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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 for Healthy and Productive Seas and Oceans

MB- Management Board of JPI Oceans

SRIA- Strategic Research and Innovation Agenda

StAB- Strategic Advisory Board



CHAPTER 1

Our Network

Election Chair and Vice Chair Management Board



FROM LEFT TO RIGHT: LOURDES ARMESTO, NILS CHRISTIAN STENSETH, DIRK VAN MELKEBEKE & CARON MONTOMERY

At the 6th JPI Oceans Management Board meeting Caron Montgomery and Lourdes Armesto were elected as Chair and Vice Chair of the board.

Caron Montgomery is one of the UK representatives in the Management Board and head of the Marine & Fisheries Science Unit of the Department for Environment, Food and Rural Affairs (Defra). Lourdes Armesto represents Spain in the Management Board and has the position of Head of Department of the Spanish Ministry of Science and Innovation.

After the election, Caron Montgomery thanked the outgoing chair Dirk Van Melkebeke for the solid foundation laid in the start-up phase of JPI Oceans. She expressed her enthusiasm to turn the aspirations of JPI Oceans into further actions and highlighted the importance of the development of the Strategic Research and Innovation Agenda as the first step in this process. The newly elected Vice-Chair Lourdes Armesto underlined the importance of marine and maritime research for Spain and Europe as a whole and expressed her enthusiasm in continuing Spain's strong commitment and support of JPI Oceans in her role as the Vice Chair.

JPI Oceans Welcomes Greece as a New Member

On the 5th of March Greece officially joined JPI Oceans, nominating two representatives to the JPI Oceans Management Board. The addition of Greece to the JPI Oceans' member list takes the number of nations involved in the initiative to 20.

Greece's new members of the board were welcomed by Dirk Van Melkebeke, former chair of the JPI Oceans Management Board who was very pleased to have Greece joining JPI Oceans: "as a maritime nation, we will benefit greatly from the Greek experience in the Mediterranean and beyond". Greece will be represented in the JPI Oceans Management Board by:

- Dr. Evangelos Papathanassiou, Research Director of the Hellenic Centre for Marine Research
- Alternate member: Mrs. Chryssoula Diamanti, The General Secretariat of Research and Technology

René Dekeling Joins Strategic Advisory Board

The JPI Oceans Management Board appointed René Dekeling, Senior Policy Advisor at the Netherlands Ministry of Infrastructure & Environment and Ministry of Defence, as a new member of the Strategic Advisory Board.

Mr. Dekeling follows in the footsteps of Mr. Gert Verreet who resigned from the Board as he joined the JPI Oceans Management Board in his new position at the Flanders Authority, Department for Economy, Science and Innovation. At the Netherlands Ministry of Defence, René Dekeling is coordinator of the research programme on effects of underwater sound on marine life. In the Netherlands Ministry of Infrastructure and the Environment, René Dekeling is responsible for the national policy and research programming related to effects of underwater noise, and he is a member of the team coordinating the national implementation of the European Marine Strategy Framework Directive. International activities include co-chairing the expert group TG Noise, that was tasked by the European Commission to assist European member states in making the step from legislation to operational monitoring and management, and participation in the OSPAR group working on noise.



René Dekeling

New Post of Deputy Director in the JPI Oceans secretariat

In November 2014 Jacky Wood joined the JPI Oceans secretariat as Deputy Director. Formerly she worked at the National Oceanography Centre in the UK where she was the Head of the International and Strategic Partnerships Office (ISPO) and a member of the NOC Executive Board. Her role there included representing the Natural Environment Research Council (NERC) at the JPI Oceans Management Board.

In addition Tom Redd joined the secretariat as an adviser. He formally also worked at the UKs National Oceanography Centre, as a policy support officer, working on the CSA Oceans Work Package 5 (Science-Policy). Tom holds an MSc in Marine Science, Policy & Law from the University of Southampton and a BSc (Hons) in Ocean Science from Bangor University.



