

# ABIOP

Quantification of biofouling  
by means of established protocols  
and associated recommendations

**DURATION: 22 months (2017-2018) | BUDGET: €545K**

## CONTEXT

The extent and effects of biofouling on ORE systems are poorly understood and represent a challenge for engineers in the design and maintenance phases that can impact on LCOE. It is therefore crucial to provide reliable input data needed for engineering based on studies coupling marine biology, marine metrology and structural design.

## OBJECTIVE

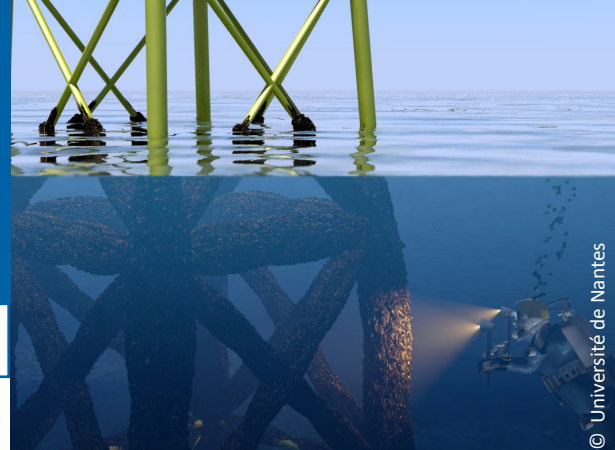
To develop biofouling characterisation and quantification methods to make the design and maintenance of ORE systems more reliable.

## MAIN ACHIEVEMENTS

- Literature review and georeferencing of studies carried out on biofouling on French sea facades
- Review of biofouling issues encountered for the various ORE technologies
- Improvement of image analysis protocols for macrofouling integrating environmental measurement conditions
- Recommendations for optimising the positioning of biological expertise
- Specification of sensor requirements in terms of accuracy and reliability

## CONCLUSION

ABIOP has identified the research needs that will enable better identification and management of the risks relating to the ORE components most sensitive to biofouling. Initial in situ measurements were also carried out to characterise biocolonisation in the Atlantic and Mediterranean from an engineering and environmental point of view. The necessary additional studies are being carried out within the framework of the ABIOP+ project.



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### TECHNOLOGIES



### STAGES OF THE VALUE CHAIN



Preliminary  
studies

Design

Operations  
Maintenance

## RESOURCES GENERATED

- **Bibliographic atlas** of the biofouling of French coasts in an ORE context
- **Databases: bibliographic atlas and image analysis protocols**
- **Video system** with antifouling protection that can be deployed at depths of up to 200 m

## PARTNERS



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