

**MarineBiotech workshop:
Mobilisation and Engagement of
Funding Agencies and Stakeholders**

November 2012



Report on the 2nd MarineBiotech workshop:

Mobilisation and Engagement of Funding Agencies and Stakeholders

Authors

Imke Schneemann, Norgenta North German Life Science Agency, Germany

&

Cristiana Leandro, Foundation for Science and Technology (Fundação para a Ciência e a Tecnologia, FCT), Portugal

Coordinator: Steinar Bergseth, The Research Council of Norway.

Index

Summary	3
Introduction	3
Mobilisation and Engagement of Funding Agencies and Stakeholders	7
MarineBiotech 2nd Workshop – Mobilisation of Funding Agencies and Stakeholders	8
Development of the Strategic Forum	10
Development of the Stakeholder Group	11
Recommendations concerning the forthcoming ERA-NET in Marine Biotechnology	14
Future work of the CSA MarineBiotech	14
Annex I Workshop agenda	15
Annex II Stakeholder Group Round Table Agenda	17
Annex III Table II – List of participants in the 2nd workshop	20

CSA MarineBiotech is funded by the European Union's Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 289311

Summary

MarineBiotech is a preparatory action for an ERA-NET in marine biotechnology. To achieve its main goal, the project has organised two workshops in order to mobilise and engage funding agencies and stakeholders with interest in marine biotechnology. The first workshop was hosted by FCT in April 2012 and took place in Olhão, Portugal. A report presenting the outcomes of this is available at www.marinebiotech.eu. The second workshop was held in October 2012 in Hamburg, Germany, hosted by Norgenta. During this, almost 60 industry, academic, policy and funding agency representatives debated the role and future of marine biotechnology in Europe, contributed to plans for the final public conference to be held in Brussels in March 2012, and considered the scope and structure of the forthcoming ERA-NET in marine biotechnology.

Introduction

Europe has a 70.000 km coastline along two oceans and 4 seas: the Atlantic and Arctic Oceans, the Baltic, the North Sea, the Mediterranean, and the Black Sea. Figure 1 shows this, as well as the location of MarineBiotech's partners. The EU's maritime regions account for some 40% of its GDP and population. MarineBiotech recognises that Europe's marine ecosystems could be better explored for sustainable utilisation. Organisms present in the sea and extreme environments are largely unexplored, understudied and underexploited. This extensive and diverse set of marine ecosystems, supporting an enormous marine biodiversity needs pooled European resources to be explored. In addition, the marine environment is an important food producer and will become of increasing importance for this and also delivering energy and chemicals to support increasing populations and development of the bioeconomy. Marine biotechnology will be a driver to achieve these goals. ,

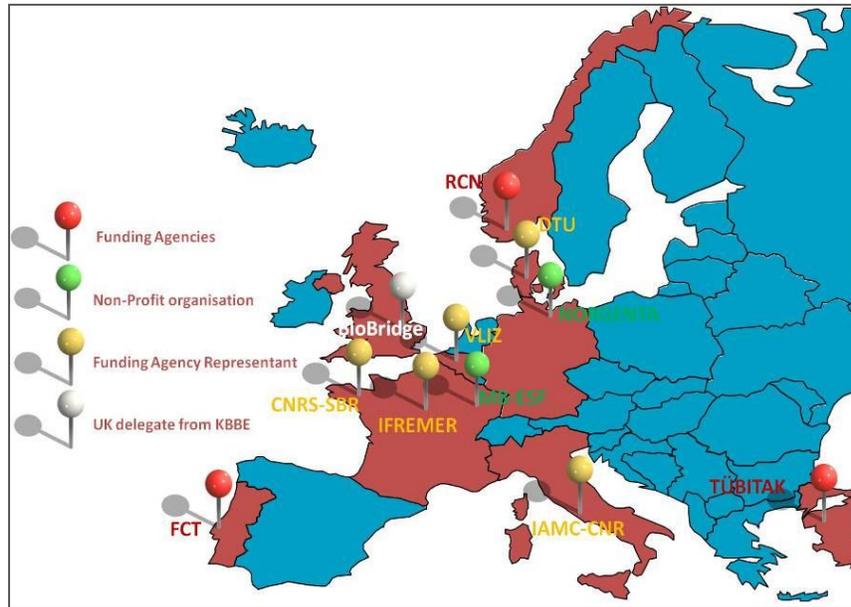


Figure 1. Europe’s coast and the MarineBiotech partners.