Jacky Wood –

Deputy Director JPI Oceans secretariat



Tom Redd

Adviser

Visit Norwegian State Secretary



STATE SECRETARY DILEK AYHAN AND THE JPI OCEANS SECRETARIAT

State Secretary Dilek Ayhan, from the Norwegian Ministry of Trade, Industry and Fisheries, visited the JPI Oceans secretariat on the 20th of February as part of the State Secretary's visit to Brussels with Minister Monica Mæland. The two hour meeting saw constructive dialogue between the State Secretary and the JPI Oceans secretariat. Director of the JPI Oceans secretariat, Kathrine Angell-Hansen, presented the status of JPI Oceans. The State Secretary was glad to learn about the international composition of the secretariat stating that it is valuable in securing participation from different parts of Europe. "It lays the foundation for good collaboration", concluded State Secretary Ayhan.



CHAPTER 2

Our Activities

New Pilot Action Approved



PHYTOPLANKTON CULTURES IN LABORATORY FLASKS | CREDIT: THINKSTOCK - ROB

The new 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.

The JPI Oceans pilot action will add value by:

- finding experienced scientific expert leads to perform required analyses in the most cost-efficient way for phytoplankton and benthic invertebrate fauna
- 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 the 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 questionnaire selection process.

In doing so, the JPI Oceans pilot action will enable a longterm dialogue between environmental authorities and the scientific community of Member States to solve remaining scientific challenges jointly. 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.

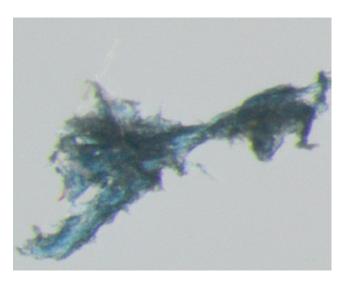
Ecological Aspects of Microplastics

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. In this regard four different measures were taken forward:



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 excercises in which stakeholders are consulted through questionnares and surveys.



MICROPLASTIC PARTICLE EXTRACTED FROM MARINE SEDI-MENTS IN BELGIUM. CREDIT: LISBETH VAN CAUWENBERGHE, GHENTOXLAB, 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 <u>foresight</u> <u>exercise in microplastics</u> 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, will host an international scientific experts workshop on microplastics in January 2015. The aim of the workshop is 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 an expected 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.

Envisaged is a three-legged cruise to visit 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. The first leg of the cruise is scheduled for 11 March 2015 and the other legs will follow in the summer.

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) will:

- 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

Multi-use of Infrastructure for Monitoring in the North Sea



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

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 a 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);
- 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 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.

Strategic Research and Innovation Agenda endorsed



In 2014, the JPI Oceans Management Board endorsed the Strategic and Research Innovation Agenda (SRIA) at its meeting on 11-12 December in Trieste. The endorsement was preceded by a broad consultation process conducted by the CSA Oceans project 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 inputs of RFAs/ministries on
needs and gaps, but to feed 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. These inputs were 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; (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 member states 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.

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 on 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 which is expected to be tabled at the first Management Board meeting in 2015.

CSA Oceans project activities

The CSA Oceans is an EU FP7 project which facilitates the implementation of JPI Oceans in its startup phase. The project proposes tools, procedures and structures for long-term governance and operational cooperation of the Joint Programming activities. Furthermore CSA Oceans identifies 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 will run untill 31 August 2015.

Analysis of policy needs

During 2014 CSA Oceans has completed its preliminary analysis of policy needs. The public <u>deliverable</u> 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 a 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. It was suggested that greater involvement in the IOC GOOS programme could be an appropriate platform to do this.

In a next phase CSA Oceans has published its recommendations to JPI Oceans on how to improve science-policy interfaces in Europe. The <u>report</u> presents five examples of science-policy mechanisms to explore how they work and what makes them effective. 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 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 technologies and approaches when it considers how best to bridge the gap between scientists and policy makers.

