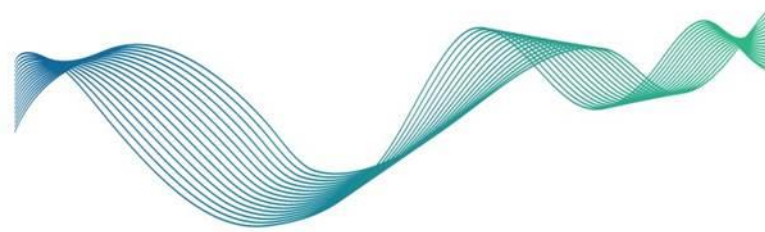




# MarineBiotech



## Setting the scene for Training and Education

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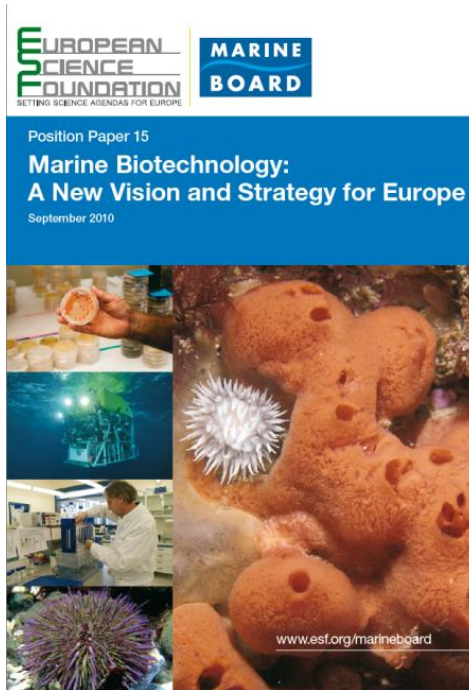
1<sup>st</sup> Marine Biotechnology ERA-NET Stakeholder Meeting



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December 2013 - November 2017

# **Why is Training and Education such an important issue for Marine Biotechnology and Marine Sciences in general?**

## RECOMMENDATION 4: Improve training and education to support Marine Biotechnology in Europe



While the strengthening of fundamental science is essential, specific education and training pathways are required to provide both research and industry with skilled graduates. The future of life sciences in the 21st century is closely linked to the ability of scientist to develop and participate in interdisciplinary projects embracing skills and concepts from other disciplines. Hence, **training the next generation of marine biotechnologists must focus on the use of interdisciplinary and holistic approaches to solve technological problems specific to dealing with marine organisms and the marine environment**

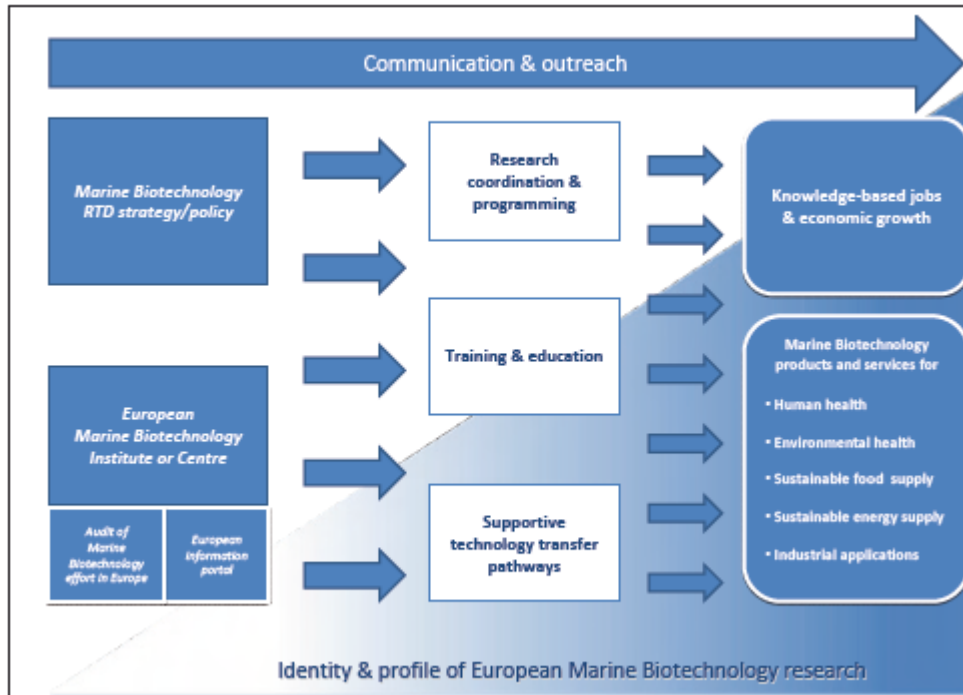


Figure 42. Flow-chart of recommended priority actions for immediate implementation and their expected impact

### Recommended Actions:

**4a)** Assure that appropriate biotechnology modules are included in all bio-science undergraduate educational programmes.

