



Report First JPI Oceans Conference 7 May 2015

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Images conference

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Official hand-over of the Strategic Research and Innovation Agenda



FROM LEFT TO RIGHT: DIRECTOR GENERAL OF DG RESEARCH AND INNOVATION, EUROPEAN COMMISSION ROBERT-JAN SMITS, NORWEGIAN STATE SECRETARY DILEK AYHAN, CHAIR OF THE JPI OCEANS MANAGEMENT BOARD, CARON MONTGOMERY, BEL-GIAN STATE SECRETARY BART TOMMELEIN

The conference was opened by the Chair of the 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.

Going beyond the national level: Cooperation priorities of European countries in marine & maritime research



FROM LEFT TO RIGHT: KATHRINE ANGELL-HANSEN, DIRECTOR JPI OCEANS SECRETARIAT, CARON MONTGOMERY, CHAIR JPI OCEANS MANAGEMENT BOARD, LOURDES ARMESTO, VICE-CHAIR JPI OCEANS MANAGEMENT BOARD.

The second session of the conference was chaired by **Lourdes Armesto**, Vice-Chair of the JPI Oceans Management Board. During the session, **Kathrine Angell-Hansen** presented the outcome of the CSA Oceans project. In doing so she gave a short overview of the different publications and products which were developed within the project. In addition she explained the consultation process, which has led to the Strategic Research and Innovation Agenda.

She explained that the development of the SRIA has been a collective, shared and forward-looking exercise, identifying and prioritising cross-cutting research, development, and innovation challenges. Through the CSA Oceans project, JPI Oceans has gathered a vast collection of baseline information which serves as a 'knowledge bank' for later assessment and evaluation of the objectives of JPI Oceans.

The consultation process involved:

- An extensive mapping exercise and desk based research;
- A series of workshops during the summer of 2013 involving over 60 European and international stakeholder groups, organisations, networks, platforms and

projects;

- An online open consultation;
 - A Research Funding Agencies consultation (2013-2014), via a questionnaire to identify the key challenges and opportunities for the future and to gather information on functioning and mapping of: national R&D and innovation systems, science to policy mechanisms, and, national research strategies and programs. This questionnaire was sent to the 20 JPI Oceans Member Countries and one observer country. In addition, the questionnaire was sent to 6 other European and non-European countries with coastal areas (Croatia, Cyprus, Greece, Israel, Latvia and Slovenia).

During the process the JPI Oceans Strategic Advisory Board (StAB) members have been actively engaged in a series of meetings and workshops to develop the themes and provide advice to Member Countries on the relative priorities, urgency and feasibility of the actions. Joint meetings of the StAB and the Management Board helped formulate the thematic priority areas for action. In addition the Management Board members also carried out their own consultations at national level.



FROM LEFT TO RIGHT: CARON MONTGOMERY, CHAIR JPI OCEANS MANAGEMENT BOARD, LOURDES ARMESTO, VICE-CHAIR JPI OCEANS MANAGEMENT BOARD.

After the explanation of the process, **Caron Montgomery** presented the Strategic Research and Innovation Agenda (SRIA) and its ten strategic areas.

Actions within the Strategic Areas will vary in size, scope and duration.

The 10 strategic areas 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

In addition to the Strategic Areas, three cross-cutting issues have been identified where JPI Oceans can add value in the European landscape.

- Science-Policy Interface
- Human capacity building
- Infrastructures: Shared Use and Common Procurement Strategies

Implementing the European Research Area in marine & maritime research



FROM LEFT TO RIGHT: GILLES LERICOLAIS, JASPER DALHUISEN, JOACHIM HARMS, DAVID COX AND JACKY WOOD.

The third session was chaired by **Gilles Lericolais**, Director of European and International Affairs, Ifremer, who explained that the first pilot actions were launched in 2013 before the finalization of the SRIA and allowed JPI Oceans to test new instruments for cooperation and demonstrate the added values of joint programming. In addition, the pilot actions increased the visibility of JPI Oceans towards its stakeholders.

Multi use of Infrastructure for Monitoring in the North Sea

The first pilot action, Multi Use of Infrastructure for Monitoring in the North Sea, was presented by Jasper Dalhuisen of the Ministry of Economic Affairs (The Netherlands). The action, which was proposed in the Management Board meeting of October 2012, 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 pilot project of the Directorate-General for the Environment, European Commission: "New knowledge for an integrated management of human activity in the sea". This in order to be able to calculate costs and contribute to the design of efficient integrated monitoring programmes.

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 and 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 tested monitoring for MSFD descriptors in the current International Bottom Trawl Survey (IBTS). This resulted in a clear overview of the costs which are related to more integrated monitoring. The pilot action finished at the end of 2014 and final reporting of the action was concluded by May 2015.

Ecological Aspects of Microplastics

Joachim Harms, Head of division, Project Management Jülich, Germany gave a short presentation on the pilot action "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. 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:

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 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 to provide a baseline setting for further monitoring of the expanding research field.

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



MICROPLASTIC PARTICLE EXTRACTED FROM MARINE SEDI-MENTS IN BELGIUM. CREDIT: LISBETH VAN CAUWENBERGHE, GHENTOXLAB, UGENT

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 looked at best practices of methodologies and the future of microplastic research. The results of this workshop are summarized in a published report.

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 which was launched in February 2015. The call, which had 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

At the closing of the call 21 joint proposals were submitted requesting &26 million in funding. Projects funded under this call are 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).

Ecological Aspects of Deep Sea Mining

Dr. Harms also presented the pilot action 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 to 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.

The three-legged cruise started in March 2015 and visits 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.

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) are:

- assessing the scale of recovery, the ecosystem status, and the biogeochemical situation of the DISCOL site by comparing disturbed with adjacent undisturbed sites.
- testing 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.
- conducting 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.

- predicting 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.
- communicating the results to stakeholders, policymakers to initiate the revision of ISA regulations.



JOACHIM HARMS, HEAD OF THE DIVISION MARINE RESEARCH, GEOSCIENCES, SHIP AND MARINE TECHNOLOGY, PROJECT MANAGEMENT JÜLICH, GERMANY

Intercalibration for the EU Water Framework Directive

The latest 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 presented by **David Cox** of the Belgian Federal Science Policy Office. The action was proposed by the Belgian delegation in JPI Oceans and approved at the JPI Oceans Management Board meeting in Oslo in March 2014.

As explained in the presentation the pilot action adds 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



DAVID COX, FEDERAL SCIENCE POLICY, BELGIUM

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 enables a longterm dialogue between environmental authorities and the scientific community of Member Countries 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.