Marine Research Infrastructure

In addition, the CSA Oceans project delivered its first report on marine research infrastructures and human capacity building. The report includes an overview that aims to help member countries identify infrastructures that require concerted efforts in the second phase of the project.

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 has integrated mapping efforts conducted over the last few years into one single repository. 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, stakeholder consultations and existing initiatives (EURO-Argo, GROOM, EMSO, FIXO3, 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 Strategic Research and Innovation Agenda of JPI Oceans.

Identification of technologies and solutions to boost blue growth

Following the same approach the report "Identification of new and cross-cutting technologies and solutions to boost blue growth" was written. The 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 enabling and cross-cutting technologies and relevant procedures and sources for future scoping and analysis to enable JPI Oceans to identify new emerging technologies and to boost blue growth. The numerous gaps and needs call for improved joint programming and coordination of research and innovation strategies in Europe and for strengthening of the interface between industry and research. Finally, a set of recommendations is included in the last section.

Analysis of the existing needs and gaps in marine sciences

Likewise a mapping and analysis of the existing needs and gaps in marine sciences was conducted. The information provided in the report complemented the information gathered in the above mentioned reports. Although a lot of work has already been conducted to map the activities, gaps and needs at EU level in marine and maritime research by various organizations, initiatives and projects at the European level a specific mapping and gap analysis was needed. Notable examples of previous mapping exercises include ongoing projects and initiatives such as SEAS-ERA, BONUS, Euromarine and CLAMER and strategic documents developed by science organizations such as the European Marine Board, EFARO and ICES. However, the mapping activities conducted by these organizations and initiatives are frequently focused on specific disciplines or sectors and/or geographical areas, and have not been conducted looking at the intersections between the three big areas targeted by JPI Oceans (i.e. marine environment-climate change, maritime economy-climate change and marine environment-maritime economy and activities), where the key challenges relevant to JPI Oceans are found. Therefore, to develop the Strategic Research and Innovation Agenda (SRIA) of JPI Oceans it was necessary to conduct a targeted mapping to identify specific cross-cutting needs and gaps to achieve the goals of this JPI.



REPOSITORY ON MARINE RESEARCH INFRASTRUCTURE DEVELOPED IN COLLABORATION WITH EUROCEAN

Input to Horizon 2020

Horizon 2020 is the biggest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020). JPI Oceans has continuously followed up the development of the H2020 bi-annual programmes to ensure the complementarity and synergies between the JPI Oceans and H2020, avoiding duplication of efforts between member states and the European Commission, and increasing the impact of funding to tackle grand challenges. In this context, JPI Oceans provided a detailed input to Horizon 2020 in March 2014, as well as general messages in the context of preparation of Horizon 2020 work programmes for 2016-

2017. These general messages recommended the European Commission to (1) Reinforce the critical role played by the seas and oceans and the importance of Blue Growth as a Horizon 2020 Focus Area, (2) Re-emphasise the fact that, as a Focus Area, Blue Growth should be obvious in all relevant Work Programmes, (3) Introduce a cross-sectorial / cross societal challenge funding mechanism in Horizon 2020 to address major marine challenges, (4) continue to monitor and report on all marine-related research projects supported under Horizon 2020 on a regular basis.

ERA-NET Cofund

In the context of cooperation between European Commission and member countries, JPI Oceans has been working towards the identification of topics to be cofunded under the ERA-NET Cofund scheme. The ERA-NET Cofund under Horizon 2020 merges the former ERA-NET and ERA-NET Plus into a single instrument with the central and compulsory element of implementing one substantial call with top-up funding from the Commission. The focus of ERA-NETs is therefore shifting from the funding of networks to the top-up funding of single joint calls for transnational research and innovation in selected areas with high European added value and relevance for Horizon

2020. Under the auspices of JPI Oceans, three topics were in the process of development in 2014, in cooperation with relevant ERA-NETs:

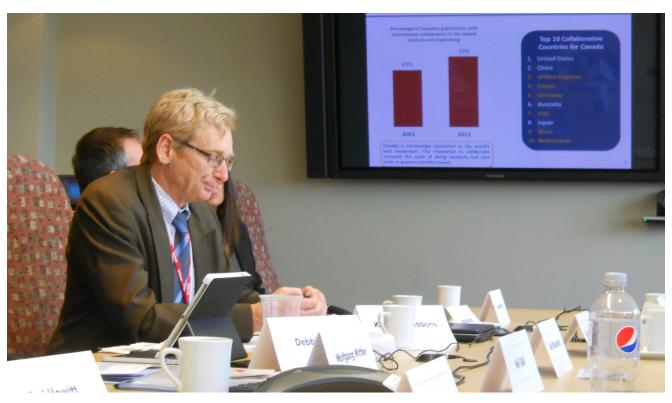
- Unlocking the potential of marine bio resources, Value chains for marine biomass;
- Technology, platforms sensor development (including for extreme environments);
- Ocean observation, modelling, mapping, leading to better forecasting and prediction.



CHAPTER 3

International cooperation

Transatlantic Cooperation



ERA-CAN+ INVITED EUROPEAN AND CANADIAN PROGRAM OWNERS TO JOIN FOR A PROGRAMME LEVEL COOPERATION MEETING ON NOVEMBER 18, 2014

JPI Oceans followed closely the developments which led to the Transatlantic Marine Research Alliance. The process was initiated by the Irish EU Presidency which hosted a high level event in Galway, Ireland in May 2013, creating the alliance. The 'Galway Statement on Atlantic Ocean Cooperation' was signed on 25 May 2013 at a high level conference between Canada, USA and the EU. The alliance will build on existing bilateral cooperation agreements and projects with the aim of developing and advancing a shared vision for the Atlantic.

US American (e.g. NOAA) and Canadian (e.g. DFO and MEOPAR) have expressed great interest in cooperating and aligning with European programmes. In particular, they would like to explore long-term strategic cooperation beyond Horizon 2020 and are looking to the EU Member States and JPI Oceans for this. Similarly, the European Commission is actively seeking the involvement of the Member States.

So far, JPI Oceans has participated in a number of meetings: On invitation of the European Commission, Joachim Harms and Jacky Wood (Management Board) together with Kathrine Angell-Hansen (Secretariat) have participated in the 1st and 2nd Galway Stakeholder Meetings in Brussels in April and July, Peter Heffernan (Management Board) and John Hanus (Secretariat) represented JPI Oceans at the 3rd meeting in Washington and 4th meeting in Ottawa respectively. Furthermore, the JPI Oceans Executive Committee discussed with the Irish Marine Institute the involvement in the Institutes' led proposal for the H2020 BG-14 project "Supporting international cooperation initiatives: Atlantic Ocean Cooperation Research Alliance". While it was mutually agreed that a direct participation of JPI Oceans was not the most suitable option, further engagement, for instance in an advisory function is still to be explored.

