

Applied
Microbiology
International

appliedmicrobiology.org

Submission to
the European
Commission 'Call for
Evidence' to evaluate
the EU Marine
Strategy Framework
Directive

SUBMISSION TO THE EUROPEAN COMMISSION 'CALL FOR EVIDENCE' TO EVALUATE THE EU MARINE STRATEGY FRAMEWORK DIRECTIVE

Research about our oceans remains chronically under-funded and is often overlooked. Despite the importance of our oceans, SDG 14 (Life Below Water) receives the lowest long-term funding of any of the UN's Sustainable Development Goals.

Ocean Time Series (a sequence of data points collected over time) play an essential role in getting the necessary data for setting baselines on a variety of parameters (ranging from geochemistry to microbiology), helping to observe seasonal and non-seasonal variations, site-to-site variability, as well as on-going trends. They will also provide the necessary information that will help to assess resilience of different types of ecosystems, the impact of human activity, and inform eventual policies for mitigation and remediation of such impacts.

The need for long-term observations is frequently incompatible with the typical funding support, which tends to rely on increasingly shorter funding cycles, aimed directly at applied sciences, or dependent on national/regional political cycles. The issue of long-term support and sustainability of these efforts should be addressed, particularly for on-going, longer-standing initiatives. Selection of a clear set of key representatives – sites or systems that represent major ocean environments – for different types of relevant environmental settings and upgrading them to Research Infrastructure status would be an important step.

Efforts should be made to ensure that methodologies and data collection procedures are consistent throughout. Recent efforts on the establishment of standards (Bermuda Time Series Workshop recommendations) are vital in ensuring global comparability and have extended to multiple Ocean Time Series but they are not yet universally used. Efforts should be made to support wide-spread adoption across Europe.

Several Ocean Time Series already exist across Europe but they traditionally tend to be more associated with coastal settings. The mapping of different types of relevant oceanic ecosystems, representing different types of environmental settings and selection of key representatives should help to ensure proper coverage and added value of this network of European Ocean Observatories.

Further promotion of access to this set of European Ocean Time Series and its scientific outputs would increase visibility and impact. This should be leveraged for outreach activities and for promoting the inclusion of this European Network as part of the golden references in the sectors (such as [BATS](#) in Bermuda, and [ALOHA](#) in Hawaii).

Applied Microbiology International and its members support the current initiative and are keen on providing the necessary backing from the microbiology side, particularly focused on microbial oceanography, microbial ecology, microbial diversity studies (both molecular- and cultivation-dependent) as well from an applied microbiology perspective.

Contributors:

Prof André Antunes, Leader of the Astrobiology Group
Macau University of Science and Technology (MUST) and member of AMI's
Ocean Sustainability Advisory Group