

Sustainable utilization of living marine resources

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The ERA-MBT marine biotechnology research and
innovation roadmap launch

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HAVFORSKNINGSINSTITUTTET
INSTITUTE OF MARINE RESEARCH

Position Paper 15

Marine Biotechnology: A New Vision and Strategy for Europe

September 2010

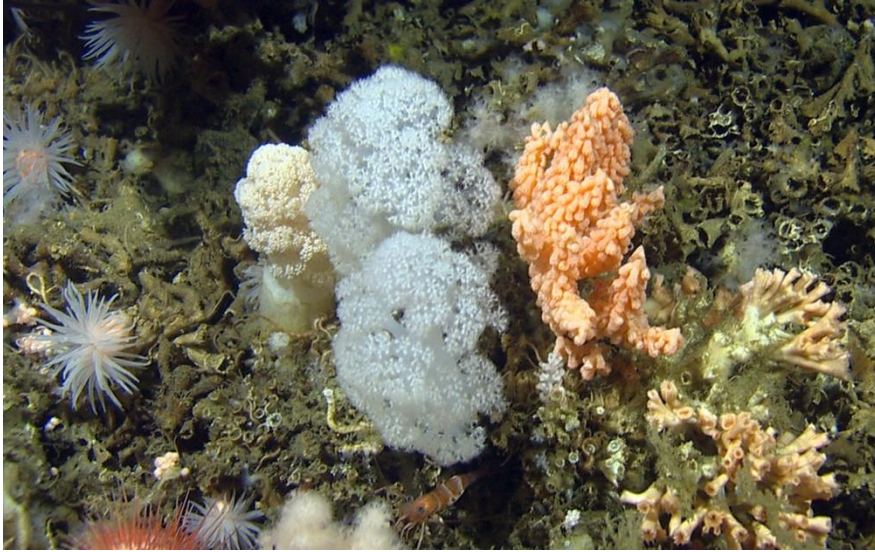


There are still major deficiencies in the basic knowledge of ocean biodiversity, ecosystem functioning, resilience and connectivity.

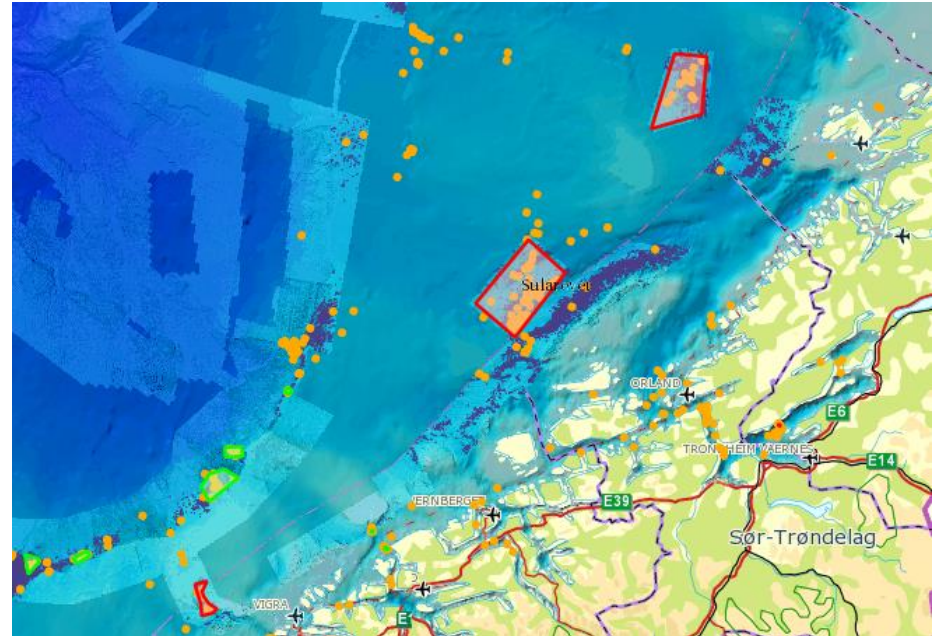
Increasing our fundamental knowledge of the ocean systems is essential to underpin all societal, environmental and economic activities in the ocean.