Marine biotechnology utilises aquatic biological resources for the production of goods and services, modifies marine organisms for improved properties or applies biotechnology in the marine (aquatic) setting. These developments can positively or negatively affect the natural environment, so MarineBiotech is also devoted to sustainable use and social acceptance of biotechnology for bio-based production from the marine environment.

While the field of marine biotechnology represents a large potential for European added value, the current level of collaborative research is not sufficient. Interdisciplinary cooperation and networking is needed. Multi and cross disciplinary collaborations between basic research in marine biology, physiology of marine plants and animals, taxonomy, microbiology, biotechnology, nanotechnology, systems biology, bioinformatics, toxicology, *-omics* technologies and chemistry are needed.

The result will be new innovations and application in fields such as drug discovery, novel foods and food ingredients, bio-remediation, biomaterials, aqua- and agriculture, diagnostics, production processes and bio-energy. Europe should focus and strengthen its effort in the area of marine biotechnology in order to find competitive niches. Attention should be given to sustainable exploitation of Europe’s marine biosphere and the understanding of its biodiversity and natural heritages.

Marine biotechnology has a horizontal scope with a vertical focus within all thematic areas relevant to its application and represents an enormous economic potential for Europe. No single European country

or region has the necessary capacity, knowledge or resources to exploit research and innovations from the marine environment. Advanced infrastructures both at sea and in the laboratories will be needed, and **trans- European collaboration will provide synergies and more value for money by a coordinated European funding activity within this area.**

MarineBiotech, as an EU-funded Coordination and Support Action (CSA), is designed to deliver the first concrete steps towards better coordination of relevant national and regional RTDI programmes. Reduced fragmentation and duplication, and paving the way for common programmes and cooperation in the provision and use of research infrastructures through a **future ERA-NET in marine biotechnology** will be the result. In doing so, MarineBiotech will advance progress in this field towards the vision of a European Research Area (ERA)¹ and promote and position marine biotechnology to contribute to the delivery of *'smart, sustainable and inclusive growth'*, a core objective of the Europe 2020 Strategy².

¹ http://ec.europa.eu/research/era/index_en.htm

² http://ec.europa.eu/europe2020/index_en.htm

MarineBiotech's 11 partners from 9 countries are shown in Table 1.

Table 1. MarineBiotech partners

Partner no.	Name	Acronym	Country
1	Norges Forskningsrad	RCN	Norway
2	Vlaams Instituut Voor de Zee Vzw	VLIZ	Belgium
3	Norgenta Norddeutsche Life Science Agentur GmbH	Norgenta	Germany
4	Danmarks Tekniske Universitet	DTU	Denmark
5	Centre National de la Recherche Scientifique	CNRS	France
6	Institut Francais de Recherche pour L'Exploitation de la Mer	Ifremer	France
7	Fondation Europeenne de la Science	ESF MB	France
8	Consiglio Nazionale delle Ricerche	CNR	Italy
9	Fundação para a Ciência e a Tecnologia	FCT	Portugal
10	Türkiye Bilimsel ve Teknoloji Arastirma Kurumu	TÜBİTAK	Turkey
11	BioBridge Limited	BioBridge	UK

In order to accomplish its main goal – prepare the foundation for an ERA-NET in marine biotechnology – MarineBiotech set-up the following work plan (Fig. 2):

- Mobilisation and engagement of funding agencies and stakeholders: extending the partnership of funding agencies and European stakeholders. To this end the consortium envisages pro-active engagement with relevant and potentially interested funding agencies and stakeholders through development of appropriate fora, the organisation of information sessions, workshops and other project activities – **WP2 led by FCT.**
- Provide better understanding of the Marine Biotechnology landscape in Europe and beyond. The consortium will carry out an analysis of the current landscape (research effort, infrastructures, stakeholders, strategies and programmes, gaps and barriers to cooperation) – **WP3 led by ESF MB.**
- Sketching the contours of future cooperation between funding agencies in the area of marine biotechnology. The consortium foresees workshops involving the extended network of funding agencies and representative governmental organisations to set the stage for the set-up of appropriate cooperation tools to develop joint programmes and pool resources for collaborative research on a European scale – **WP4 led by RCN.**
- Managing information relevant to marine biotechnology research, technology development and innovation, and making this available via a dedicated web-site (including Wiki pages), newsletters, reports and briefing documents – **WP5 led by VLIZ.**