**4b)** Initiate actions that will ensure the participation of researchers from non-marine backgrounds in Marine Biotechnology, thus ensuring a growing pool of exceptional research talent is available to the Marine Biotechnology sector.

**4c)** Organise regular training or summer schools on Marine Biotechnology subjects supported, for example by the EU Framework programme.

**4d)** Create a European School of Course on Marine Biotechnology (virtual and distributed) and a European PhD programme on MB both of which include business and entrepreneurship training.

## Summary of the recommendations from the Stakeholders Group to the Marine Biotech ERA-NET (ERA-MBt) consortium

### *Recommendation 5. Organise a series of thematic research workshops and support training activities*

- ERA-MBt should support **training activities** (e.g. master classes/courses, summer courses, master courses) on various topics including
  - Acquisition of ‘soft’ skills in management, business, economics and entrepreneurship
  - Insight into legal and IP/ABS issues, including Nagoya protocol status and implications



# Mapping Training programmes in MB ERA-NET



Training courses or modules in MBT are provided all over Europe and for different target audiences (Bachelor-/Master students, Doctoral-/Post-doc researchers, Technical staff...).

A **mapping of the different courses** (master programmes, doctoral schools, summer schools, hands-on trainings, online courses...) will be outlined, in order to make a listing of training possibilities within Europe and make this information accessible through the ERA-MBT online portal . This listing could serve as the starting point for trainees to get access to information about MBT education.

Current expertise in marine biotechnology is often found in **scattered spots** throughout the European Union. Opportunities for supporting career development shall be enhanced through a web-based communication forum , which will:

- 1) Support a student and scientist exchange and career forum for marine biotechnology researchers.
- 2) Establish a communication channel with potential employers, including the industry.

## Marine Biotechnology and utilization of Marine Bioresources: Mapping existing training/ education and gap analysis

### Presentation of the survey

In order to promote and to reinforce the *Training and Education strategy* for marine biotechnology and the utilization of the marine bioresources all over Europe and for different target audiences, the Marine Biotechnology ERA-NET designed a survey for mapping the existing operational programs, while aiming to identify needs and gaps.

The survey includes 2 different pages:

- Pages 1 to report details on **existing education or training programmes** within a marine biotechnology context
- Page 2 to report details on the **needs and gaps** related to the current education or training programs within a marine biotechnology context

## Marine Biotechnology and utilization of Marine Bioresources: Mapping existing training/ education and gap analysis

**Fill in the details on the existing education or training programs relevant to marine biotechnology or utilization of the marine bioresources.**

---

### Target group

- Scientific users
- Industrial users
- Management users
- Technical users





**a. Title of Training**

**b. Type of Training**

- Personal training
- Master program
- Bachelor program
- Summer school
- Doctoral school
- Group based training
- E-learning
- Other (please specify)

**c. Duration of training**

**d. Duration type**

- Single event
- Upon demand
- Yearly recurring
- Other (please specify)

**e. Language of training**

**f. Target audience**

- Doctoral students
- Graduate
- Undergraduate
- Post-doc/staff
- Other (please specify)

**g. URL if available**

**Fill in the details on the needs and gaps for education or training programs relevant to marine biotechnology or utilization of the marine bioresources.**

**Target group**

- Scientific users
- Industrial users
- Management users
- Technical users

**Need/gap**

**Estimated duration type**

**Estimated budget**

**Estimated duration of training**

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Please complete the online questionnaire!  
and spread the word.....

