

Marine Board-ESF activiteiten en perspectieven in het kader van Mariene Biotechnologie

**Werkvergadering Mariene Biotechnologie in Vlaanderen
1 Februari 2012**

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Science Officer, Marine Board of the European Science Foundation**

De Marine Board is een partnership van belangrijke nationale mariene onderzoeksorganisaties (uitvoerend/fondsen) opgericht in 1995 om de samenwerking en coordinatie van mariene wetenschappen in Europa te versterken.

www.esf.org/marineboard



Marine Board-ESF Mission

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

34 Member Organisations (Research Funding and Performing Organisations) from 20 countries



- BELGIUM
- CYPRUS
- DENMARK
- ESTONIA
- FINLAND
- FRANCE
- GERMANY
- GREECE
- IRELAND
- ITALY
- NORWAY
- POLAND
- PORTUGAL
- TURKEY
- SPAIN
- SWEDEN
- THE NETHERLANDS
- UK

1. Specialist Workshops / Conferences

- E.g. EurOCEAN 2004 (Galway), EurOCEAN 2007 (Aberdeen) and **EurOCEAN 2010 (Ostend)**

2. Follow policy developments: Science-Policy Interface

3. Partnership and Foresight Projects of strategic importance

4. Core Marine Board Outputs/Activities:

- **Expert Working Groups / Position Papers**
- Vision Groups / Vision Documents
- Marine Board Panels
- Marine Board Forum

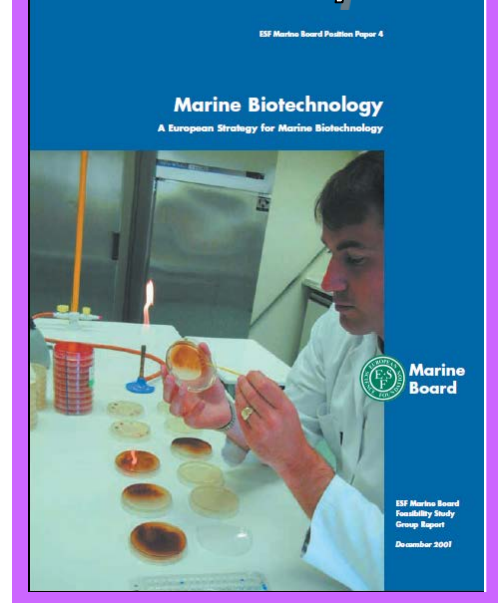


Waarom Mariene Biotechnologie?

• In 2001 Marine Board

- Vaststelling dat het potentieel en de mogelijkheden van mariene biotechnologie voor Europa grotendeels onbenut bleven
- Vraag naar een Europees initiatief om de versnippering van de expertise en infrastructuur tegen te gaan met een meer gecoördineerde aanpak

First Position Paper 2001



• 2007-2008?

- Weinig weerklank van de aanbevelingen - onvoldoende vooruitgang
- Nieuw wetenschappelijk, economisch en beleidscontext – nieuwe mogelijkheden
- nood aan nieuwe impuls om het Europese mariene biotechnologisch onderzoek te promoten

During the last decade, the scientific and political language of marine biotechnology has been heavily modified. Despite significant achievements, marine biotechnology is not considered to its full potential in assessing the numerous challenges European countries are facing now with the present 'global crisis'. How marine biotechnology can contribute to these challenges is therefore an even more relevant question nowadays than ten years ago.

The Marine Board ESF and COST are organizing a conference to promote scientific excellence in marine biotechnology by providing leading scientists and young researchers with a platform to present their work, to discuss current scientific understanding and recent developments in key areas of marine biotechnology, and to identify the priorities for further research and infrastructure.

The Conference will draw from a broad range of scientific disciplines focusing on identified themes, research tools and approaches of strategic importance for Europe, including on aquaculture, bioprospecting, agar and seaweed biomass, health, marine biotechnology and biotransform, marine models, marine genomics, food products and research infrastructure. The emphasis of the Conference is on innovation and vision for the future of marine biotechnology in Europe, moving from exploitation to sustainability.

Conference format:

- lectures by invited high-level speakers
- short talks by young & early stage researchers
- poster sessions, round tables and open discussion periods
- forward look panel discussion about future developments

The conference will be held at Hotel Villa del Mare in Acquafredda di Marone, Acquafredda di Marone is situated on the coast, on the Gulf of Policastro, about 200 km south of Naples.