Main objective: Maintain balanced, healthy and productive ecosystems



Source: fiskebat.no

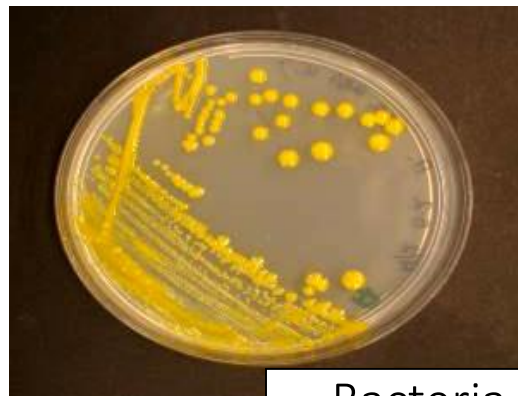


EMB position today

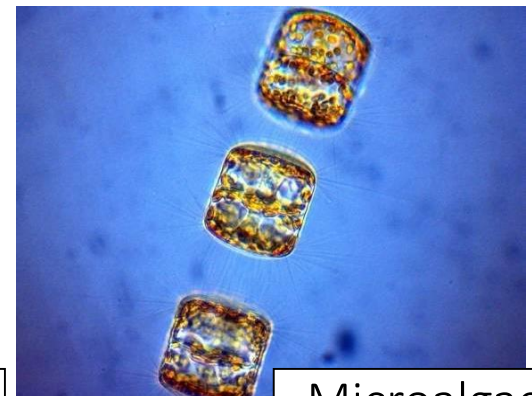
A key development is probably on the legal side – the UN negotiations on conservation and sustainable use of biodiversity from Areas Beyond National Jurisdiction. Those discussions are ongoing at the moment via the PrepComm group and ultimately will lead to a new implementation agreement within UNCLOS that **may, amongst others,** regulate access and **promote** benefit-sharing for marine genetic resources collected from ABNJ.



Invertebrates



Bacteria



Microalgae

EMB position today

It is difficult to get figures for size and economic output of marine biotech as a “blue growth’ sector – OECD struggled with this for the [Future Ocean Economy 2030 report](#). There have been reports on this in the past but **limited** current figures **and analyses** – this makes it difficult to develop policy support for the sector (**one of the five EU Blue Growth priority areas**)



Vertebrates



Macroalgae



Fungi

Marine Bioprospecting

Genes

Biomolecules

Biological processes

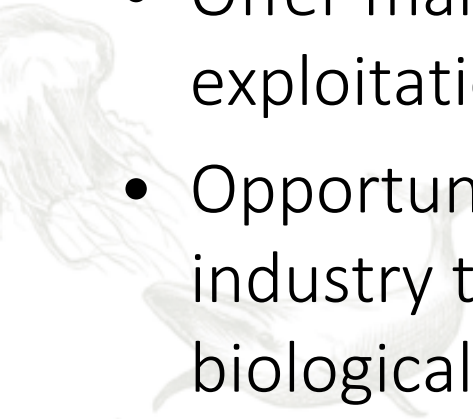
Marine biodiversity

Products

- Health
- Food/feed
- Energy/
environment

Marine biobanks

- Marine organisms are collected from their natural habitat and kept alive or processed and conserved in a biobank
- Provide safe and easy access to quality assured marine samples
- Offer marine biological samples for research and exploitation purposes
- Opportunity for researchers within academia and industry that do not have the ability to collect marine biological samples from nature



Marine biobank:

a 'Trusted Source' of marine samples

- All samples legally collected and quality assured
- Clear ownerships and origin of samples
- Material Transfer Agreements; clear legal terms of access to samples
- Reporting regime and potential ABS according to national and international regulations



A case: MarBank-NET - a national marine biobank

- Collects and curates marine organisms from Norwegian waters
- Established in close cooperation with the Norwegian Ministry of Trade, Industry and Fisheries and marine research institutions in Norway
- Organised within the Institute of Marine Research



Summing up

- Commercial interest in ocean resources is rapidly expanding, including oil and gas production, fisheries, blue biotechnology and mining
- Development of these activities, as blue biotechnology, should be based on the best knowledge of pelagic and demersal habitats and ecosystems for sustainable commercial activities in the ocean
- The Roadmap addresses these issues in the themes "*Exploration of the marine environment*" and "*Policy support and stimulation*"

