in JPI Oceans

NO.	Type of activities	Main leader	Title	Date/Period	Place	Type of audience	Size of audience	Countries addressed
10	Press releases	Vlaams Institute voor de Zee VZW	Press release: JPI Oceans publishes its first Strategic Research and Innovation Agenda	07/05/2015	Brussels	Scientific community (higher education, research); Industry; Civil society; Policy makers; Medias		EU and FP7 associated countries (interested in) participating in JPI Oceans
11	Flyers	Vlaams Institute voor de Zee VZW	Factsheet Pilot action Ecological Aspects Microplastics	07/05/2015	Brussels	Scientific community (higher education, research); Industry; Civil society; Policy makers; Medias		EU and FP7 associated countries (interested in) participating in JPI Oceans
12	Flyers	Vlaams Institute voor de Zee VZW	Factsheet Pilot action Ecological Aspects Deep-sea Mining	07/05/2015	Brussels	Scientific community (higher education, research); Industry; Civil society; Policy makers; Medias		EU and FP7 associated countries (interested in) participating in JPI Oceans
13	Flyers	Vlaams Institute voor de Zee VZW	Factsheet Pilot action Multi use of Infrastructure for Monitoring in the North Sea	07/05/2015	Brussels	Scientific community (higher education, research); Industry; Civil society; Policy makers; Medias		EU and FP7 associated countries (interested in) participating in JPI Oceans
14	Flyers	Vlaams Institute voor de Zee VZW	Factsheet Pilot action Join funding of the Scientific Intercalibration exercise for the EU Water Framework Directive	07/05/2015	Brussels	Scientific community (higher education, research); Industry; Civil society; Policy makers; Medias		EU and FP7 associated countries (interested in) participating in JPI Oceans
15	Oral presentation to a wider public	Vlaams Institute voor de Zee VZW	Presentation JPI/CSA Oceans at JPI Oceans event in Tallinn	04/12/2014	Tallinn	Scientific community (higher education, research); Policy makers	50	Estonia

NO.	Type of activities	Main leader	Title	Date/Period	Place	Type of audience	Size of audience	Countries addressed
16	Oral presentation to a wider public	Vlaams Institute voor de Zee VZW	Presentation JPI/CSA Oceans at Joint Science and Technology Cooperation meeting	08/12/2014	Wellington	Scientific community (higher education, research); Policy makers	20	New Zealand
17	Organisation of Workshops	Norges forskningsråd	Workshop Collaborative Projects	20/06/2013	Brussels	Scientific community (higher education, research)	9	
18	Organisation of Workshops	Norges forskningsråd	Workshop European Scientific Organisations and Associations	13/06/2013	Brussels	Scientific community (higher education, research)	9	
19	Organisation of Workshops	Norges forskningsråd	Workshop ERA-NET and Art.185 (BONUS)	12/06/2013	Brussels	Policy makers	7	
20	Organisation of Workshops	Norges forskningsråd	Workshop Technology Platforms; Industry; Innovation & Economic Associations	30/05/2013	Brussels	Industry	8	
21	Organisation of Workshops	Norges forskningsråd	Workshop UN-International Organisations, Policy and Regional Conventions	11/06/2013	Brussels	Policy makers	9	
22	Organisation of Workshops	Norges forskningsråd	Workshop stakeholders Marine Research Infrastructure	5/06/2013	Brussels	Scientific community (higher education, research); Policy makers	14	

## Section B

**Part B1** Applications for patents, trademarks, registered designs, etc.

None

**Part B2** Exploitable foreground

Type of Exploitable Foreground	Description of exploitable foreground	Confidential Click on YES/NO	Foreseen embargo date dd/mm/yyyy	Exploitable product(s) or measure(s)	Sector(s) of application	Timetable, commercial or any other use	Patents or other IPR exploitation (licences)	Owner & Other Beneficiary(s) involved
General advancement of knowledge	Better understanding of marine and maritime landscape in Europe due to extensive mapping	No		None	Marine and maritime	Open	None	JPI member countries

A better understanding of the marine and maritime landscape in Europe is beneficial for the JPI Oceans countries, the JPI Oceans secretariat and any European institution or organisation dealing with marine and maritime research.

## 3. Report on societal implications

Please refer to the report from the online filled in table for this section.

# ANNEXES

## Annex I: Public deliverables CSA Oceans

In addition to this final report CSA Oceans has produced other public deliverables. Below we provide the full list of these deliverables which are available at the JPI Oceans [website](#).

[\*A programmatic foresight process for JPI Oceans\*](#)

[\*Communication plan JPI Oceans\*](#)

[\*Foresight exercise test run. Experiences from the field of microplastics\*](#)

[\*Foresight for JPI Oceans - Definition and review of relevant processes\*](#)

[\*Identification of new and cross-cutting technologies and solutions to boost blue growth\*](#)

[\*Draft Implementation Plan\*](#)

[\*Improving Science-Policy Interfaces: Recommendations for JPI Oceans\*](#)

[\*Mapping and preliminary analysis of infrastructures, observation - data and human capacity building\*](#)

[\*Mapping and preliminary analysis of policy needs for evidence\*](#)

[\*Mapping of maritime research and innovation strategies and funding\*](#)

[\*Mapping of science landscape and preliminary Analysis\*](#)

[\*Needs and gaps analysis in marine sciences to feed the SRIA\*](#)

[\*Needs and gaps in infrastructure and human capacity building to feed the SRIA\*](#)

[\*Proposal for procedures for design and management of joint actions\*](#)

[\*Recommendation for a foresight process test exercise\*](#)

[\*Report first JPI Oceans conference\*](#)

[\*Report of the foresight experts workshop\*](#)

[\*Report workshop on science support to coastal and maritime planning and management\*](#)

[\*Strategic Research and Innovation Agenda 2015-2020\*](#)

[\*Technological and legal barriers - Intellectual Property Rights\*](#)

[\*Update of the JPI Oceans Early gap analysis\*](#)

## Annex II: Website - Social Media Statistics

### Website analytics

Year	Visits	Unique visitors	Pageviews	Avg. Visit Duration
2012	11,848	6,560	37,468	03:16
2013	16,882	9,615	55,914	03:07
2014	36,139	18,076	155,318	03:01

### Website Content & Newsletter

Year	News articles published	Newsletters sent	Newsletter subscribers
2012	31	4	/
2013	32	5	545
2014*	37	7	641

### Social Media

Year	LinkedIn group members	Twitter followers	Facebook likes	Slideshare views (cumulated)	Klout Score
2012	126	/	/	/	/
2013	356	457	54	2,589	41
2014	478	707	74	3,357	41

\* 2014 figures are partly based on Google Analytics in combination with an in-house analytics programme from September 2014 onwards.





The CSA Oceans project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no SCS2-GA-2012-314194-CSA Oceans