RESEARCH CONFERENCES

ESF-COST High-Level Research Conference

Marine Biotechnology: Future Challenges

Hotel Villa del Mare, Acquafredda di Marone • Italy
20-26 June 2010

Chair: **Jan Olafsen** - University of Tromsø, NO
Vice-Chair: **Adrianna Ianora** - Stazione Zoologica Anton Dohrn, IT

Organising Committee:
Jan Bart Caluweert - Marine Board ESF, IRE, Amos Tardieu - Institut Océanographique et Limnologique Research, IT

Application Forms & Programme session
www.esf.org/conferences/10330
Closing Date for Application **28 February 2010**

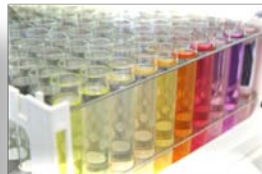
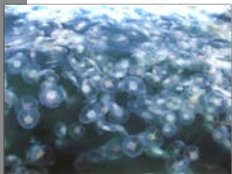
European Science Foundation - Research Conferences Unit
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Email: conferences@esf.org

www.esf.org

2010 position paper «Marine Biotechnology: A New Vision and Strategy for Europe»

Marine biotechnology draagt bij tot de grote maatschappelijke uitdagingen van onze tijd...

- ›...protection and management of the **environment** (including marine ecosystems)
- ›...securing **human health and well-being**
 - bioactive natural products (pharmacy, cosmetics, ...)
 - ingredients
 - biocatalyser
- ›...sustainable **alternative source of energy**
- ›...sustainable **supply of high quality and healthy food**
- ›The global market for marine biotechnology products is growing.



2010 position paper «Marine Biotechnology: A New Vision and Strategy for Europe»

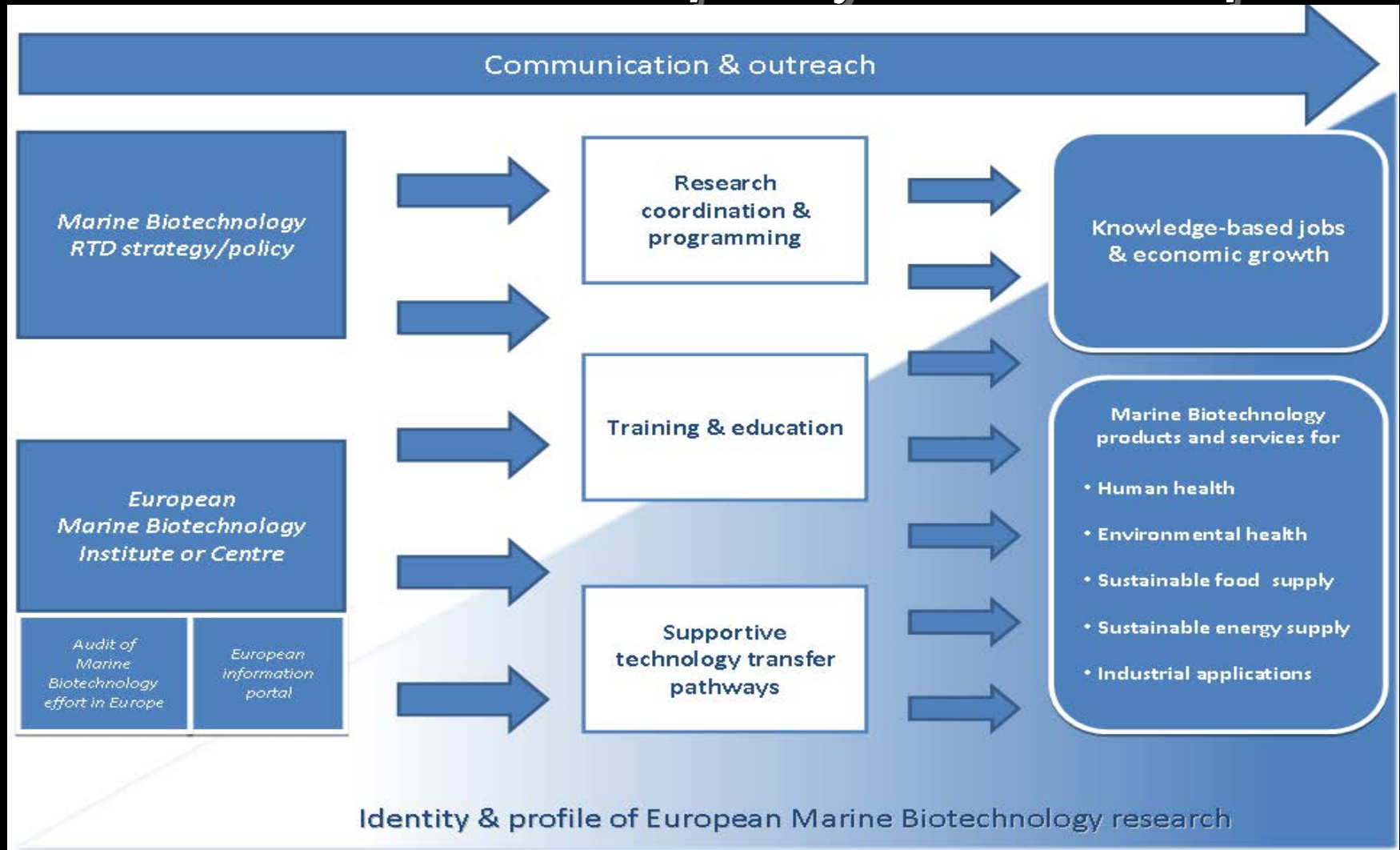
Ontwikkel een sterke identiteit en communicatiestrategie om het profiel van en zichtbaarheid te vergroten