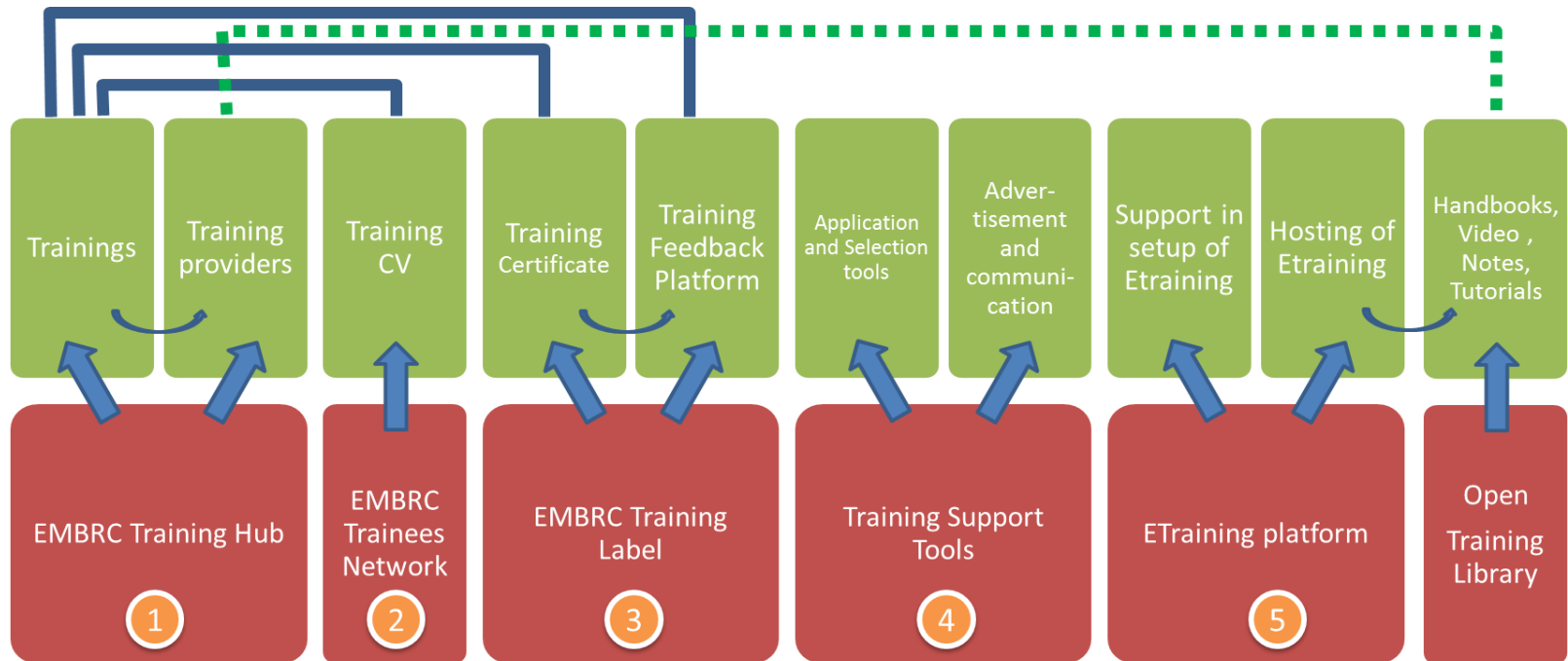
The deadline for submission is **5 January 2015.**

# What is next step?



- Sort and analyze data from the survey
- Make a listing of training possibilities within Europe and make this information accessible through the ERA-MBT online portal
- Take into account the European Landscape context

- A central repository on marine related trainings (EMBRC / broader ...)
- Need for professional support in:
  - Organization of trainings
  - Setting up digital learning environments



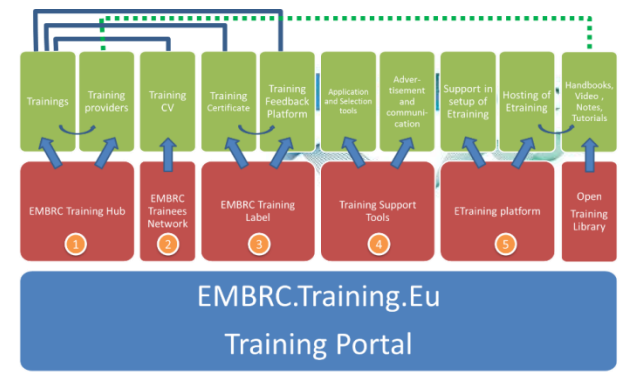
# EUROPEAN LANDSCAPE



- **European Marine Board Vision Group**  
**« Training the 21st Century Ocean Scientist »**  
**→ Position Paper in 2015**
- **Side event « Training Talent » at Eurocean Conference in Rome**



**Rome Declaration**  
**4th goal : Breaking barriers**



Education and training to encompass and foster cross-disciplinary training, the ability to work across science-policy interfaces, team-based approaches, entrepreneurship, and the broad range of specialist technical and ICT skills needed to underpin modern marine science;

# Thank you