



Deliverable D 9.2

Supporting framework for establishment of new training initiatives

Date: September 2016



HORIZON 2020 - INFRADEV
Implementation and operation of cross-cutting services and solutions
for clusters of ESFRI

Grant agreement no.: 654008
Project acronym: EMBRIC
Project website: www.embric.eu
Project full title: European Marine Biological Research Infrastructure cluster to promote the Bioeconomy

Project start date: June 2015 (48 months)
Submission due date : June 2016
First submission date: July 2016
Actual submission date: September 2016

Work Package: WP 9 - Training and exchange of best practice
Lead Beneficiary: Universiteit Gent (UGent 16)
Version: 2.0
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Project funded by the European Union's Horizon 2020 research and innovation programme (2015-2019)		
Dissemination Level		
PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

Abstract

The discovery, development and exploitation of marine derived products for research and commercial development requires a skilled workforce to 1) select, harvest and manipulate resources, 2) to treat the generated data and foster new technologies, 3) to retrieve the economic potential, and 4) to overcome current and future interconnectivity barriers. Therefore, the European Marine Biological Resource Infrastructure Cluster (EMBRIC) brings together and creates innovative training to meet the workforce requirements to foster innovation in marine biotechnology.

This report presents the supporting framework of EMBRIC towards human capacity building and knowledge transfer within the consortium and towards the end-users of the clusters' Research Infrastructures. The support will primarily be twofold. An integrated EMBRIC training programme will be developed and an EMBRIC training platform disseminating and promoting the training opportunities framework within the EMBRIC will be created. With this training support, EMBRIC aims to enhance the pace of scientific discovery and innovation from marine bioresources.



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Glossary and abbreviations

CPD:	Continuing Professional Development
EMBRC:	European Marine Biological Resource Centre
EMBRIC:	European Marine Biological Research Infrastructure Cluster
ESFRI:	European Strategy Forum on Research Infrastructures
HCB:	Human Capacity Building
IAP:	Integrating Activity Project
iCal:	iCalendar is a computer file format for calendaring
PHP:	Hypertext Pre-processor, scripting language designed for web development
RI:	Research Infrastructure, a site-specific cluster of research groups and tools that provide essential services for basic or applied research.
RSS:	Really Simple Syndication, a web feed formats to publish frequently updated information
WP:	Work package
XCRI-CAP:	eXchanging Course Related Information - Course Advertising Profile, is an information model to share information about courses



1 Introduction

This deliverable D 9.2 is part of the work package (WP) 9 in charge of training and exchange of best practice. In deliverable D 9.1, an overview of existing trainings was given in the fields of discovery and development of marine natural products and marker-assisted selection in aquaculture within and outside the clusters' Research Infrastructures (RI) and Integrated Activity Projects (IAP). Additionally, specific needs under the form of recommendations and SWOT-analysis on trainings and education were formulated. Here, a supporting framework to organize and disseminate training opportunities to fill up the present and future gaps is build. On one hand, the EMBRIC integrated training programme will be launched to boost continuous professional development (CPD) and human capacity building (HCB) of EMBRIC researchers. It will support the main goal of this programme in harmonizing practices and standards of procedures of the biotechnology domain. Ultimately, EMBRIC will spread harmonised expertise and best practices to academia and private sector during and beyond the formal end of the project. On the other hand, an EMBRIC training platform will be set up to promote training initiatives within and outside the consortium by linking to the EMBRC fostered Marine Training Platform (www.marinettraining.eu).



2 EMBRIC training portal

This service will maintain a web portal on training and education on the www.embric.eu/training website that will include a centralised information resource with searchable catalogues, targeted to people in search of training possibilities related to marine biotechnology research. Calls will be distributed within the EMBRIC's RIs and partners to solicit proposals for new courses and select on-going course programmes for incorporation in the EMBRIC training and education catalogues. Data on performance, effectiveness and impact of EMBRIC courses will be collected from participants in order to produce assessment reports.

The EMBRIC training portal page will be linked to the EMBRC fostered Marine Training Platform (www.marinetraining.eu). The EMBRC Marine Training Platform technical backbone is an open source web service run on a PHP Drupal Platform fitting the XCRI-CAP standard (eXchange of Course Related Information). Consequently, possibilities of exchange of data with similar platforms in other domains is ensured. The specific EMBRIC training page will be incorporated as an iframe or rss feed directly imported from the Marine Training Platform. It will display a list of training courses offered by EMBRIC partners in the EMBRIC framework. Additionally, trainings organized in the framework of the associated RIs will be displayed as well. Adaptations and implementation of this training page will be performed by the UGent (partner 16).

2.1 Assistance in course setup

The UGent, next to hosting and performing the adaptations and maintenance of the EMBRIC training page has an extensive knowhow on course organization. Therefore, it will offer its support to WP 2-8 for organizing trainings and workshops. It will assist the course organizer on one hand in setting up the online registration tool for his event and on the other hand to manage the subscriptions. The subscription management will allow course organisers to directly have access to participants' lists, bulk emailing options, etc. Furthermore, it will give an overview to the organizer on the participants' details of the event, for instance, to which WP and RI they belong, from which institution they come, what their contact details are, etc. Finally, the event details will directly be linked to the calendar of the project available on the EMBRIC website and available for import as iCal. In addition to this user friendliness, users will be able to directly subscribe to the event through the website event page. Finally, organisers can have a follow-up opportunity to improve future trainings to the needs of the users.