Ontwerp coherente onderzoekstrategieën en programmas voor mariene biotechnologie op nationaal, regionaal en pan-Europees niveau

Verbeter de technologie-transfer en versterk de interactie tussen academische onderzoek en industrie

Verbeter multi-disciplinaire training en onderwijs ter ondersteuning van onderzoek en industrie

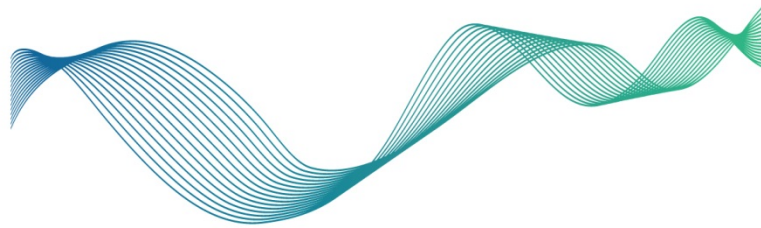
Flow-chart of recommended priority actions and impacts



- › Versterken van de coordinatie van nationale en/of regionale onderzoeksprogrammas
- › Reduceren van fragmentatie en ondersteunen van de ontwikkeling van de European Research Area (ERA)
- › Efficient gebruik van nationale en regionale fondsen door het ontwikkelen van transnationale ‘calls’
- › Deelnemers in ERA-NET acties zijn programma “beheerders” of programma “eigenaars” → de onderzoeksfinancierende organisaties/agentschappen



MarineBiotech



ERA-NET Preparatory Action
in
Marine Biotechnology



CSA (Coordinating) in Marine Biotechnology. MarineBiotech is funded under the European Commission's Seventh Framework Programme.
Contract number 289311. October 2011 - March 2013.

Project



- Jul 2010 FP7 call to establish a CSA within Marine Biotechnology
- Oct 2011 Start of the project CSA MarineBiotech

Coordinator: Steinar Bergseth, RCN (Norway)

Manager: Meredith Lloyd-Evans, BioBridge Ltd (UK)