Implementing JPI Oceans: joint actions & new tools

The development of JPI Oceans can be charted by the key documents it has published. **Jacky Wood**, Deputy Director JPI Oceans Secretariat, presented the structure below which shows the hierarchy of agreed strategic decisions taken by the Management Board in the development of the JPI Oceans. The diagram emphasises the iterative nature of JPI Oceans development, showing how a strategic vision will eventually be translated into tangible actions. The final phase will be to develop an Operational Plan to show stakeholders the actions which JPI Oceans is undertaking.

VISION DOCUMENT 3 GOALS 10 OBJECTIVES	During the preliminary phase of JPI Oceans, a common Vision Document was developed outlining the long-term goals and objectives of JPI Oceans. In September 2011 the Management Board adopted the Vision Document together with an overview of gaps to feed the Strategic Research and Innovation Agenda; an overview of the policy drivers for JPI Oceans; and a document expressing how JPI Oceans perceives its links to other JPIs.
SRIA 10 Strategic Areas 3 Cross-Cutting Areas	The SRIA is a high level document which sets out the ten strategic areas JPI Oceans will act in order to align and add value in the ERA landscape. It draws on a long version which was developed by CSA Oceans. The JPI Oceans Management Board adopted the SRIA in December 2014.
IMPLEMENTATION PLAN 43 ACTIONS 12 CROSS-CUTTING INITIATIVES	The Implementation Plan provides a long-term menu of actions for the Management Board in the 10 strategic areas of JPI Oceans. It presents 43 actions and 12 cross-cutting initiatives, with fit for purpose tools, which could be taken forward by JPI Oceans both now and in the future.
OPERATIONAL PLAN 2015-2016	The Operational Plan is a living document which presents active actions and activities of JPI Oceans. It will facilitate monitoring, evaluation and ensure feedback mechanisms.

The importance of action evaluation was discussed to show how JPI Oceans is a learning organisation. In this context, Jacky talked about the importance of building on the legacy of the CSA Oceans project for future implementation Furthermore Jacky Wood explained that between January and March, JPI Oceans has hosted a series of meetings to discuss potential actions in the Strategic Areas outlined in the SRIA. Four workshops were held to discuss actions in the areas of Maritime Spatial Planning (SA3), Climate Change (SA7), Ocean Acidification (SA8), and Interdisciplinary Research for Good Environmental Status (SA5). In addition cooperation with the European Commission was discussed through the possible development of ERA-NET Cofunds in the areas of Technology (SA2), Observations (SA6) and Biotechnology (SA10).

Horizon scanning - Setting joint priorities for future marine & maritime research



FROM LEFT TO RIGHT: PETER HERZIG, SIGI GRUBER, PETER HEFFERNAN, CHRISTINA ABILDGAARD AND NIALL MCDONOUGH

The panel session on Horizon scanning was chaired by **Peter Herzig**, Chair of JPI Oceans' Strategic Advisory Board and Executive Director of GEOMAR Helmholtz Centre for Ocean Research Kiel.

The first discussion topic he introduced dealt with the way the agenda and priority setting has been done by JPI Oceans to achieve the Strategic Research and Innovation Agenda (SRIA) and whether there could be another role of JPI Oceans to shape the future marine and maritime RTD priorities in Europe. All panellists complimented the JPI Oceans team about the challenging and ambitious bottom-up process to achieve to 10 strategic areas that are supported by all Member Countries.

They agreed on the impressive work of JPI Oceans in reaching out and engaging a substantial community to achieve an agreed vision. **Christina Abildgaard**, Management Board JPI Oceans - Department Director of the Research Council of Norway pressed the importance to actively engage the youth in making decisions for the future. **Peter Heffernan**, Chief Executive of Marine Institute Ireland pressed that this process should be the foundation to move on to the next step of implementation in a way that expresses the trust between the different Member Countries. **Niall McDonough**, Strategic Advisory Board JPI Oceans - Executive Secretary of the European Marine Board, emphasised that a strong basis is now established to move forward with the SRIA and new mechanisms should be identified to pick up the new issues as they emerge in the future. **Sigi Gruber**, Head of the Unit for Marine Resources, European Commission DG Research and Innovation highlighted the convergence between the areas identified in the SRIA and those within the working programmes of the EC which is a proof of concept that the important challenges are being addressed.

The next issue Peter Herzig raised, concerned the question whether the right people were reached to implement the SRIA. More specifically, how can we reach politicians to make the right decisions and stress the importance of the future of our seas and ocean and the importance for mankind? According to the Chair, decisions on language, strategy and topics are particularly important to address decision makers and politicians. Peter Heffernan expressed his view that the lack of awareness of the role of seas and ocean in the big issues on this planet should be tackled. 'Member Countries should take it on their own shoulders to change political appreciation of the role of seas and oceans'. Christina Abilgaard also pressed to engage other organisations, as 'oceans matter to many more people than only politicians', and a foresight process with stakeholders could be a good way to do this.



FROM LEFT TO RIGHT: PETER HERZIG AND SIGI GRUBER

Niall McDonough confirmed that ocean literacy as a developing movement has increasingly become important in Europe which provides us with a framework to work with and communicate towards local communities. There is a need to maximize the possibility and opportunity for people to take a leadership role' in raising ocean issues on the political agenda.

The third issue brought up in this panel session was the role of the EC in marine and maritime RTD funding. Given the fact that only a limited amount of funding in member states comes from the EC, Peter Herzig questioned whether there could be room for improvement? Sigi Gruber commented that there is now a Blue Growth focus area in the Horizon 2020 program and JPI Oceans and all member states are invited to support the European Commission in identifying the interconnection between the SRIA and the working programmes of the European Commission (e.g. the interconnection between human health and oceans, new materials, etc.) to include the 10 strategic areas of the SRIA in the different EC working programmes. Peter Heffernan confirmed the political window of opportunity that exists to fund the strategic areas identified in the SRIA. There is a need to work hard in the Member Countries to communicate the cross-over

opportunities and benefits. Co-fund mechanisms and key innovation initiatives are other opportunities, outlined by Christina Abildgaard, that are supported by the EC. Niall McDonough emphasised the strong communication that exists at the moment between the EC and JPI Oceans and to keep this to use the opportunities that will arrive in the future.

The panel session was closed with a final round expressing the panelists' visions on how marine and maritime research in Europe should be coordinated in the future. In order to effectively implement the SRIA, Peter Heffernan highlighted three important future activities: seabed mapping, observation to forecast effectively and sustainably developing and protecting the marine environment. Niall McDonough argued that existing structures should be used to raise the level of seas and oceans on the political agenda. Christine Abildgaard pictured her vision to work together and disseminate the importance to reach healthy and productive seas and ocean. Sigi Gruber stressed that more action is needed to increase the awareness at the global population level about the healthy, productive and economic potential of our ocean.

Blue Growth and jobs



FROM LEFT TO RIGHT: EMILIO FORTUNATO CAMPANA, FRANÇOIS DUTHOIT, COURTNEY HOUGH, JOHN MURRAY, DAMIEN PÉRISSÉ.