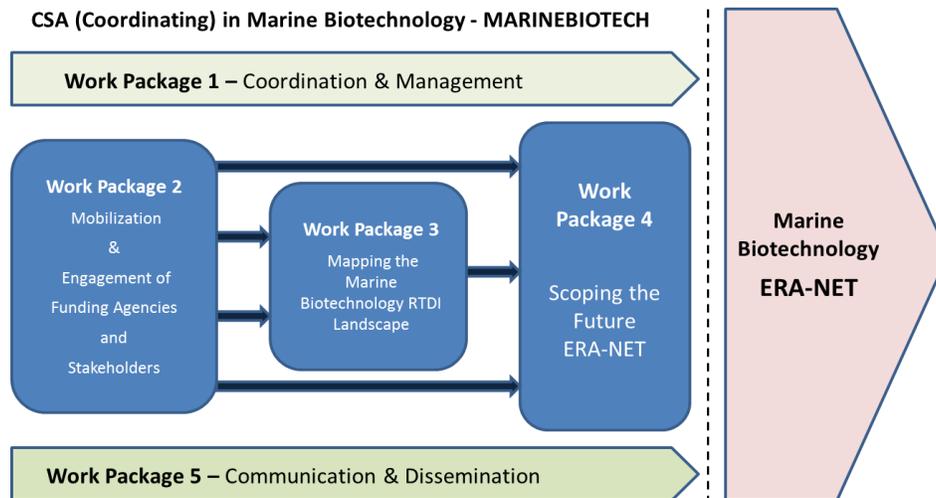


Figure 2. Scheme of the MarineBiotech work packages.

Mobilisation and Engagement of Funding Agencies and Stakeholders

The objectives of WP2 – **Mobilisation and Engagement of Funding Agencies and Stakeholders** – are:

- (i) to identify and integrate funding organisations from EU Member and Associated States into a Strategic Forum and
- (ii) to identify and mobilise a wider community of stakeholders who will be part of a Stakeholder Group. Both these groups will provide strategic advice to the project consortium and contribute to a high-quality proposal for a future ERA-NET in marine biotechnology.

The MarineBiotech **Strategic Forum** includes Research, Technology Development and Innovation (RTDI) funding agencies from EU Member and Associated States with interest in marine biotechnology. The SF aims to (i) strengthen the MarineBiotech by networking core policy makers and funders from the project partners, (ii) provide important information and insight in scoping and preparing for a future ERA-NET in marine biotechnology, and finally, (iii) form the basis of the future ERA-NET consortium.

The MarineBiotech **Stakeholder Group** includes stakeholders from research, industry, public support and policy communities relevant to the development of marine biotechnology in Europe. These will contribute to the identification of priority topics and the development of an achievable approach to an ERA-NET. The SG or part of the group will become the advisory group for the future ERA-NET, maintaining impact beyond the end of the CSA

The potential expectations and benefits of these 2 groups are summarised in Table 2:

Table 2. Potential expectations and benefits of the Strategic Forum and the Stakeholders Group

	Strategic Forum	Stakeholders
Potential expectations	<ul style="list-style-type: none"> ▪ Strong focus on strategic support of marine biotechnology research, development and application. ▪ Act as advisory forum for the MarineBiotech to identify shared strategic areas for action. ▪ Contribute to trans-national exchange of information (help to exchange and disseminate relevant information also to non-MarineBiotech member states). ▪ Identify and mobilise funding agencies at regional and national level. ▪ Help to identify realistic targets and innovative topics for projects launched by a future ERA-NET. ▪ Participation in workshops promoted by the MarineBiotech. ▪ Help to position a future ERA-NET in marine biotechnology within the multiple initiatives of the European Research Area (ERA) landscape, providing strategic and scientific advice on marine biotechnology. 	<ul style="list-style-type: none"> ▪ Act as advisors for the MarineBiotech. ▪ Contribute to trans-national exchange of information (help to exchange and disseminate relevant information also to non-MarineBiotech member states). ▪ Identify and mobilise stakeholders at regional and national level. ▪ Help to identify realistic targets and innovative topics for projects launched by a future ERA-NET. ▪ Participation in workshops promoted by the MarineBiotech. ▪ Help to position a future ERA-NET in marine biotechnology within the multiple initiatives of the ERA landscape, providing strategic and scientific advice on marine biotechnology.
Benefits	<ul style="list-style-type: none"> ▪ Participate in the formation of a well-organised research coordination structure within marine biotechnology as established by a future ERA-NET. ▪ Contribute to reduced fragmentation of research efforts in marine biotechnology through better coordination and cooperation between key member states. ▪ Be central in forming the basis of the future ERA-NET consortium. 	<ul style="list-style-type: none"> ▪ Improvement of networking activities across a wide range of participants. ▪ Benefit from a well-organised research coordination structure within marine biotechnology established by a future ERA-NET. ▪ Provision of advisory information, which could be relevant for future topics within marine biotechnology.