11 partner from 9 countries

Budget 1 Mio €

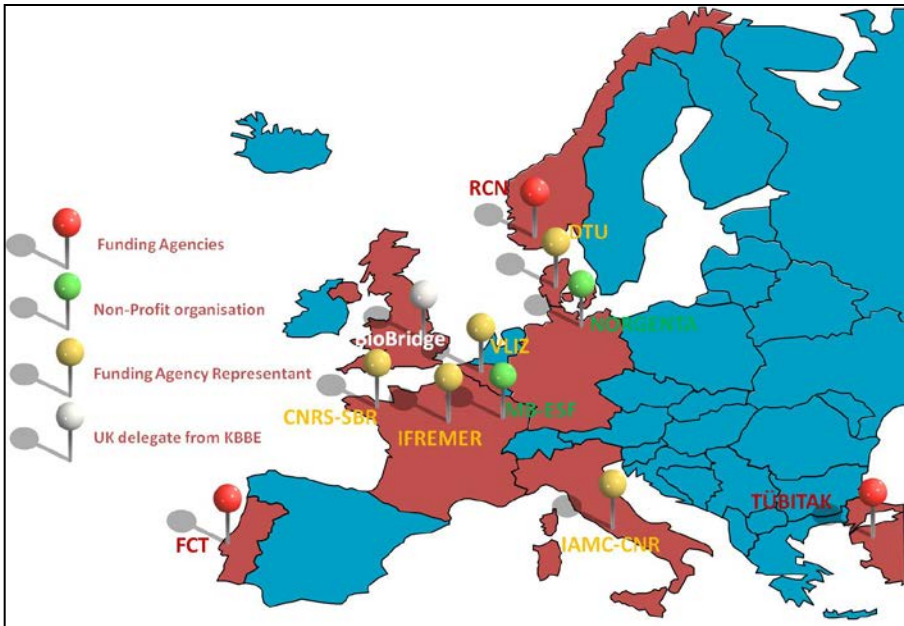
18 month



- **Aim:** Mobilise funding agencies and other stakeholders to participate in a future ERA-NET with the critical mass needed to fund transeuropean R&D projects of high quality within MB