Emilio Fortunato Campana, JPI Oceans' Management Board - Director, Marine Technology Research Institute of CNR, Italy chaired the panel session on Blue Growth and jobs and started the session with introducing its objective; to discuss how public authorities can enable Blue Growth by cooperation across borders in Europe. In that regard, the session addressed the current bottlenecks, different actions which are available and possible cooperation between the different initiatives.

The first question raised was which type of action has the largest impact in boosting Blue Growth. François Duthoit, Chair, Waterborne Blue Growth Working Group kicked off the discussion with his strong point of view that growth of the maritime industry is most crucial for economic development for Europe at sea. Allocating money and the necessary equipment to support this is important to develop engineering and technology at sea and improve economic growth. Courtney Hough, Secretary, European Aquaculture Technology and Innovation Platform (EATiP) shared his experience with developing a SRIA for EATiP which was focused on growth, investment and competitiveness. From his sectoral point of view, public-private partnerships for innovation and growth are essential to push through the market but simultaneously you need the support from technology transfer clusters promoting national efforts and training and education opportunities. **John Murray**, Chief Executive of Society of Maritime Industries addresses the need to persuade policy makers that the maritime sector is worth supporting. In his experiences, new opportunities to engage with governments have recently arisen but there is a need for robust mechanisms to go beyond the lifetime of a Parliament. **Damien Périssé**, Director, Responsible for maritime affairs, innovation and competitiveness, and follow-up of the Baltic Sea Commission, Conference of Peripheral Maritime Regions of Europe (CPMR) mentioned the idea of public-private-society partnerships. He also mentioned the importance of actions that are used to implement regional strategies which can later also become important in EU strategies or for the JPI Oceans.

The second discussion topic brought up by Emilio Fortunato Campana was about the most promising areas to stimulate growth opportunities and to boost jobs in Europe. François Duthoit formulated that cooperation and stimulation of the market is most important to make blue economy grow faster. He explained the four enablers to stimulate the market; exploration, environmental impact, regulations at sea and technology development, which need a scientific community and cooperation for effective growth. Courtney Hough addressed the issue of licensing, which takes a long time at all levels and which is hampering the development of Blue Growth.



EMILIO FORTUNATO CAMPANA

This problem has been recognized throughout Europe and should be addressed politically. John Murray shared his experience of developing a partnership with the government in the UK as an effective mechanism to bring the right people together to work out problems more efficiently. Damien Périssé explained the link between existing activities that stimulate growth and which potentially contribute to the development of new activities. He also confirmed the problem of licensing which is limiting activities at sea.

The next issue brought up by the chair inquired about the role of Knowledge and Innovation Communities (KICs) promoted by the European Union. KICs may provide acceleration services to start-ups and ventures by supporting entrepreneurs with their business ideas, strengthening their business models, building expert teams, and providing access to finance. The question was raised whether the establishment of a KIC could be useful in supporting Blue Growth at European scale. All panelists supported the potential of a marine KIC. François Duthoit stressed that the human factor is paramount and there should be a focus on training. Courtney Hough supports very strongly the KIC if there is no duplication with the European Technology Platforms. Damien Périssé supports the idea of a marine KIC but mentions the needed support from the scientific community to raise the agenda.

The last round of this panel session summarized some final remarks of the panelists which dealt with education, cooperation, communication, engineering and science. François Duthoit promoted the development of an international sea station to boost job creation. John Murray stressed that seabed mapping should be taken up in a separate research program as it is important for business growth in other areas while bringing the entire marine and maritime community together. Damien Périssé encouraged the maritime community to improve communication on the current projects and results obtained which can be integrated in future analyses. Courtney Hough identified integrated multitrophic aquaculture as an important business reducing environmental impact and an opportunity for investment with the need to look into ways of financing this type of business.



JOHN MURRAY

Closing session



FROM LEFT TO RIGHT: CARON MONTGOMERY, MANUEL BARANGE, MARIANNE WENNING AND RICARDO SERRÃO SANTOS,

The closing session was chaired by **Caron Montgomery**, Chair JPI Oceans Management Board - Head of Marine and Fisheries Science, Department for Environment, Food & Rural Affairs (DEFRA), UK who introduced all speakers of this session.

Marianne Wenning, Director, European Commission, DG Environment expressed her support of the wide range of activities being carried out by JPI Oceans. She emphasized the three concepts underlying the work of JPI Oceans that are equally important and without those, successes would be random, fragmented and with little policy relevance. The first concept she mentioned is cooperation and integration and this includes a closer way of working together at all levels. It is important to bundle energy and research interests and invest jointly in the right management and funding tools to tackle the many challenges ahead. The second concept is Blue Growth, which is the economic growth that could flow from maritime activities and which ultimately leads to the benefit of the European citizens. The third concept is Green growth; which means that any growth coming from our seas and oceans cannot be at the expense of the health and productivity of our seas and oceans but they have to take place in the context of the relevant environmental legislations.

The European Commission firmly believes that economic, social and environmental objectives can be mutually supportive. Marianne Wenning highlighted some of the EU instruments that can be used to achieve these challenges. The Horizon 2020 programme plays a vital role in supporting information, implementation and innovation that we need in working towards the challenges which are hard, numerous and broad.

The final message of Marianne Wenning confirmed that the commitment of JPI Oceans is very important and much valued by the European Commission. "We can only achieve maximum benefits if we pool our intellectual and financial resources together". Therefore, the SRIA of JPI Oceans points the way to new and exciting challenges for which she wished JPI Oceans all success with its endeavors.



MARIANNE WENNING



MANUEL BARANGE

Manuel Barange, Vice Chair Strategic Advisory Board JPI Oceans - Deputy Chief Executive and Director of Science at Plymouth Marine Laboratory (PML), UK contributed to this closing session with some lively reflections and comments.

When putting two recent quotes from the Economist intelligence unit and a WWF report together, it was clear that views on the ocean differ widely. In that regard Manuel Barrange warned about the confusion these messages cause, even towards the scientific community.

Similarly, Manuel Barange compared figures from the last assessment report from IPCC. The first plot showed that 95% of the heat produced by anthropogenic activity over the last 40 years sits in the oceans. The second plot showed that the generated carbon mostly sits in the N-Atlantic and European seas. "It makes absolutely sense to consider climate change as a major driver in the context of these messages": he concluded.

Manuel Barrange also highlighted the fact that standards are evolving rapidly and there is a discrepancy between the standards we use for the oceans and those we expect from land. In this context, his final remark summarized his high expectations:"JPI Oceans has got a window of opportunity and a window of solutions that we cannot miss. Because it deals with climate change, it deals with the environmental consequences and it deals with the maritime economy and human activities. It is a program that brings conflicted messages in the context of climate change." **Ricardo Serrão Santos**, Member of the European Parliament and former deep-sea researcher shared his thoughts on the process of Blue Growth in Europe, which sticks on top of his agenda for two reasons. The first is the need to support economic growth and boost innovation activities and jobs in Europe. Secondly there is a need to ensure that exploration and exploitation are kept below the carrying capacity of oceans and that moral, social and environmental considerations are going side by side to promoting investments at sea.

