ASSEMBLE

ASSOCIATION OF EUROPEAN MARINE BIOLOGICAL LABORATORIES EXPANDED

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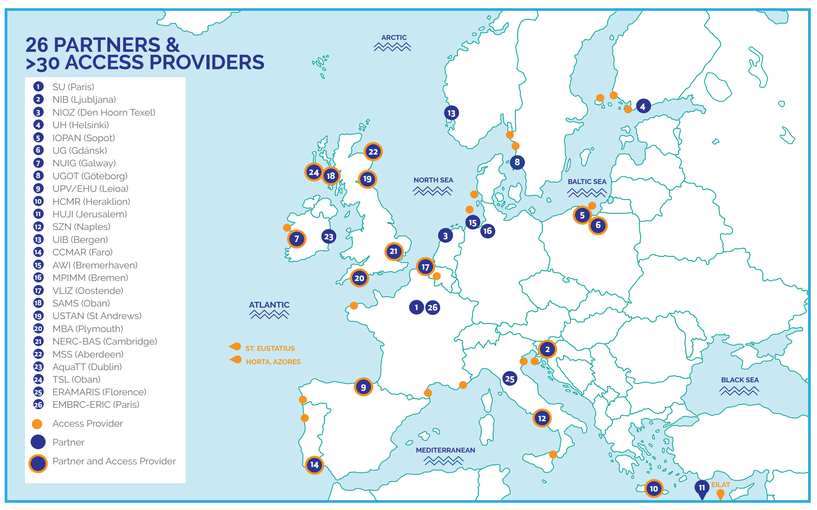
INTRODUCTION

ASSEMBLE Plus provides scientists from academia, industry and policy with a quality-assured programme of access to its marine biological station facilities and resources.

The goal of the project is to stimulate fundamental and applied research excellence in Europe in the fields of marine biology and ecology.



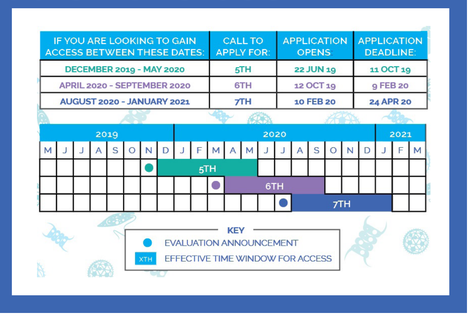
The sum of the project actions - *including transnational and remote access, networking, and research* - will ultimately increase the number of users of marine biological stations and lead to collaborative strategic development between partners. This will make a key contribution to the long-term sustainability of marine biological stations.

RESULTS

The project's key results of the transnational access and joint research activities at mid-term (Month 24) are presented below.

TRANSNATIONAL ACCESS

- The access programme is open until April 2020 and the next review will take place on 9th February 2020.
- So far, more than 300 applications have been received and around 100 individuals have been placed with >30 providers.
- 30 days of access and travel & subsistence expenses can be sponsored for up to 2 persons.



IF YOU ARE LOOKING TO GAIN ACCESS BETWEEN THESE DATES:	CALL TO APPLY FOR:	APPLICATION OPENS	APPLICATION DEADLINE:
DECEMBER 2019 - MAY 2020	5TH	22 JUN 19	11 OCT 19
APRIL 2020 - SEPTEMBER 2020	6TH	12 OCT 19	9 FEB 20
AUGUST 2020 - JANUARY 2021	7TH	10 FEB 20	24 APR 20

GENOMIC OBSERVATORIES

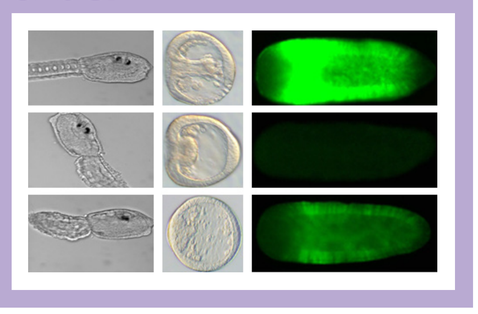
- 18 stations take part in Ocean Sampling Day, a collective effort to assess global marine biodiversity.
- 103 and 61 sites were sampled in 2018 and 2019, respectively.
- Autonomous Reef Monitoring Structures (ARMS) have been deployed in 19 sampling areas.

CRYOBANKING MARINE ORGANISMS

- Cryopreservation has been achieved for mussel larvae (*M. galloprovincialis*). Seed has been grown to juvenile stage and put to ropes to reach maturation, increasing market seasonality.
- In total, novel cryopreservation approaches have been developed for 200 algal species (micro and macroalgae).

FUNCTIONAL GENOMICS

- CRISPR protocols have been established for two sea urchins (*Paracentrotus lividus*, *Strongylocentrotus purpuratus*), one cnidarian (*Clytia hemisphaerica*) and two ascidians (*Ciona intestinalis*, *Phallusia mammillata*). Results are promising for amphioxus.
- Insertional transgenesis worked in sea urchins, ascidians, *Clytia* and amphioxus.

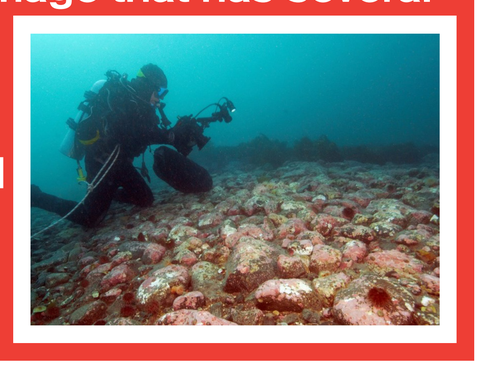


DEVELOPING INSTRUMENTATION

- The "Research Aquarium Infrastructure" pilot was launched (internally) and features reviews on the aquarium systems and equipment.
- Technology developments are being shared, leading to collaboration and knowledge sharing in tide simulation, CO_2 control, pH control, LEDs, multiplex systems, flow chambers and turbulence.

SCIENTIFIC DIVING

- Stereophotogrammetry, also known as "structure in motion" is a methodology that uses normal imagery (photos, videos, micrographs) to generate 3D point clouds to build a 3D image that has several applications.
- A draft standard operating procedure has been developed and various models (for image processing) interrogated.



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