Partners

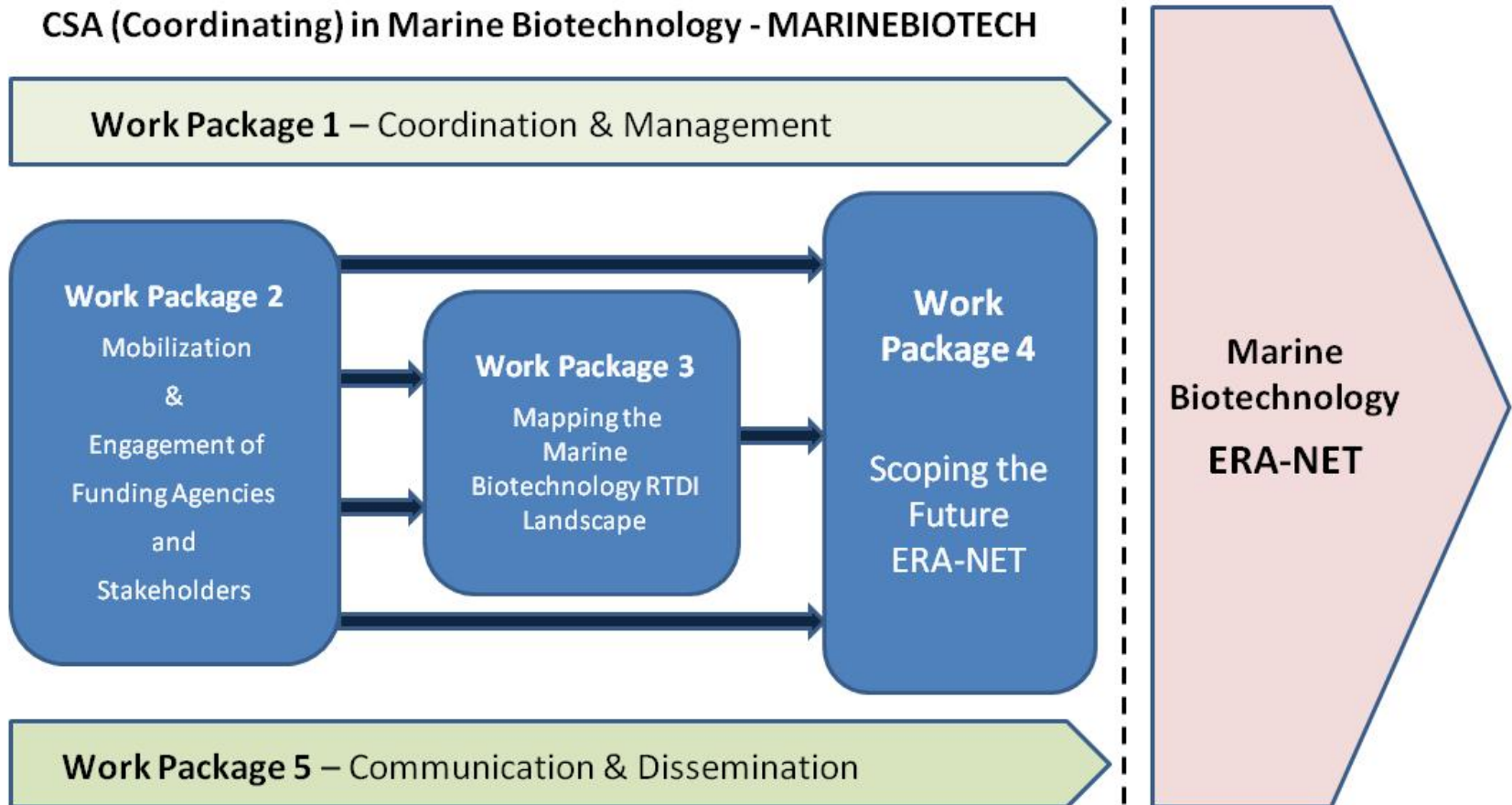


- Research Council Norway★
- VLIZ (Belgium)
- Norgenta (Germany)
- DTU (Denmark)
- CNRS –Roscoff (France)
- IFREMER (France)
- ESF-Marine Board (Belgium)
- CNR (Italy)
- FCT (Portugal)
- Tübitak (Turkey)
- Biobridge (UK)★

★ *Coordination*
★ *Project management*

Project Structure

CSA (Coordinating) in Marine Biotechnology - MARINEBIOTECH



TASK 3.1. Inventory of European Marine Biotechnology RTDI Strategy, Programmes and Initiatives

General approach:

- One file per country / region + 1 pan-European
- High level essential information and complement with more details as information is gathered and is made available
- Develop a strong visual concept to present the results → 2 pagers per country / region
- Finalise the draft in Mo 13 (October-November 2012)



Belgium

Overarching Research Strategy:

-
-

Relevant Science Policies:

-
-

Funding schemes:

-
-

Research priorities:

Strategic documents:

-
-
-

Infrastructures and coordination and support capacities / initiatives:

-
-
-

Major Initiatives:

-
-
-



Norway



Overarching science strategies, plans and policies:

- National Whitepaper: "Climate for research" describes the overall Norwegian government's research strategy.
<http://www.regjeringen.no/pages/2176785/PDFS/STM200820090030000DDPDFS.pdf>
- National Whitepaper: "Marine Bioprospecting- a source of new and sustainable wealth growth" describes the Norwegian government's strategy for marine bioprospecting.
http://www.regjeringen.no/upload/FKD/Vedlegg/Diverse/2009/Marin_bioprospektering_080909_lavoppl.pdf
- National Whitepaper: "National strategy for biotechnology" describes the Norwegian government's strategy on biotechnology.
<http://www.regjeringen.no/upload/KD/Vedlegg/Forskning/Bioteknologistrategi.pdf>
- National White paper: "Strategy for an Environmentally Sustainable Norwegian Aquaculture Industry" describes the Norwegian government's strategy on aquaculture.
<http://www.regjeringen.no/upload/FKD/Vedlegg/Diverse/2009/strategy%20for%20an%20sustainable%20aquaculture.pdf>
- National White paper: "Nordområdestregetien" describes the Norwegian government's strategy for research in the high north.
<http://www.regjeringen.no/upload/FKD/Vedlegg/Diverse/2009/strategy%20for%20an%20sustainable%20aquaculture.pdf>



Research Funding Schemes and Programmes:

- The Research Council of Norway (RCN) funds research projects, innovation projects, industrial projects and infrastructure. Relevant research programmes includes:
 - o BIOTEK2021: A research financing program that finance applied academic research and industrial development of biotechnology.
<http://www.forskningsradet.no/servlet/Satellite?c=Page&pagename=biotek2021%2FHovedsidem&cid=1253970728155&langvariant=en>
 - o Aquaculture- An industry in growth: A research financing program that finance applied academic research and industrial development on aquaculture and fisheries
<http://www.forskningsradet.no/servlet/Satellite?c=Page&pagename=havbruk%2FHovedsidem&cid=1226994216892>
 - o The ocean and the coast: A research financing program that finance academic research and industrial development on eco systems and the marine environment
<http://www.forskningsradet.no/servlet/Satellite?c=Page&cid=1226994156395&pagename=havkyst%2FHovedsidem>
 - o Sustainable Innovation in Food and Bio-based Industries: A research financing program that finance applied academic research and industrial development of bio-based industries.
<http://www.forskningsradet.no/servlet/Satellite?c=Page&pagename=bionaer%2FHovedsidem&cid=1253971968504&langvariant=en>
 - o Polar research: A research financing program that finance research on sustainable management and development of industries in the high north
<http://www.forskningsradet.no/servlet/Satellite?c=Page&pagename=polarforskning%2FHovedsidem&cid=1231229969369&langvariant=en>
- Innovation Norway funds innovation projects with industry and infrastructure. Relevant programmes include:
 - o Public R&D contracts and Private R&D contracts, where SMBs can be funded with up to 35% in a collaboration project with either a public or private customer.
<http://www.innovasjon Norge.no/Finansiering/IFUOFU/>
 - o Entrepreneurial grant, where start-ups can be funded in an initial period of the company.
<http://www.innovasjon Norge.no/Finansiering/Etablerertilskudd1/>