Ricardo Serrão Santos urged the audience to be creative and imaginative in supporting actions to promote Blue Growth and contribute to knowledge while keeping healthy and productive seas and oceans. Therefore, building a societal base in knowledge and international comprehension is important and JPI Oceans is having a key role to bring this message forward.



RICARDO SERRÃO SANTOS

Pre-event: 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 econmic areas. He encouraged the participants of the conference to collaborate and work on new recycling technolgies to, among others, prevent waste entering our seas.





Programme

Programme

09:00-09:30 Registration and coffee

09:30-09:40 Welcome and introduction

• Caron Montgomery, Chair JPI Oceans Management Board - Head of Marine and Fisheries Science, Department for Environment, Food & Rural Affairs (DEFRA), UK

09:40-10:10 **Opening session**

- Bart Tommelein, State secretary for the Fight against Social Fraud, Privacy and North Sea, Belgium
- Dilek Ayhan, State Secretary Ministry of Trade, Industry and Fisheries, Norway
- Robert-Jan Smits, Director General, European Commission DG Research & Innovation

10:10-11:15 Going beyond the national level: Cooperation priorities of European countries in marine & maritime research

Session chair: Lourdes Armesto, Vice Chair of JPI Oceans' Management Board - Head, Technical Environmental and Natural Resources Department, Ministry of Economy and Competitiveness, Spain

- From Vision to Strategic Research and Innovation Agenda Kathrine Angell-Hansen, CSA Oceans Coordinator - Director JPI Oceans secretariat
- JPI Oceans Strategic Research and Innovation Agenda & Implementation Plan Caron Montgomery, Chair of JPI Oceans' Management Board - Head of Marine and Fisheries Science, Department for Environment, Food & Rural Affairs (DEFRA), UK

11:15-11:45Coffee break

11:45-13:00 Implementing the European Research Area in marine & maritime research

Session chair: Gilles Lericolais, Executive Committee JPI Oceans - Director of European and International Affairs, Ifremer, France

Flash presentations Pilot Actions:

Multi-use of infrastructures for monitoring in the North Sea
 Jasper Dalhuisen, Senior Policy Adviser, Ministry of Economic Affairs, The Netherlands
 Ecological aspects of micro-plastics in the marine environment

Joachim Harms, Head of the Division Marine Research, Geosciences, Ship and Marine Technology Project Management Jülich, Germany

3. Ecological aspects of deep-sea mining

Joachim Harms, Head of the Division Marine Research, Geosciences, Ship and Marine Technology Project Management Jülich, Germany

4. Intercalibration for the EU Water Framework Directive

David Cox, Programme Manager, Federal Science Policy, Belgium

Flash presentations joint actions & new tools Jacky Wood, Deputy-Director JPI Oceans secretariat

Questions and answers

13:00-14:00 Lunch

14:00-15:00 Panel session: Horizon scanning - Setting joint priorities for future marine & maritime research

Session Chair: Peter Herzig, Chair of JPI Oceans' Strategic Advisory Board - Executive Director, GEOMAR Helmholtz Centre for Ocean Research Kiel

- Peter Heffernan, Chief Executive, Marine Institute Ireland
- Christina Abildgaard, Management Board JPI Oceans Department Director, Research Council of Norway
- Niall McDonough, Strategic Advisory Board JPI Oceans Executive Secretary, European Marine Board
- Sigi Gruber, Head of the Unit for Marine Resources, European Commission DG Research and Innovation

15:00-15:20 Coffee break

15:20-16:20 Panel session: Blue Growth and jobs

Session Chair: Emilio Fortunato Campana, JPI Oceans' Management Board - Director, Marine Technology Research Institute, CNR, Italy

- François Duthoit, Chair, Waterborne Blue Growth Working Group
- John Murray, Chief Executive, Society of Maritime Industries
- Courtney Hough, Secretary, European Aquaculture Technology and Innovation Platform (EATiP)
- Damien Périssé, Director, Responsible for maritime affairs, innovation and competitiveness, and follow-up of the Baltic Sea Commission, Conference of Peripheral Maritime Regions of Europe (CPMR)

16:20-16:45 Closing session

- Caron Montgomery, Chair JPI Oceans Management Board Head of Marine and Fisheries Science, Department for Environment, Food & Rural Affairs (DEFRA), UK
- Marianne Wenning, Director, European Commission, DG Environment
- Manuel Barange, Vice Chair Strategic Advisory Board JPI Oceans Deputy Chief Executive and Director of Science at Plymouth Marine Laboratory (PML), UK
- Ricardo Serrão Santos, Member of the European Parliament

16:45-18:00 **Reception**



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



Speaker biographies



Christina Abildgaard

Research Council of Norway

Christina Abildgaard graduated from the Norwegian University of Life Sciences in 1985 and has a Ph.D in biotechnology. She is the Director of Department for Marine Bioresources and Environmental Research in the Research Council of Norway. She has previously held position as a Deputy Director General in the Department of Research and Innovation in the Norwegian Ministry of Fisheries and Coastal Affairs and has experience from different positions in the Research Council of Norway, from Ministry of Trade and Industry, and from industry and academia.

IntheResearchcouncilofNorwayshehasbeenresponsibleforlargescale programs within Aquaculture, ICT, nanotechnology and biotechnology, and programs within environment, food technology, Oceans and programs within Ethical, Legal and Social Aspects of Biotechnology. She has also been responsible for foresight activities. Her field covers research policy and strategy within marine research, environment, biotechnology including marine bioprospecting and food technology.

She has been a member of several national and international research policy committees within OECD and EU and been a member of the Norwegian Biotechnology Advisory Board. She is a member of the Management Board in JPI Oceans.



Kathrine Angell-Hansen

JPI Oceans secretariat

Kathrine Angell-Hansen, MSc, is Director in RCN, Director of the JPI Oceans Secretariat and project coordinator of the CSA Oceans project. She has been responsible for the strategy development and innovation from major marine and maritime industries in Europe as well as covering these fields as a Deputy Director in RCN on research and innovation. She was a Deputy Director General on research in the Ministry of Fisheries and Coastal Affairs. She was seconded to DG MARE in the development of the EU maritime policy prior to her present position.