MarineBiotech 2nd Workshop – Mobilisation of Funding Agencies and Stakeholders

MarineBiotech has promoted the second networking event to support and enhance the mobilisation and engagement of funding agencies and stakeholders with interest in marine biotechnology. Following up the work done since the first workshop, attendees were briefed on preliminary outputs of MarineBiotech and had again the opportunity to discuss the status of European marine biotechnology, congregate with other EU initiatives, clarify issues of concern, gather input on priorities, help to identify gaps and discuss European competitiveness (Annex I – Workshop agenda).

Attendees were welcomed by Norgenta's managing director, Dr Hinrich Habeck, and were then brought up to date with MarineBiotech's activities by consortium members. In the plenary sessions, an update on current initiatives in Europe was presented and its potential for interfacing with the proposed ERA-NET in marine biotechnology was explored. These included the ERA-NET PLATFORM, the new CSA supporting the Joint Programming Initiative JPI-OCEANS and the Knowledge and Innovation Centre Marine-KIC.

PLATFORM brings together the Bioeconomy-relevant ERA-NETs, CSAs, KBBE-NET Working Groups and the Standing Committee on Agricultural Research SCAR, and was presented by its coordinator, Dr Christine Bunthof from the University of Wageningen. The work of PLATFORM includes mutual learning to enhance the impacts of the involved European RTDI instruments, making sure that mechanisms are in place to serve the priority needs for coordination, to improve networking between ERA-NETs and CSAs, to achieve a common vision and strategy for the contribution of the biosciences to the bioeconomy, and to communicate an aligned perspective. The next PLATFORM conference will take place at INRA (France) in 2013.

The Marine-KIC is still in the process of being formally adopted as a possibility under the Knowledge and Innovation Centres scheme funded by the European Institute of Innovation and Technology (EIT). KICs are intended to bring together industry, academics and funders to move research on into industry. They provide not only information, but also Venture Capital or seed funding for spin-outs and start-ups, and higher-level training including new MSc and PhD courses. The EIT has funded similar KICs at a level of €20-30M a year for 3 years or more. The JPI-OCEANS CSA and Marine-KIC were presented by Dr John Hanus of KMD, the German Marine Research Consortium.

Dr Adrianna Ianora of the Stazione Zoologica Anton Dohrn (Naples, Italy) provided the scientific keynote talk, summarizing the achievements, key topics and outlook for marine biotechnology. In Europe, the EMBRC (European Marine Biological Resource Centre) is gearing up to provide a virtual marine laboratory that covers Europe, interlinking laboratory resources, field resources including research vessels, and the knowledge and skills of the associated scientists, as well as identifying the gaps and planning for their infill.

There is a vast range of resources and marine environments that no one country can afford to establish or has access to, and great efficiencies are expected from the EMBRC when it is established in 2014. The EU OPENSREEN project was also presented. All the presentations are available at www.marinebiotech.eu.

Separate sessions for the MarineBiotech Strategic Forum (SF) and the Stakeholders Group (SG) were held, in the format of round table discussions, to discuss the content, scope and structure of a future ERA-NET in marine biotechnology and their interests in this area. The SF's discussion was focused on the proposal for the ERA-NET in marine biotechnology and its consortium. The SG's discussion was focused on priorities and gaps in marine biotechnology and also contributed to the plans for the **Final Conference** to be held in Brussels in March 2012 and considered the **MarineBiotech Registers** and the **Wiki pages**. These round table discussions were followed by a plenary session summarising the main points and allowing the MarineBiotech consortium to confirm necessary actions and recommendations for the next steps.

Development of the Strategic Forum

The existing funding agencies participating in MarineBiotech (RCN, FCT and TÜBITAK; Fig. 2) formed the core of the SF, with a main aim of catalyzing further development to encompass more funding agencies, especially to facilitate commitment towards a future ERA-NET. The first workshop was already successful in enlarging the group of interested funding agencies. The second workshop made further progress by providing the ideal venue for committed funding agencies to work together on the outline and tasks and begin the development of an ERA-NET proposal. Fourteen eligible funding agencies have confirmed commitment to leading or helping in tasks and others have indicated strong interest in being observers with the option of joining relevant calls from the ERA-NET.

The funding agencies have formed an ERA-NET Working Group (Table 3). The Research Council of Norway and FCT (Portugal) offered themselves for election as Co-ordinator. During the workshop the eligible funding agencies chose RCN to be the Co-ordinator of the ERA-NET and, therefore, responsible for the proposal preparation activities.