- SIVA funds infrastructures, such as laboratories and necessary housing for innovation centres.
<http://www.siva.no/internett/cms.nsf/pages/english?open>
- Regional research foundations funds research projects, innovation projects, industrial projects and infrastructure.
<http://www.regionaleforskningsfond.no/servlet/Satellite?c=Page&pagename=fff-hovedside/Hovedsidem&cid=1253954088866>
- A collaboration effort exists between Innovation Norway, The research council of Norway, SIVA and equivalent research councils in the United Kingdom to fund innovation and applied research in marine biotechnology.
https://connect.innovateuk.org/web/biosciencesktn/articles/4/blogs/6374683-1sessionid=E2F58BAC408C2F4ECA1F541C658C5587_MekushUdbev4

Research priorities for marine biotechnology research:

- Bioprospecting / Biodiscovery, Aquaculture, Human and animal health
- Fisheries
- Polar research
- Industrial biotechnology
- Bio-based industries



Strategic documents:

- Strategy plan for Marin Bioprospecting: A strategy document formed by the RCN, Innovation Norway and SIVA on how to implement the national strategy for Marin Bioprospecting.
<http://www.forskningsradet.no/servlet/Satellite?c=Page&cid=1253953666626&pagename=fuge%2FHovedsidem>
- The Arctic and Northern Areas Initiative (Forskning.nord.no): The Research Council of Norway's research strategy for the high north
<http://www.forskningsradet.no/servlet/Satellite?c=Nyhet&cid=1253968952749&lang=no&pagename=nord%2FHovedsidem>
- A new program plan (Biotek2021) for biotechnology is under development.

Infrastructures and coordination and support capacities / initiatives:

- Biotech North: BioTech North is the network organisation for the development of biotechnology in the Tromsø region in North Norway. <http://biotechnorth.no/biotech-north-2/>
- Biotech Forum: Norwegian Bioindustry Association (NBA) was established autumn 2001 by representatives for Norwegian biotechnological industries and the Confederation of Norwegian Business and Industry (NHO). The Association is an independent member organization with purpose to promote development of Norwegian biotechnological trade and research. http://www.biotekforum.no/About_us/
- 10 biotechnology platforms: These technology platforms have been built up during the course of the FUGE programme. They offer service in different high tech niches to academic researchers and industry.
<http://www.forskningsradet.no/servlet/Satellite?c=Page&cid=1226993578290&pagename=fuge%2FHovedsidem>
- Mabcent-SFI: Center for research based innovation on bioprospecting in Tromsø where academic research groups and SMBs collaborate on defined research topics for innovation. <http://www0.nfh.uit.no/mabcent/>
- MarBank: A national marine biobank organising the collection, and structuring of the marine biodiversity for research and industrial development.
http://www.imr.no/barentshavet/tokt/toktdagbok_2006/dagbok/marbank
http://www.noruega.org.pt/PageFiles/575028/7%20Kjersti%20%20Gabrielsen_Marbank%20-%20A%20national%20collection%20of%20Arctic%20Marine%20Organisms.pdf

Major Initiatives:

- FUGE: The first targeted programme at The Research Council of Norway aimed at functional genomics. The program was in function from 2002 to 2011 and have financed research projects for about 1,7 billion kroner of which about 20 % are within marine biotechnology. The responsibility for fulfilling the national strategy for marine bioprospecting was part of the program. This is now continued within the BIOTEK2021 programme.
<http://www.forskningsradet.no/servlet/Satellite?c=Page&pagename=fuge%2FHovedsidem&cid=1226993493126>

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Thank you for your attention
and your future contribution to success