Lourdes Armesto

Ministry of Economy and Competitiveness, Spain

Lourdes Armesto (PhD in Chemistry) is Head of the Technical Environmental and Natural Resources Department of MINECO. She is in charge of coordinating the implementation and management of national programmes and calls in the fields of environmental science and technologies, biodiversity, climate change, marine science, energy and water research. She is participating in a number of ERA-NETS (CAPITA, ECOINNOVERA, BIODIVERSITY, SEASERA, etc). From 1989 to 2004 she was coordinating several projects relating to Energy and Environmental Science and Technologies. Now she is involved in different JPIs: JPI WATER (Coordination Team), JPI CLIMATE (Member of Governing Board) and JPI Oceans as Vice Chair of the Management Board and Executive Committee.





State Secretary Ministry of Trade, Industry and Fisheries, Norway

Ms Dilek Ayhan is State Secretary at the Norwegian Ministry of Trade, Industry and Fisheries. She is the co-founder and former Managing Director (2008-2013) of Alarga, a company established to strengthen the competitiveness of Norwegian businesses by strengthening individual companies' intellectual capacity. Ms Ayhan is a former manager of JADE, a European network for young entrepreneurs, and has during the past 12 years been serving on the board of several organizations working with diversity management and intercultural communication. She has received honorable praise for her work, and in 2010 she was among 150 international entrepreneurs and leaders invited to come to Washington on President Obama's invitation to celebrate the risky, exhilarating life of entrepreneurship and share ideas about new businesses. In 2012, she received the OXLO Prize from the Oslo municipality for her significant efforts to create an inclusive and open city, free of prejudice and racism. Ms Ayhan holds a degree in Engineering from Oslo University College.



Manuel Barange

Plymouth Marine Laboratory, UK

Professor Manuel Barange is the Deputy Chief Executive and Director of Science at PML, and Honorary Professor at the College of Life and Environmental Sciences, University of Exeter, UK.

From 2010-2013 he was Chair of the Scientific Committee of the International Council for the Exploration of the Sea (ICES), and from 1999-2010 he was Director of the International Project Office of the IOC-SCOR-IGBP core project GLOBEC (Global Ocean Ecosystem Dynamics).

Manuel's expertise includes physical/biological interactions, climate and anthropogenic impacts on marine ecosystems, fish ecology, behaviour and trophodynamics, and fisheries assessment and management. In recent years, he has increasingly focused his research on the impacts of climate change and economic globalization on marine-based commodities, and on the interactions between natural and social sciences in fisheries, ecosystems and climate change, in the developed and developing world.

Manuel was awarded the 2010 UNESCO-IOC Roger Revelle Medal for his accomplishments and contributions to ocean science. Manuel has over 100 peer-reviewed publications and has recently edited books on "Climate Change and the Economics of the World's Fisheries" (Elgar Publishers) and "Marine Ecosystems and Global Change" (Oxford University Press).



Emilio Fortunato Campana

Marine Technology Research Institute of the CNR, Italy

Emilio F. Campana (Rome, 1960) received the honors degree in Mechanical Engineering (1984) and the PhD on Theoretical and Applied Mechanics at the University of Rome "La Sapienza" (1991). After two years at the IBM-ECSEC (IBM - European Centre for Scientific and Engineering Computing) he joined the Marine Technology Research Institute of the CNR (CNR-INSEAN). He is now the Director the Institute.

He has been doing research in numerical methods for hydrodynamics and Simulation-Based Design optimization for more than 20 years, authoring and co-authoring more than 150 papers and publications, often in the framework of research projects supported by the Office of Naval Research (US DoD).

His most recent research topic the development is of algorithmic for multidisciplinary tools ship optimization stochastic environmental conditions. under



David Cox

Belgian Science Policy Office

David Cox has a master's degree in biology from the Vrije Universiteit Brussel. He works as Programme Manager at the Belgian Science Policy Office (BELSPO) since 2000. He coordinates the axis "ecosystems, biodiversity and evolution" of the BRAIN-be programme (Belgian Research Action through Interdisciplinary Networks) and manages the marine and North Sea research projects. He is also in charge of the follow up of the dossier regarding the replacement of the oceanographic research vessel A962 Belgica. He is the BELPSO representative and/or the Belgian delegate in several national and international fora such as the European Marine Board, the Intergovernmental Oceanographic Commission (IOC) of UNESCO, the Belgian Coordination Committee for International Environmental Policy (CCIEP) North Sea and Oceans group, the Belgian marine spatial planning advisory committee, the Belgian Coast Guard structure. He has been a partner and acted as work package and task leader in several marine related Eranets like AMPERA, MARINERA and SEAS-ERA. David has been involved in JPI Oceans since the very beginning and is currently one of the Belgian representatives in the Management Board.



Jasper Dalhuisen Ministry of Economic Affairs, The Netherland.

Dr. Jasper Dalhuisen (1972) graduated in Environmental Economics at Wageningen Universityin January 1998. From April, 1998 he was affiliated with the Tinbergen Institute and the Department of Spatial Economics at the Vrije Universiteit Amsterdam. He obtained his PhD in October 2002 with a PHD-thesis on the Economics of Sustainable Water Use. In 2002 he started to work at the Ministry of Economic Affairs, where he now deals with international agricultural-, marine- and fisheries research policy as well as the coordination of OECD work on agricultural issues (Chair of the governing body of the research programme on biological resources in agriculture of the OECD), Furthermore, he is the alternate Management Board Member of JPI Oceans and was involved in the pilot action multi-use of infrastucture for monitoring.



François Duthoit Waterborne Technology Platform "Blue Growth" Working Gr

Mr François Marie Duthoit is Chairman of the Waterborne Technology Platform "Blue Growth" working group. This group has been created on the basis that if "oceans are the future of the earth", a significant opportunity exists for the Maritime Industry if it is able to recognise itself not only as shipbuilders and equipment providers, but as the Community of Maritime Engineering and Technologies, providing to anyone willing to do business at sea the means to do it. François holds a double degree in Physics and Chemistry from the Ecole Supérieure de Physique et Chimie industrielle in Paris, and a master degree in Applied electronics from the Paris VI Pierre et Marie Curie University. Scientist by training, and engineer by experience, François spent most of his career in technical direction, with Thales in Australia for 6 years, then in Sophia Antipolis in France, before joining DCNS as Innovation Director. He is now in charge of the international development of DCNS' R&D.



Sigi Gruber

Directorate General for Research and Innovation, European Commission

Since January 2014 she is heading the newly established Marine Resources Unit in the Directorate General for Research and Innovation of the European Commission. The Unit defines and implements R&I objectives and priorities to support the EU's integrated Maritime Policy, in particular the Blue Growth Agenda, thereby contributing to the sustainable and responsible management of marine resources, both in Europe and globally. She is the official representative of the European Commission in the Management Board of JPI Oceans. The European Commission is a non-voting member of the Management Board.

After graduating from the University of Padua (Italy) in Slavonic and Germanic Studies, Sigi Gruber worked for Culture Institute in Padua the German-Italian and the German Cultural Institute (Goethe-Institute) in Milan.