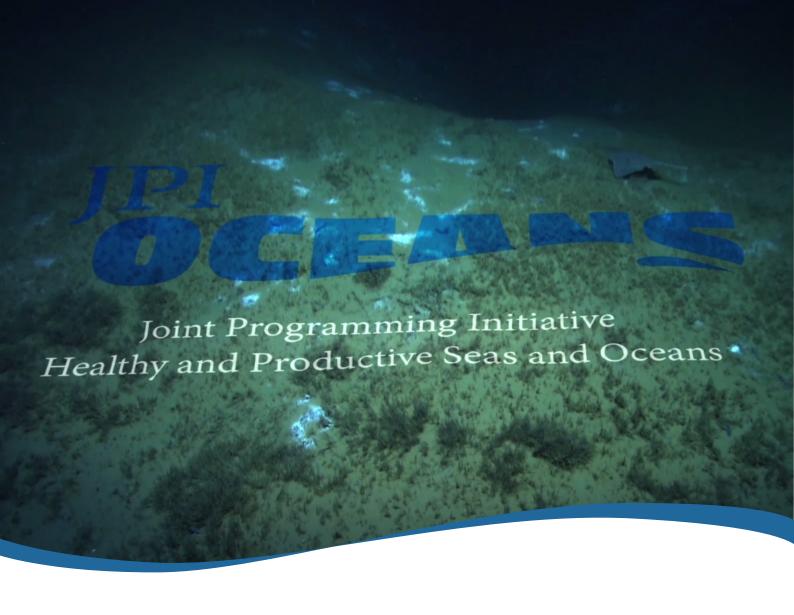
Joint Science and Technology Cooperation Committee New Zealand

JPI Oceans was invited at the Joint Science and Technology Cooperation Committee meeting between the European Commission and New Zealand taking place on 8 and 9 December 2014 in Wellington. In a preparatory workshop organised by the New Zealand Ministry of Business, Innovation and Employment, JPI Oceans representatives identified eight common marine and maritime research priorities between JPI Oceans and New Zealand.

- Exploring the deep sea Research on the development of deep sea mining - seabed habitat mapping
- Science for coastal planning and management -Enhance research on the land-sea interface by increasing the role of integrated models.
- Oceans and human health Interdisciplinary research on ocean and human
- Observing Support e-infrastructures for computing modelling forecasting

- Impacts of climate change on ocean circulation and effects on pelagic ecosystems and ecosystem dynamics
- Monitoring the variability and combined effects of acidification and warming on the upper ocean layer
- Interactions between marine aquaculture and fisheries and land-based food production including societal consequences.
- Coordinated efforts along the value chain from marine genetic resources to markets for sustainable blue growth

The outcome of the workshop was presented at the plenary meeting the next day and future cooperation was discussed at the Management Board meeting in Trieste, Italy.



CHAPTER 4

Communication & Outreach

Video featuring Ministers and EU Commissioner Released



The new JPI Oceans' video featuring the European Commissioner for Research, Flemish Minister for Innovation and Norwegian Minister of Fisheries reached completion 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



IPI 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 navigabilitym facilitating the viewer to access the most visited pages through quick links and well-ordered drop-down menus. 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.

ANNEXES

Annex I: 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 & Newslettter

Year	News articles published	Newsletters sent	Newsletter subscribers
2012	31	4	1
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	1	/	/	1
2013	356	457	54	2,589	41
2014	478	707	74	3,357	41

 $[\]boldsymbol{*}$ 2014 figures are partly based on Google Analytics in combination with an in-house analytics programme from September 2014 onwards.