Table 3. Establishment of the ERA-NET Working Group

RCN, Norway
FCT, Portugal
MIUR, Italy
ANR, France
DASTI, Denmark
MINECO, Spain
ADECAL, New Caledonia
UEFISCDI, Romania
RANNÍS, Iceland
FORMAS, Sweden
EWI, Belgium
PTJ, Germany
Marine Institute, Ireland
MESCS, Slovenia

The election of the Coordinator was followed by a discussion concerning the content of the ERA-NET, its structure (Work Packages) and future activities (i.e. meetings for the preparation of the proposal).

Development of the Stakeholder Group

Twenty two stakeholders from eight countries participated in the workshop (Annex III – Table II: List of participants) and were invited to be part of the MarineBiotech SG.

Based on results and recommendations from the first workshop, the SG round table discussion conducted a more detailed discussion of the needs of the scientific and industrial communities in marine biotechnology, aiming at getting expert input on topics in this field.

a. Stakeholders' needs from an ERA-NET in marine biotechnology

In the SG round table, discussion centred on specific questions (Annex II). The discussion showed that there is still high interest in legal aspects in particular in relation to access and benefit-sharing concerning marine assets and Intellectual Property Rights (IPR). It was hoped that current EU-funded projects such as PharmaSea will deal with these delicate issues. However, the need for a legal toolkit placed on the web portal was expressed.

It was mentioned that technology transfer is a critical issue and appropriate mechanisms for transfer of knowledge, Public-Private-Partnerships, joint research labs and industry-academic collaborative approaches are needed as well as appropriate support for development of skills related to business development and management. In addition the entire value chain should be considered and a call dedicated to Proof of Concepts would be an added value.

International collaborations and relations have to develop deeper. In doing so, attention should be paid to existing frameworks, networks and initiatives to bring added value to existing initiatives. Additionally, the access to screening platforms and access to marine biodiversity should be drastically improved. While this is already taken forward by several other projects and initiatives the ERA-NET in marine biotechnology should investigate how it can contribute to these initiatives.

Training and education are important aspects and should be improved to align available skills with those required by the market.

The MarineBiotech SG mentioned the importance of involving industry in the ERA-NET in marine biotechnology. For example, through their involvement in calls and in the definition of the topics and also by including experts with a wider background including economists, marketers and business developers. Special attention should be paid to SMEs and these could be represented by the clusters, as SMEs do not have the capacity to participate individually. Furthermore, the ERA-NET in marine biotechnology should facilitate meetings between SMEs and public research laboratories to create networks and build communities. Developing a marine biotech community and sector which can contribute to economic recovery should be the central aim of the ERA-NET in marine biotechnology at the long term.

With regard to the marine web portal the Stakeholder Group suggested to maintain and expand the portal, combine the regional information that is already available as well as map e.g. biobanks and clusters; where they are and what the expertise is. The platform should include not only natural scientists but also social scientists and people with a business background.

b. Developing the European marine biotechnology portal

After a plenary presentation on the general functionality and future plans, made by Fien de Raedemaecker of VLIZ, the responsible MarineBiotech partner, on Day 1, the SG was asked to provide feedback to enhance and further develop the European marine biotechnology portal www.marinebiotech.eu; more precisely the dynamic components of the portal: the MarineBiotech Registers (IMIS) and community information pages (WIKI).

The portal was positively received by the SG as an important tool to develop and support a growing marine biotech RTDI community. The current efforts are done in the framework of the CSA MarineBiotech project but it is aimed that the marine biotechnology portal becomes a long-term stand-alone tool. Additional information and functionality which would be useful were discussed. Stakeholders were invited to actively contribute by providing information about themselves, their organisation and their networks/contacts and by providing text and edits to the community information pages (WIKI).

c. Final Conference – working on the framework

A discussion paper outlining options and suggestion for the MarineBiotech final conference was provided to the meeting and the stakeholder group was asked to provide input for the development of that conference. The conference should disseminate the results of the MarineBiotech project and raise awareness about the challenges and opportunities presented by Marine Biotechnology.

The SG recommended a high level conference with a balance of science-policy and industry, ideally in Brussels for ease of travel, in March 2013.