In 1991 she was appointed as an expert to work for the European Commission to launch the LINGUA Programme, the European Communities' first foreign language learning programme. Afterwards she worked in the Directorate General for Education and Training where she was - inter alia - responsible for the actions dealing with foreign language learning for vocational training and for policy development of the vocational training programme, the Leonardo da Vinci Programme.

Then she became the General Secretary of the European Association for the Education of Adults before re-joining the European Commission in 2001, on this occasion in the Directorate General for Research. She was Head of Sector for Researchers' Careers, and her responsibilities included policy initiatives related to the European Charter for Researchers, the Modernising Agenda of European Universities and the European Institute of Innovation and Technology.

From 2007 to 2011 she headed the Unit responsible for Relations with Third Countries. This Unit aimed to promote coherence and synergy between Member States and the EU as regards international cooperation policies and activities with major partner countries and regions. At this time she was also responsible for launching the Indo-European Research and Innovation Partnership. This Unit also ensured the followup of cooperation with multilateral fora such as the G8 and Carnegie.

In April 2011 she took responsibility for EU science, research and innovation cooperation with North America, Latin America the Caribbean, where she coordinated the launch and Canada-EU-US Atlantic of the Ocean Research Alliance.



Joachim Harms

Project Management Jülich, Germany

Dr. Joachim Harms studied Biology in Darmstadt, where he received his PhD in 1986. He worked as marine zoologist at the Marine Station Helgoland in various interdisciplinary projects. From 1991 to 1992 he worked at the "National Institute of Fisheries Science" in Tokyo. He joined the Research Centre Juelich in 1994 and was responsible for international research projects in cooperation with Indonesia, Brazil and Israel. In 2001 he took over responsibility for the regional research programme of Mecklenburg-Pommerania. In 2008 he became head of the department PtJ-MGS with the responsibility for the national research funding activities in the field 'System Earth' including the programme of the ERA-Net BONUS Steering Committee since 2007.



Peter Herzig

GEOMAR Helmholtz Centre for Ocean Research in Kiel, Germany

Professor Peter Herzig is the Executive Director of GEOMAR Helmholtz Centre for Ocean Research in Kiel. He also serves as Maritime Coordinator of the Federal State of Schleswig-Holstein and was appointed Maritime Ambassador of the European Union in 2007. Professor Herzig is a member of a number of national, European and international boards and committees and was a Senator of the German Science Foundation from 2005-2011. He served as President of the international "Partnership for Observation of the Global Oceans" (2011-2012), and is a member of the Advisory Boards of the National Oceanography Centre in the UK, the Halifax Marine Research Institute in Canada, and the Japan Agency for Marine-Earth Science and Technology JAMSTEC. In 2000 Professor Herzig received the prestigious (€2.5m) Leibniz Award of the German Science Foundation for his research on seafloor hydrothermal systems and associated metal deposits. He is a member of the German National Academy of Science and Engineering and the Saxonian Academy of Sciences in Leipzig. In 2015 he was appointed Vice President of the Helmholtz Association of German Research Centres.

In 2010 Professor Herzig was awarded the Medal of Merit of the Federal State of Schleswig-Holstein and appointed to the Foresight Committee of Schleswig-Holstein chaired by the Prime Minister.

Professor Herzig received his Ph.D. in Geology from the Aachen University of Technology in 1986. Following an Alexander von Humboldt Post-Doctoral Fellowship at the University of Toronto, he obtained a Research Associate and Assistant Professorship at Aachen and was a Visiting Professor at the Geological Survey of Canada. From 1993-2003, Professor Herzig was Full Professor and Chair of Economic Geology and Petrology as well as Head of the Leibniz Laboratory for Applied Marine Research at Freiberg University of Mining and Technology in Germany. He served as Dean of the Faculty for Geosciences, Geo-Engineering and Mining from 1997-1999. Following a Visiting Professorship at the Southampton Oceanography Centre in the United Kingdom, he became Full Professor atthe University of Kielin 2003 and Executive Directorof GEOMARin 2004.



Courtney Hough

European Aquaculture Technology and Innovation Platform

Courtney Hough received a scientific education in the UK and, after developing a pilot farm for warm water fish production, was involved in project development and consultancy, overseeing technical and marketing services in Europe, Latin America and Africa.

He is the General Secretary of the Federation of European Aquaculture Producers (FEAP), which groups 26 National European Aquaculture Associations, representing the FEAP in different European advisory committees and development actions. As coordinator of 5 EC projects and participating in more than 20 since 1998, the FEAP has been active in promoting and disseminating industry-relevant research and innovation actions. He was closely involved in the creation of the European Aquaculture Technology and Innovation Platform (EATiP), becoming its Secretary in 2008.

Courtney has also cooperated with international organisations on aquaculture issues, notably the FAO, OECD and IUCN, with a focus on governance, environmental and development issues. He was recently appointed to the new Bioeconomy Panel of DG Research and Innovation.



Gilles Lericolais

Ifremer , France

Dr. Gilles Lericolais has been a marine geologist/geophysicist at Ifremer since 1984. He has been chief scientist for more than 10 scientific cruises. He worked 2 years for TOTAL Oil Company (1989-1991) as a site survey geologist. From 1997 to 2011, he has been leading a collaborative project focused on sedimentary records and processes across marine margins. He has been the coordinator of the 5th FP ASSEMBLAGE project dealing with the Black Sea sedimentary systems. He has also been the regional coordinator for the Black Sea in the 6th FP HERMES Project and the WorkPackage leader for the HYPOX FP7 project.

From 2006 to 2011, he was in charge of the Laboratory of Sedimentary Environments of Ifremer and was responsible for the Ifremer project "Margins and Sedimentary systems". In 2007, he was nominated as an expert for IODP and acted as Vice-Chair (2009-2010) and Chair (2011-2013) of the Site Survey Panel for IODP. Dr. Lericolais is the author of over 700 communications and publications (HI=25) and was Habilitate to lead Research (HDR) in 2009. He is a member of the European Marine Board and one of its vice-chairs, ESF and EurOcean and an alternate member of the Management Board and Executive Committee of JPI Oceans. He has been appointed Chair of the EURD Facility Board. In 2011, he was appointed as Director of the European and International Affairs of Ifremer and therefore participates to the Management Board of Ifremer.



Niall McDonough

European Marine Board

Niall McDonough is Head of the European Marine Board, Europe's foremost marine science policy think-tank, delivering strategy and foresight to advance European research focused on seas and oceans. Niall originally trained as a marine biologist, with research interests in aquaculture, fisheries and marine resource management. He has held scientific and management roles with the National University of Ireland, Galway, Queens University Belfast, and with the Irish Marine Institute. He is a member of the JPI Oceans Strategic Advisory Board.