Annex II: JPI Oceans presentations at external events

Event & place	Date	Representative
Presentation of Mapping procedures and Foresight at JPI FACCE Workshop, Madrid, Spain	4 February 2014	Florence Coroner and John Hanus
Presentation at SEASERA Strategic Forum	25 February 2014	Kathrine Angell-Hansen
Presentation at Healthy Oceans – Productive Ecosystems (HOPE): A European conference for the marine environment, Brussels, Belgium	3-4 March 2014	Rudy Herman (ExCom)
Presentation at VLIZ Young Marine Scientists' Day 2014, Bruges, Belgium	7 March 2014	Ángel E. Muñiz Piniella
Presentation at the EC MSFD Project Coordination Group meeting, Brussels, Belgium	10 March 2014	Wendy Bonne
SEASERA final conference, Palma de Mallorca, Spain	8-9 of April 2014	Kathrine Angell-Hansen
Keynote presentation at the 54th ECSA Conference "Coastal systems under change: tuning assessments and management tools" for the session "Improving management and decision processes", Sesimbra, Portugal	16 May 2014	Wendy Bonne
Presentation at 1st stakeholder meeting on Aquaculture RTD cooperation with China and ASEAN, Brussels, Belgium	10 June 2014	Wendy Bonne
Presentation at Joint Programming Information session at Canadian embassy, Brussels, Belgium	13 June 2014	John Hanus
Participation to BONUS projects joint kick-off meeting and BONUS Advisory Board meeting, Riga, Latvia	26-27 August 2014	Wendy Bonne
Presentation at the EC MSFD Project Coordination Group meeting, Brussels, Belgium	23 September 2014	Wendy Bonne
Presentation at Water JPI-WatEUr meeting "Taking Forward Europe- an Alignment of National Water RDI Activities", Brussels, Belgium	22 October 2014	Ángel E. Muñiz Piniella and Willem De Moor
Presentation at BILAT USA 2.0+ Workshop on Transatlantic Cooperation, Rome, Italy	6 October 2014	Pierpaolo Campostrini (ExCom)
Participation in panel at EurOCEAN conference, Rome, Italy	7-9 October 2014	Kathrine Angell-Hansen
Presentation at Third Bioeconomy Stakeholders' Conference, Turin, Italy	8-9 October 2014	Christina Abildgaard
Presentation at World Research and Innovation Congress	15-16 October 2014	Gilles Lericolais (ExCom)
Presentation at 7th EuroGOOS conference: Operational Oceanography for sustainable blue growth	28-30 October 2014	Florence Coroner
Presentation in the panel discussion of the conference EUROMED cooperation, inland and marine water challenges, Naples, Italy	4 November 2014	Wendy Bonne
4th Galway Implementation Meeting & Presentation at the ERA- Can+ Programme Level Cooperation Meeting, Ottawa, Canada	17-18 November 2014	John Hanus
Presentation at JPI Oceans event, Tallinn, Estonia	4 December 2014	Willem De Moor
Joint Science and Technology Cooperation Committee meeting, Wellington, New Zealand	8-9 December 2014	Gilles Lericolais (ExCom) and Willem De Moor
Presentation at National Institute of Water and Atmospheric Research (NIWA) Auckland, New Zealand	13 December 2014	Willem De Moor

Annex III: Management Board

Country	Organisation	Representatives
BELGIUM	Belgian Federal Science Policy Office (BELSPO) Flemish Government, Department Economy Science and Innovation (EWI) Fonds National de la Recherche Scientifique (FNRS)	CONTACT: FRANK MONTENY CONTACT: DAVID COX CONTACT: DIRK VAN MELKEBEKE CONTACT: GERT VERREET CONTACT: FREIA VAN HEE
DENMARK	National Institute of Aquatic Resources (DTU-DTU Aqua) Danish Agency for Science, Technology and Innovation (DASTI)	CONTACT: TORGER BØRRESEN CONTACT: SUSANNE E. HEDE CONTACT: FLOOR TEN HOOPEN
ESTONIA	Ministry of the Environment of the Estonian Republic University of Tartu; Estonian Marine Institute (EMI) Ministry of Agriculture University of Tartu; Institute of Ecology and Earth Sciences	CONTACT: SILVER VAHTRA CONTACT: HENN OJAVEER CONTACT: EVE KÜLMALLIK CONTACT: KALLE OLLI
FINLAND	Finnish Environment Institute (FEI/SYKE) Academy of Finland, Research Council for Biosciences and Environment	CONTACT: MARI WALLS CONTACT: KYÖSTI LEMPA
FRANCE	French Research Institute for Exploitation of the Sea (IFREMER) French National Research Agency (ANR)	CONTACT: FRANÇOIS JACQ CONTACT: GILLES LERICOLAIS CONTACT: MAURICE HERAL CONTACT: PATRICK MONFRAY
GERMANY	German Federal Ministry of Education and Research (BMBF) German Federal Ministry of Food, Agriculture and Consumer Protection Research Centre Jülich (JÜLICH)	CONTACT: CHRISTIAN ALECKE CONTACT: WIEBKE RÜDT VON COLLENBERG CONTACT: HARTMUT STALB CONTACT: JOACHIM HARMS
GREECE	Hellenic Centre for Marine Research (HCMR) Ministry of development; General Secretariat for Research and Technology (GSRT)	CONTACT: EVANGELOS PAPATHANASSIOU CONTACT: CHRYSOULA DIAMANTI
ICELAND	Marine Research Institute Iceland (MRI) Icelandic Centre for Research (RANNIS)	CONTACT: JOHANN SIGURJONSSON CONTACT: SIGURDUR BJÖRNSSON
IRELAND	Marine Institute Ireland (MI)	CONTACT: JOHN EVANS CONTACT: PETER HEFFERNAN
	National Institute of Oceanography and Experimental Geophysics (OGS)	CONTACT: ANGELO CAMERLENGHI
ITALY	Italian Ministry of Infrastructure and Transport, Directorate of Maritime Transport and Inland Waterways Italian Consortium for Managing research Activities Venice	CONTACT: ENRICO MARIA PUJIA CONTACT: PIERPAOLO CAMPOSTRINI
	Lagoon (CORILA) National Research Council of Italy, Marine Technology Research Institute (INSEAN-CNR)	CONTACT: EMILIO FORTUNATO CAMPANA