2.2 Course dissemination

Therefore WP9 will work closely with WP1 to follow the implementation of the overall dissemination strategy in EMBRIC using dedicated tools to target specific audiences including user communities (academic, commercial), policy makers (regional and national governments, academia, industry) and the wider public. The dissemination plan of the EMBRIC training will include, amongst others:

- 1) a dedicated web portal on the project's website,
- 2) creation of promotion material following the prior defined project's identity and graphic chart,
- 3) diffusion of the novel training events through the project's newsletters and press releases,
- 4) where necessary participate at relevant workshops or other relevant international initiatives to present the outcome and future trainings
- 5) training events to be distributed throughout various social communication channels, partners' websites and infrastructures' websites

The EMBRIC training platform is an important tool for project dissemination and training of staff and users. Especially at ensuring that project, outcomes are adopted in the long-term (beyond the formal end of the project). This will be achieved by close cooperation with the RI and IAP of the cluster. In deliverable D 9.2, table 2, an overview was given on how the EMBRIC cluster infrastructures deal with knowledge transfer. Some use repository-training platforms, while other infrastructures organise specific CPD trainings focussed on HCB enhancement in the fields of the project's scope. Communication and exchange of information will take place and the EMBRIC related information will be implemented on the EMBRIC training platform and EMBRIC specific initiatives will be disseminated through the RI and IAP dissemination paths.

Next to this 'internal' framework, EMBRIC wants to provide skills to a larger community of users than any single participating RI. Subsequently EMBRIC will enable more precise and complete matching of user demands with service supply than could be achieved within the constraints of partnerships between individual RIs, let alone between individual partner facilities within given RIs. Therefore, in collaboration with other European initiatives, linked to marine biotechnology and mariculture (see deliverable 9.1, table 1 for examples), a coherent body of knowledge management activities and tools for staff and users will be developed. Knowledge will be disseminated through targeted training, generic communication activities, and capacity building promoted beyond the EMBRIC sphere.



3 Integrated training programme

Training of both potential users and in-house technical and administrative staff of service providers is an integral part of the activity of each of the RIs involved in EMBRIC. Consequently, exchange of personnel and training of staff became an integral task in Work Package 9 (WP9) of the EMBRIC project. Promoting short-term staff exchanges and other dedicated training to build on and strengthen human capital in the cluster, next to spreading good practices, consultancy and training in integrated marine biotechnology workflows are key to the EMBRIC project.

In this framework, dedicated training activities (e.g. workshops, courses, and knowledge and technology transfer meetings) will be set up and become part of the EMBRIC integrated training programme. The main goal of this programme is to harmonize practices and standardizations of procedures of the biotechnology domain within EMBRIC. Hence, the whole EMBRIC cluster will spread harmonised expertise and best practices to academia and private sector beyond the formal end of the project.

Therefore, an internal training call (see 3.2) is launched amongst EMBRIC partners. The WP9 will oversee and assist the submissions before presenting the proposals at the executive board (EB) for selection.

3.1 Fostering new training initiatives

The gap analysis performed in deliverable D 9.1 allowed identification of specific needs of different user communities for new training. A budget of 50k€ will be dedicated in this task to encouraging and enabling the establishment of new training initiatives (including via linking existing capacities). An expert group composed of representatives of all involved RIs will be established to evaluate proposed new training offers and to advise on the best suitable format for these. Possible examples of new training initiatives are:

- Thematic workshops for the staff and/or end-user communities of EMBRIC allowing for exchange of practices in a specific field in cooperation with WP 5
- Development of online training packages to promote standards and best practices in cooperation with WP 4
- Training of staff through staff exchange: mobility grants for short (< 1 month) training through exchange initiatives;
- Training of EMBRIC users on the access to and use of marine genetic resources in cooperation with WP 2 and 10

In addition to financial support for new initiatives, the EMBRIC training platform (see point 2) will include a set of tools for the advertisement of training, hosting of electronic training material, and communication and feedback mechanisms.



3.2 Call for proposals

The aim of this call is to provide EMBRIC collaborate an extra incentive and financial support to organise, host and participate in short-term staff-exchange, best practice and knowledge transfer. More information on the exact conditions related to this financial opportunity, will be available in the terms & conditions of the EMBRIC integrated training programme. In order to meet the EMBRIC requirements and aims, proposals should involve collaboration between at least two of the 27 EMBRIC consortium partners. These partners should belong to different WPs and should propose a training activity having a benefit and fit within at least one EMBRIC Work Package deliverable. Several broad topics can be tackled during the EMBRIC trainings. However, in order to follow the EMBRIC philosophy, training should focus on following themes:

- Standardised procedures for discovery, development and exploitation of resources
- Novel technical enhancements for generating marine derived products
- Methods and developments in computational resources
- Innovation dynamics, technology transfer (TT) and value creation in blue biotechnology
- Transnational access (TNA) and access benefit sharing (ABS)
- Intellectual property (IP), governance and policy
- Human capacity building (HCB) and transferable skills



4 Conclusion

This deliverable D 9.2 tackles the supporting framework available for EMBRIC training organisers. The WP 9 puts forward several tools, for instance an EMBRIC training platform and an EMBRIC integrated training programme to assist partners on several levels (e.g. financially, administratively, and practically). By these means, EMBRIC will assist in meeting workforce requirements to foster innovation in marine biotechnology. The use of the EMBRIC training platform will allow broad dissemination beyond the project's cluster. The innovative EMBRIC integrating training programme will host initiatives tackling all the steps of the blue economy value chain. Therefore, knowledge transfer through EMBRIC human capacity building and continuous professional development will enhance the pace of scientific discovery and innovation from marine bioresources.