Department for Environment, Food & Rural Affairs (DEFRA), UK

Caron Montgomery has been a civil servant with the UK's Department of Environment, Food and Rural Affairs (Defra) for more than 27 years, commissioning and managing many aspects of marine and freshwater science. Currently she heads the Marine Evidence Team responsible for the procurement and management of Defra's marine science programme and the secretariat of the Marine Science Coordination Committee. Caron's research background is in fisheries ecology and management, specialising in coarse and migratory fish. In Defra she provides an integral role in linking science to policy. She has served for 4 years on the National Oceanography Centre's Advisory Council and is currently a member of the Sir Alistair Hardy's Foundation for Ocean Science Advisory Board. She chairs the Management Board for JPI Oceans. She has a particular interest in the developing new technologies for the oceans as well as raising the importance our seas play in the planet's health.

John Murray

Society of Maritime Industries

John Murray is Chief Executive of the Society of Maritime Industries. The Society is the UK trade association for the UK maritime engineering and business sector, representing commercial and naval defence shipbuilding markets, marine science and technology, maritime security and safety, ports and terminals infrastructure and offshore energy including renewables.

A graduate chemical engineer, John commenced his career in the oil industry. An active period of trade association involvement, during which time he ran his own company, ultimately led to John being appointed to Chief Executive of the Society in April 2001. John currently represents the industry on a number of external bodies including the UK Department for Business, Innovation and Skills sponsored Marine Industries Leadership Council, of which he is a Vice Chair and also the Chairman of the Council's Technology and Innovation Group. He also serves on the Board of SEA Europe, based in Brussels; a member of the Advisory Council of the National Oceanography Centre; a member of the UK Government's Marine Industry Liaison Group of the Marine Science Coordination Committee; and a member of the Transport Advisory Group of Innovate UK's Knowledge Transfer Network. John is a member of the Greenwich Forum, a liveryman of the Worshipful Company of Shipwrights and on the London City University's Advisory Group for the MSc course in Maritime Operations and Management.





Robert-Jan Smits

Directorate General for Research and Innovation, European Commission

Robert-Jan Smits is Director-General of DG Research and Innovation (RTD) at the European Commission. In this capacity he is responsible for defining and implementing the EU policy and programmes in the field of research and innovation (average annual budget 8 billion euro).

Mr Smits was one of the main architects and negotiators of Horizon 2020, the new 80 billion EU programme for science and innovation.

Mr Smits has also been instrumental in the development of several other policy initiatives in the field of European science and innovation such as: the European Research Council (ERC), the European Roadmap for large scale facilities, Public-Private Partnerships in research, the Innovation Union and the European Research Area (ERA).

Mr Smits is chairing several high-level committees such as European Research Area Committee (ERAC), the Steering Committee of the ERC (ERCEA) and joint S&T committees with Europe's key global partners.

Mr Smits was born in The Netherlands. He has degrees from Utrecht University in The Netherlands, Institut Universitaire d'Hautes Etudes Internationales in Switzerland and Fletcher School of Law & Diplomacy in the United States of America.



Bart Tommelein

State secretary for the Fight against Social Fraud, Privacy and North Sea, Belgium

- Communication studies at 'Hoger Instituut voor Bedrijfsopleiding' in Ghent
- Publicity coordinator at 'Media Center Oostende' (1984–1985)
- Employee, branch manager, sales manager, regional manager at 'Anhyp' (1985–1998)
- Distribution Director Anhyp/AXA (1998–2000)
- Spokesman 'Minister-President' Patrick Dewael (2000–2003)
- City councilor Oostende (1989–1990, 2001–present)
- Council president Oostende (2007–2012)
- 'Eerste schepen' Oostende (2013–2014)
- Member of federal Parliament (2003–2009)
- Senator (2009–2013)
- Parliamentary group leader federal parliament (2007–2009)
- Parliamentary group leader Senate (2009–2013)
- Member of Flemish Parliament (2009–2014)
- Parliamentary group leader Flemish parliament (2013–2014)
- Member Benelux Interparliamentary Consultative Council (2003–2014)
- President Benelux Interparliamentary Consultative Council (2009–2011)
- Secretary of State for Combating social fraud, Privacy and North Sea (11-10-2014–present)

Bart Tommelein is married to Sarah Schotte and has five children. He is a member of 'Willemsfonds', 'Liberaal Vlaams Verbond' and 'Liberaal Vlaams Studentenverbond'.
Speakers



Marianne Wenning

European Commission, DG Environment

Marianne Wenning is currently Director for 'Quality of Life, Water & Air' in DG Environment of the European Commission. In this capacity she is overseeing the implementation and enforcement of an extensive body of environmental legislation with regard to air quality, industrial emissions, water & marine issues and industrial accidents and works towards the further integration of environmental and sustainability aspects into other Community policies.

Ms Wenning has been working for the European Commission since 1992. She was a Head of Unit in Europe Aid (Asia) and in DG Environment (industrial emissions & air quality) before she become Director for 'Legal Affairs & Cohesion' in DG Environment from 2011 to 2013. Her experience in developing and implementing environmental policies, cutting across also areas such as transport, agriculture, regional, industrial, research and development policies includes the economic aspects of environmental policy, programme-management in Asia as well as negotiations at European and international/UNECE level in particular with regard to the Kyoto, the Montreal and the Gothenburg Protocols.

Speakers



Jacky Wood

JPI Oceans secretariat

Mrs	Jacky	Wood	joined	the	JPI	00	eans	Secr	etariat
as	Deputy	Director	at	the	end	of	Novem	ber	2014.

Formerly she worked at the UK's National Oceanography Centre as the Head of the International and Strategic Partnerships Office (ISPO) and a member of the NOC Executive Board. ISPO, acting on behalf of the wider NERC supported marine science community, is responsible for national and international relationships, strategy and coordination. This includes the NERC contribution to the UK Government's Marine Science Coordination Committee, the JPI Oceans Management Board, the UK office for the Intergovernmental Oceanographic Commission (UNESCO-IOC) and the NOC Association. Jacky was a vice-chair and EXCOM member of the European Marine Board from May 2012-May 2015.

Prior to joining NOC in 2002, Jacky was an Assistant Director in the UK's Department of Trade and Industry, Office of Science and Technology International Directorate, focusing on European science and innovation policy. Sherepresented the UK in CREST (forerunnerto ERAC the European Research Area Committee) and on the FP programme committees for Innovation and SMEs. Jacky's former roles in DTI included developing and directing knowledge exchange programmes in industrial biotechnology, in environmental technologies and in metrology.

She started her research career at the UK's National Physical Laboratory working on infrared measurement standards and thermal imaging. She is a physics graduate of the University of Southampton.