Recommendations concerning the forthcoming ERA-NET in Marine Biotechnology

The parallel round table discussions of the SF and the SG produced both general advice and specific advice for the preparation of an ERA-NET in marine biotechnology. The recommendations were presented at the end of the workshop:

- Consolidate the SG into an ERA-NET in marine biotechnology Stakeholder Platform and ensure active participation of stakeholders in the ERA-NET in marine biotechnology activities
- Take an industry-academic collaborative approach, ensuring appropriate industry involvement in the ERA-NET in marine biotechnology
- Drastically increase efforts to map and better understand the European marine biotechnology landscape
- Ensure that a central component of the ERA-NET in marine biotechnology (and its budget) is dedicated to communication, outreach and providing access to relevant information to mobilize a broad European marine biotech research community
- Organise a series of thematic research workshops and support training activities.

Future work of the CSA MarineBiotech

The CSA MarineBiotech has thus fulfilled all its objectives to-date, notably the establishment of an enlarged group of funding agencies committed to an ERA-NET in marine biotechnology, a group of committed academic, industry and policy stakeholders who will advise on content and direction of research, and communication activities that have raised the profile of marine biotechnology in Europe as a contributor to develop the bioeconomy and address the Grand Challenges.

The MarineBiotech project will finish with a public conference in Spring 2013 at which the progress towards the future ERA-NET will be announced. The participants will include members of the CSA MarineBiotech consortium, the Strategic Forum, the Stakeholders Group, researchers, policy makers, organizations, industry and any other interested parties. The proposed future plans will be discussed from both scientific and political perspectives and consensus aimed on the topic of collaborative RTDI programmes. Details will be available shortly, via the web, the MarineBiotech e-Newsletter and other marine bio-related electronic mailings.

Annex I Workshop agenda

MarineBiotech

Workshop 2: Mobilisation and Engagement of Funding Agencies and Stakeholders

Venue: Radisson Blu, Hamburg, Germany

8th – 9th October 2012

Monday, October 8th

11:30 Registration & Lunch

13:00 Welcome and Opening
Hinrich Habeck (Norgenta, Germany)

Session 1: CSA MarineBiotech project and marine biotech landscape in Europe – a brief update
Chair: Imke Schneemann (Norgenta, Germany) and Cristiana Leandro (FCT, Portugal)

13:20 CSA MarineBiotech – an update
Coordinator Steinar Bergseth (RCN, Norway)

13:50 Mapping the Marine Biotechnology RTDI Landscape – an update
Jan-Bart Calewaert (ESF-MB, Belgium), Meredith Lloyd-Evans (BioBridge, UK)

14:20 Integrated Marine Information System IMIS & Wiki
Fien De Raedemaeker (VLIZ; Belgium)

14:40 New European marine biotechnology initiatives in Europe:
MarineKIC John Hanus (German Marine Research Consortium, Belgium)
ERA PLATFORM Christine Bunthof (Wageningen UR, Netherlands)

16:00 Marine Biotechnology: new Opportunities for Europe through the MB ERA-net and EMBRC
Adrianna Ianora (Stazione Zoologica Anton Dohrn, Italy)
Chair: Coordinator Steinar Bergseth

Session 2: Scoping the ERA-NET in marine biotechnology
Chair: Katrine Rese Shadidi (RCN, Norway)

16:45 Open discussion: Scope of the ERA-NET in marine biotechnology

18:00 - Strategic Forum: Preparation for Day 2 based on open session

19:00 Chair: Cristiana Leandro (FCT, Portugal)

Stakeholder Group: Preparation for Day 2 based on open session

Chair: Jan-Bart Calewaert (ESF-MB, Belgium)

Tuesday, October 9th

9:00 Summary of day 1 discussions

Katrine Rese Shadidi (RCN, Norway)

Session 3: Active Session

09:15 Parallel round table

(1) 09:15 – 10:45 Strategic Forum: Active work session on structure & content of ERA-NET.

Chair: Katrine Rese Shadidi (RCN, Norway)

10:45 – 11:45 ERA-NET consortium: Funding agencies actively engaging in the application process meet to structure a work plan.

Chair: Coordinator of the ERA-NET (to be elected)

(2) Stakeholder Group: What do we need from an ERA-NET in MB?

Chair: Catherine Boyen (CNRS-Roscoff, France)

12:15 Wrap-up of the 2nd workshop, follow up and closure of the meeting

Chair: Coordinator Steinar Bergseth (RCN, Norway) & Meredith Lloyd-Evans (BioBridge, UK)

13:30 Visit the European ScreeningPort & PerkinElmer

Annex II Stakeholder Group Round Table Agenda

MarineBiotech

Workshop 2: Mobilisation and Engagement of Funding Agencies and Stakeholders

- Stakeholder Group Round Table -

Venue: Radisson Blu, Hamburg, Germany

8th – 9th October 2012

Monday, October 8th

18:00 - Stakeholder Group: Preparation for Day 2 based on open session

19:00 Chair: Jan-Bart Calewaert (ESF-MB, Belgium)

- Tour de Table
 - Role of Stakeholders now and in the future
 - Agenda for the next day
- Any comments or additional issues that need to be discussed?*

Tuesday, October 9th

09:15 - Stakeholder Group: What do we need from an ERA-NET in MB?