Country	Organisation	Representatives
LITHUANIA	Ministry of the Environment of the Republic of Lithuania (AM) Research Council of Lithuania	CONTACT: DALIUS KRINICKAS CONTACT: VIKTORIJA VAŠKEVICIENE CONTACT: BRIGITA SERAFINAVIČIŪTĖ CONTACT: AUDRIUS ŽVIKAS
MALTA*	University of Malta, Physical Oceanography Unit (UM)	CONTACT: ALAN DEIDUN
NETHERLANDS	Ministry of Economic Affairs, Agriculture and Innovation (EL&I) Netherlands Organisation for Scientific Research (NWO) on behalf of the Ministry of Education, Culture and Science	CONTACT: INO OSTENDORF CONTACT: J.M. DALHUISEN CONTACT: JOSEF F. STUEFER CONTACT: BERNARD WESTEROP
NORWAY	Research Council of Norway (RCN) Norwegian Ministry of Fisheries and Coastal Affairs	CONTACT: CHRISTINA ABILDGAARD CONTACT: KRISTIN ELISABETH THORUD CONTACT: ARNE BENJAMINSEN CONTACT: JARTRUD STEINSLI
POLAND	Polish Academy of Sciences; Institute of HydroengineerinW PAN)	CONTACT: GRZEGORZ RÓŻYŃSKI
PORTUGAL	Portuguese National Funding Agency for Science, Research and Technology (FCT) Portuguese Institute of Ocean and Atmosphere (IPMA)	CONTACT: ALEXANDRE FERNANDES CONTACT: NUNO LOURENÇO
ROMANIA	National Authority for Scientific Research, Directorate for European Integration and International Cooperation University of Bucharest, Faculty of Geology and Geophysics	CONTACT: VIOREL VULTURESCU CONTACT: VIOREL GH. UNGUREANU
SPAIN	Spanish Ministry of Economy and Competiveness (MINECO)	CONTACT: LOURDES ARMESTO
SWEDEN	Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (FORMAS) Swedish Agency for Marine and Water Management (HaV)	CONTACT: LISA ALMESJÖ CONTACT: ANNA JÖBORN
TURKEY	Tübitak Marmara Research Center	CONTACT: CINAR ONER
UNITED KINGDOM	Department for Environment, Food and Rural Affairs (DEFRA) National Oceanography Centre (SOTON-NOCS) Natural Environment Research Council (NERC)	CONTACT: CARON MONTGOMERY CONTACT: ED HILL CONTACT: MIKE WEBB

The European Commission (DG Research and Innovation) has a status of non-voting member. The two appointed members are Jacques Fuchs and Sieglinde Gruber.