Name	Organisation
ABBADESSA Valerio	Italian National Agency for New Technologies, Energy and Sustainable Economic Develop- ment (ENEA)
ABILGAARD Christina	The Research Council of Norway (RCN)
ADRIAENSSENS Veronique	ARCADIS Belgium N.V. (ARCADIS)
AGASØSTER Bodil	South Norway European Office (SEK)
ALMESJÖ Lisa	The Swedish Research Council Formas (For- mas)
ANGELL-HANSEN Kathrine	JPI Oceans secretariat
ARMESTO Lourdes	Ministry of Economy and Competitiveness (MINECO)
ATTAI Ahmadshah	Ministry of agriculture irrigation & live stock (MAIL)
AUNE Agnes	JPI Oceans secretariat
AYHAN Dilek	Norwegian Ministry of Trade, Industry and Fish- eries (NFD)
BAISNÉE Pierre-Francois	Institut de Recherche pour le Développement / EuroMarine (IRD / EuroMarine)
BALGUERÍAS Eduardo	Spanish Institute of Oceanography (IEO)
BALLAS Dionysios	Permanent Representation of Greece to the EU
BARANGE Manuel	Plymouth Marine Laboratory (PML)
BARBIER Michele	The Mediterranean Science Commission (CIESM)
BELL John	European Commission
BEUF Armand	European Commission
BLIECK Melissa	Flanders Marine Institute (VLIZ)
BOCQUEL Caroline	Marine Institute Ireland (MI)
BOGASON Sigurdur	MarkMar ehf (Mark)
BONNE Wendy	JPI Oceans secretariat
BOUISSOU Victor	DCNS
BOULAT Jean-Charles	DCNS
BOYEN Catherine	Station Biologique Roscoff CNRS-UPMC (SBR)
BROGGIATO Arianna	Independent
BRUGNOLI Enrico	National Research Council of Italy (CNR)
BUCH Erik	EuroGOOS
BURGESS Samantha	OceanTerra

Name	Organisation
BUTLER Paul	School of Ocean Sciences, Bangor University (SOS)
BUYLE-BODIN Zoe	Lower-Normandy Brussels Office
CAMERLENGHI Angelo	National Institute of Oceanography and Experi- mental Geophysics (OGS)
CAMPANA Emilio Fortunato	National Research Council - Marine Technology Research Institute (CNR-INSEAN)
CAMPOSTRINI Pierpaolo	Consortium for managing scientific research in Venice lagoon system (CORILA)
CANALS Miquel	University of Barcelona
CAPPELLETTO Margherita	National Research Council of Italy (CNR)
CARMAN Rolf	Department of Science and Education
CHARLET François	Global Sea Mineral Resources / DEME
CLAUS Simon	Flanders Marine Institute (VLIZ)
COLLINS Damian	University of the Highlands and Islands (UHI)
CONESA ALCOLEA Ivan	European Commission, DG RTD
CONNOR David	European Commission, DG Environment
CORONER Florence	JPI Oceans secretariat
CORSI Alessio	Italian Cultural Institute in Cairo (ITCC)
COX David	Belgian Science Policy Office (BELSPO)
CRAWLEY Peter	European Commission
CURY Philippe	Institut de Recherche pour le Développement (IRD)
DALHUISEN Jasper	Agri- and Natureknowledge Department - Min- istry of Economic Affairs (EZ-ANK)
DAS Krishna	University of Liège
DAVID Mills	Centre for Environment, Fisheries & Aquacul- ture Science (Cefas)
DE MOOR Willem	JPI Oceans secretariat
DE RAEDEMAECKER Fien	Flanders Marine Institute (VLIZ)
DOBBELAERE Ingrid	Flanders Marine Institute (VLIZ)
DUTHOIT François Marie	The European Technology Platform WATER- BORNE
DWYER Ned	EurOcean
ECHEVARRIA Fidel	University of Cádiz (UCA)
EDIANG Okuku	Nigerian Meteorological Agency (NIMET)

Name	Organisation
EDVARDSEN Torgeir	Organisation for Economic Co-operation and Development (OCDE)
EDWARDS Kristina	University of Malta
EGGERMONT Hilde	Belgian Biodiversity Platform/Biodiversa ERA- net (BELSPO/BIODIVERSA)
FERNÁNDEZ SUÁREZ Emilio	Ministry of Economy and Competitiveness - Vigo University (MINECO - UVI)
FOGIEL Anna	Council of the European Union
FÖH Jörg	Hanse-Office
FORSTER Rodney	University of Hull, Institute of Estuarine and Coastal Studies (IECS)
GAGO Jesús	Spanish Institute of Oceanography (IEO)
GALGANI Luisa	Independent Researcher
GARCIA ALVAREZ Blanca	Freelancer
GARCIA-SOTO Carlos	Spanish Institute of Oceanography (IEO)
GEIR Pedersen	Christian Michelsen Research (CMR)
GHOSH Anupam	Asian Marine Conservation Association (AMCA)
GREEN Jenny	Vrije Universiteit Brussel
GREGOIRE Marilaure	University of Liège
GRUBER Sigi	European Commission, DG RTD
GUST Marion	Ministry of Ecology (MEDDE)
HALL Stephen	National Oceanography Centre (NOC)
HANUS John	JPI Oceans secretariat
HARMS Joachim	Project Management Juelich (PtJ)
HAUT Gaëlle	Surfrider Foundation Europe
HAYWARD Victoria	The UK Research Office (UKRO)
HEEBØLL Ida	Capital region Denmark EU Office (CreoDK)
HEFFERNAN Peter	Marine Institute Ireland (MI)
HELMKE Jan	GEOMAR Helmholtz Centre for Ocean Research Kiel (GEOMAR)
HERNÁNDEZ Susana	Ministry of Economy and Competitiveness - Fundation Science and Tecnology (MINECO- FECYT)
HERZIG Peter M.	GEOMAR Helmholtz Centre for Ocean Research Kiel (GEOMAR)
HOUGH Courtney	Federation of European Aquaculture Producers (FEAP)

Name	Organisation
HUMMEL Herman	Royal Netherlands Institute for Sea Research (NIOZ)
IATCO Iulia	Moldovan Office for Science and Technology (MOST)
JEANNE Gherardi	French Research Institute for Exploitation of the Sea (Ifremer)
KELLERMANN Adi	International Council for the Exploration of the Sea (ICES)
KILLIAN Patricia	Marine Institute Ireland (MI)
KING Matthew	European Commission
KOKOSIS Konstantinos	European Bureau for Conservation and Devel- opment (EBCD)
KONONEN Kaisa	Baltic Organisations' Network for Funding Sci- ence (BONUS)
KOWALEWSKA Grazyna	Institute of Oceanology, Polish Academy of Sciences (IOPAN)
KÜLMALLIK Eve	Ministry of Agriculture (AGRI-EE)
LAGRANGE Alain	Ministry of National Education, Higher Educa- tion and Research (MENESR)
LAIHONEN Pasi	Finnish Environment Institute (SYKE)
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