12:15 Chair: Catherine Boyen (CNRS-Roscoff, France)

- **Recommendations for the Strategic Forum/ERA-NET consortium – towards an effective and efficient ERA-NET in marine biotechnology**
 - *Revisit issues arising from the 1st workshop (see below)*
 - *What additional marine biotech issues should be considered that have not yet received proper attention?*
 - *What would improve your research in marine biotech the most?*
 - *What kind of collaboration activities at the European level would provide the greatest added value?*
 - *Role and position of the ERA-NET in relation to other projects and initiatives (e.g. working on issues related to Intellectual Property and Access and Benefit Sharing)*

- *Which topics are important for the ERA-NET? Which topics are not? What would be a useful mechanism to ensure stakeholder involvement in setting the priorities?*
 - *Lessons learned from science-industry-cooperation?*
 - *Lessons learned from other ERA-NETs and coordination activities?*
 - *Based on the discussions, formulate a clear set of recommendations **to the Strategic Forum/ERA-NET consortium***
- **Developing the European marine biotechnology portal www.marinebiotech.eu**
 - *The current web portal; general functionality and feedback from stakeholders*
 - *What additional information and functionality would be useful for the stakeholders on the short, medium and long term?*
 - *Populating the dynamic components of the web portal: the MarineBiotech Registers (IMIS) and community information pages (WIKI)*
 - *How can Stakeholders contribute to the success of the portal? Call for information and text editors*
 - **Final Conference – working on the framework**
 - *The requirements and options for the scope and focus of the final conference*
 - *Involvement of stakeholders*
 - *Suggestions from the stakeholders in terms of*
 - *General approach*
 - *Focus*
 - *Programme Build-up*
 - *Desirable outcome*

CSA MarineBiotech 1st Workshop - summary

Twenty six stakeholders from ten countries participated in the workshop. The round table discussion dedicated to the Stakeholder Group promoted a discussion of the needs of the scientific community in marine biotechnology and aimed at getting expert input on three main topics, inspired by the Marine Board's position paper 15: **I) Strengths and weaknesses in marine biotechnology:** The stakeholders participating at the discussion concluded that there are no research gaps in marine biotechnology, not previously identified at the Marine Board's position paper 15. The scientific community feels that industry and markets drive the research in this field, as this sector progresses faster than academia. Therefore, industry could take an early interest in the development phase. In addition, it is important that industry knows who to approach to seek for new collaborations and expertise in academia. The European Technology Platforms (ETPs) had a special mention, as these can play an important role in facilitating and accelerating access to screening and –omic platforms. Intellectual property (IP) was identified as an issue where the researchers would benefit from help and assistance from facilitators.

II) How can technology transfer be improved? In order to improve technology transfer, the whole value chain needs to be considered and complementary expertise must be brought together. The involvement of industry at a proof-of-concept phase is seen as beneficial, reinforcing the wish from academia for strong collaborations with industry.

III) Resource problems: There are existing infrastructures already in place (i.e.: EMBRC), however, these are not biotech specific. The need for specialised training was stressed during this discussion. For example, combined training between academia and industry (i.e.: work place training) would be very beneficial, as it would better fulfil the needs from industry (i.e.: there is a need for training on photobioreactors, as there is a lack of trained personnel in the field). Also, the mapping of the available PhD courses, as well as summer schools and training courses, would be helpful.

Recommendations from the Strategic Forum and the Stakeholders Group

The parallel round table discussions of the Strategic Forum and the Stakeholders Group, respectively, originated a set of recommendations from both these groups: general advice and specific advice for the preparation of an ERA-NET in marine biotechnology. The recommendations were presented at the end of the workshop:

- Position the future ERA-NET in marine biotechnology in the European arena
- Define the scope of the future ERA-NET in marine biotechnology
- Establish an outline for the preparation of the future ERA-NET in marine biotechnology
- Support the continuation of the Stakeholder Group and its active involvement in the preparation of the future ERA-NET in marine biotechnology

The expectations for the 2nd workshop:

- Priorities in the field of marine biotechnology and how these priorities are going to be addressed by the future ERA-NET
- How do the different initiatives at EU level interact between them to increase their coordination to avoid overlapping of activities and priorities
- Look at the synergies that could be generated from the coordination/interaction of the different initiatives and its added value
- Creation of the new ERA-NET consortia
- Present a clear outline of the coming ERA-NET in marine biotechnology
- Assist with the development of a platform to allow stakeholders to express their view
- Foster good interactions between participants and give concrete advices towards the achievement of the proposal

Annex III Table II – List of participants in the 2nd workshop

Name of Participant	Participant's Organisation	Participant's Country
Addison, Sue	BioBridge Ltd	UK
Almesjö, Lisa	Swedish Reseach Council (FORMAS)	Sweden
Barbas, Julio	Ministry of Economy and Competitiveness (MINECO)	Spain
Bergseth, Steinar	Research Council Norway (RCN)	Norway
Bettencourt, Raul	IMAR/University of the Azores	Portugal
Björnsson, Sigurður	RANNÍS - The Icelandic Centre for Research	Iceland
Blank, Wolfgang	BioCon Valley GmbH	Germany
Bleser, Gerhard	Federal Ministry of Economics and Technology (BMWV)	Germany
Bocquet, Arnaud	Pierre Fabre Laboratories	France
Børresen, Torger	Technical University of Denmark (DTU)	Denmark
Boyen, Catherine	CNRS Station Biologique de Roscoff	France
Brilling, Julia	Norgenta GmbH	Germany
Bunthof, Christine	Wageningen UR	Netherlands
Cadoret, Jean-Paul	Ifremer	France
Calewaert, Jan-Bart	ESF Marine Board	Belgium
Choisy, Patrick	L'Oréal	France
Conceição, Egas	Biocant, Biotechnology Innovation Center	Portugal
Cuttitta, Angela	Institute for Marine and Coastal Environment - National Research Council of Italy (IAMC-CNR)	Italy
Denaro, Renata	Institute for Marine and Coastal Environment - National Research Council of Italy (IAMC-CNR)	Italy
De Raedemaeker, Fien	Flanders Marine Institute (VLIZ)	Belgium
Durand, Patrick	Ifremer	France
Frahm, Thomas	Norgenta	Germany
Frank, Peter	ScanBalt	Denmark
Friedrich, Udo	DuPont/Danisco Deutschland GmbH	Germany
Gebert, Marina	Fraunhofer EMB	Germany
Guiu, Garbiñe	European Commission	Belgium
Habeck, Hinrich	Norgenta GmbH	Germany
Hallouin, Florence	Atlanpole Blue Cluster	France
Hanus, John	Konsortium Deutsche Meeresforschung (KDM)	Germany
Holthus, Paul	World Ocean Council	USA
Hov-Gylthe, Tina Rebecca	Research Council Norway (RCN)	Norway
Hurst, Dermot	Marine Institute	Ireland
Ianora, Adrianna	Stazione Zoologica Anton Dohrn	Italy
Isidro, Anabela	Fundação para a Ciência e a Tecnologia (FCT)	Portugal
Jarlbæk, Henrik	Technical University of Denmark (DTU)	Denmark
Klosterman, Ernst	BioTech North	Norway
Kräutner, Markus	Norgenta GmbH	Germany
Kucharzak, Ramón	Projekträger Jülich (PTJ)	Germany
Labes, Antje	Kiel Center for marine natural products at GEOMAR	Germany
Lampel, Stefan	Projekträger Jülich (PTJ)	Germany
Leandro, Cristiana	Fundação para a Ciência e a Tecnologia (FCT)	Portugal
Lloyd-Evans, Meredith	BioBridge Ltd	UK
Macedo de Sousa, Joaquim	University of Aveiro	Portugal
Marquardt, Ronny	Fraunhofer EMB	Germany

Name of Participant	Participant's Organisation	Participant's Country
Mazzola, Salvatore	Institute for Marine and Coastal Environment - National Research Council of Italy (IAMC-CNR)	Italy
Neudörfer, Frank	BioCon Valley e.V.	Germany
Pardo, Daniel	CNRS/MNHN	France
Penez, Jacqueline	Ifremer Interantional	France
Salamone, Monica	Abiel biotech	Italy
Schneemann, Imke	Norgenta GmbH	Germany
Six, Caroline	Atlanpole and Atlanpole Biotherapeutics	France
Shadidi, Katrine Rese	Research Council Norway (RCN)	Norway
Stokke, Runar	University Bergen	Norway
Syberg Hansen, Steffen	Danish Agency for Science, Technology and Innovation (DASTI)	Denmark
Turk Križanec, Kim	Ministry of Education, Science, Culture and Sport (MIZKS)	Slovenia

Note: Participants in blue represent a funding agency.