^{*} Malta is an observing member to the JPI Oceans Management Board

Meeting	Date	Place
Sixth Management Board meeting	27 March 2014	Oslo, Norway
Seventh Management Board meeting	21 October 2014	Brussels, Belgium
Eight Management Board meeting	11-12 December 2014	Trieste, Italy

WENDY WATSON-WRIGHT

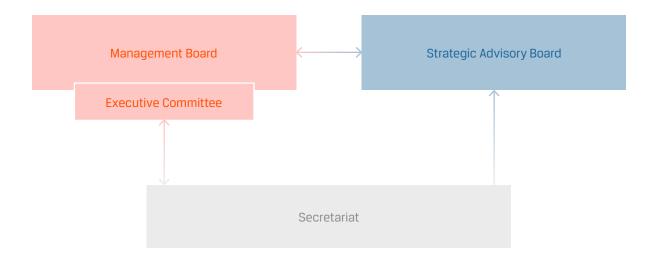
Annex IV: Strategic Advisory Board

Name Organisation MANUEL BARANGE Plymouth Marine Laboratory (PML) Centre National de la Recherche Scientifique; Station Biologique de Roscoff **CATHERINE BOYEN** (CNRS-SBR) Ministry of Infrastructure and the Environment - Directorate-general for Spa-RENÉ P.A. DEKELING tial Development and Water Affairs LAURA GIULIANO Italian National Research Council - Institute for Coastal Marine Environment ARTURO GONZÁLEZ ROMERO **INNOVAMAR** PETER HERZIG Helmholtz Centre for Ocean Research Kiel (GEOMAR) **IØRN KROG** County Governor of Sør-Trøndelag KARIN LOCHTE Alfred Wegener Institute for Polar- and Marine Research (AWI) NIALL McDonough European Marine Board (ESF-EMB) JEAN-FRANCOIS MINSTER **TOTAL** SIGVE NORDRUM Aker BioMarine Antarctic SEVCAN ÇOLPAN POLAT BEKEN Scientific and Technological Research Council of Turkey (TÜBITAK) **EEVA-LIISA POUTANEN** Ministry of the Environment of Finland FRANK ROLAND Centre of Maritime Technologies e.V. (CMT) YVONNE SHIELDS Commissioners of Irish Lights University of Oslo, Centre for Ecological and Evolutionary Synthesis (UiO-NILS CHRISTIAN STENSETH

Meeting	Date	Place
Fourth Strategic Advisory Board meeting	26-27 March 2014	Oslo, Norway
Workshop CSA Oceans - Strategic Advisory Board	1 July 2014	Madrid, Spain
Fifth Strategic Advisory Board meeting	21 October 2014	Brussels, Belgium

Intergovernmental Oceanographic Commission (IOC)

Annex V: JPI Oceans Governance Structure



Management Board

The Management Board (MB), the decision-making body of JPI Oceans, has the overall responsibility for the implementation of JPI Oceans. All member countries participating in JPI Oceans are represented in the Management Board (MB). The representatives from each country have sufficient authority to agree on joint action plans and potential funding initiatives across Europe.

Executive Committee

The Executive Committee (ExCom) is an executive body, providing support and assistance to the Management Board during the development and implementation of the JPI Oceans governance, plans, actions and activities.

Strategic Advisory Board

The Strategic Advisory Board (StAB) provides independent advice to the JPI Oceans Management Board. The StAB is made up of selected independent experts from the three key groups of stakeholders targeted by JPI Oceans, namely science, industry and civil society, but each of the StAB members are appointed in their own capacity as independent experts in marine/maritime issues and not as representative of any stakeholder group.

Secretariat

The Secretariat is committed to facilitating and supporting the work conducted under the JPI Oceans process by Member states and stakeholders through efficient and effective processes.

JPI Oceans

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