THE CHALLENGE

Sustainable use of marine resources is inevitably linked to our ability to assess and predict drivers of change, and the subsequent impact on marine ecosystems. **MISSION ATLANTIC** will provide knowledge and tools to accurately assess pressures imposed on Atlantic marine ecosystems, identifying the parts most at risk from natural hazards and human activities. Through the development of an Integrated Ecosystems Assessment (IEA) Framework, **MISSION ATLANTIC** will support managers and policy makers to balance the need for environmental protection with sustainable societal development, and provide the necessary science to develop a novel narrative to secure a positive future for the Atlantic Ocean.

PROJECT OBJECTIVES

**MISSION ATLANTIC** will better our understanding of Atlantic Ocean ecosystems and drivers of change that impact marine biodiversity and ocean resources. Through ecosystem-based management approaches and sustainable management strategies, the multidisciplinary team of **MISSION ATLANTIC** ocean experts will:

1. **Assess** the status of ecosystems in the Atlantic Ocean and their resilience to the impact of pressures, including food provision, climate regulation and cultural services.
2. **Map** the present, and establish the future, 3D distributions of Atlantic biomes and pressures on them, to support the sustainable use of marine resources.
3. **Develop** new indicators, tools and technologies to identify risks to, and vulnerabilities of, the Atlantic Ocean under different climate conditions and management scenarios.
4. **Formulate and transfer** assessment guidelines, data, and modelling tools into ecosystem-based management procedures to support sustainable governance of marine resources and the development of the Blue Economy.
5. **Educate** ocean resource managers and researchers in the application of the IEA Framework within countries bordering the North, South and Tropical Atlantic Ocean.

AT A GLANCE

**PROGRAMME:** European Union Horizon 2020

**TYPE OF ACTION:** Research and Innovation Action

**TOPIC:** All Atlantic Ocean Research Alliance Flagship (BG-08-2019-2)

**DURATION:** September 2020 – August 2025 (60 months)

**CONSORTIUM:** 33 partners in 14 countries

**COORDINATOR:** Danmarks Tekniske Universitet (DTU), Denmark

**TOTAL BUDGET:** €11.5 million
ALL ATLANTIC INTEGRATED ECOSYSTEM ASSESSMENT (IEA)

Working towards an operational IEA for the entire Atlantic Basin, MISSION ATLANTIC will develop and systematically apply IEAs to seven regional case studies in sub-Arctic and Tropical regions of the Atlantic using a five-step process:

1. **Scoping**: Scope key management objectives and human activities, and the ecosystem components affected by these, through a formal process of stakeholder engagement.

2. **Indicators**: Develop a suite of indicators and reference levels for assessing status, drivers and resilience of ecosystems, as well as the occurrence of tipping points.

3. **Risk Analyses**: Assess risks and vulnerabilities of ecosystems to present impacts and future changes through a suite of qualitative and quantitative approaches.

4. **Scenario testing**: Simulate ecosystem state and dynamics under various scenarios of climate change, resource exploitation and social development using end-to-end ecosystem models.

5. **Refine**: Evaluate management options for achieving desired outcomes, reflecting the needs and trade-offs between ecological, economic and social objectives.

**Case Studies**

1. Norwegian Sea
2. North Mid Atlantic Ridge
3. Celtic Sea
4. Canary Current
5. South Mid Atlantic Ridge
6. South Brazilian Shelf
7. Benguela Current

**IMPARTS**

Engaging scientists, marine intergovernmental advisory bodies, and resource managers in the IEA process, MISSION ATLANTIC’s co-creation methodology, will ensure uptake of project results that will:

1. **Contribute** to the sustainable protection of marine and coastal ecosystems (UN SDG 14) and the implementation of the Belém Statement.

2. **Improve** monitoring, modelling, prediction and management capacities.

3. **Increase** understanding of the risks and vulnerabilities, including climate change, of Atlantic ecosystems.

4. **Develop** new technologies to service societal needs and boost competitiveness of the EU Blue Economy through capacity building.

**CONSORTIUM**

MISSION ATLANTIC brings together ocean experts from 33 beneficiaries (partner organisations), from 14 countries across four continents: Europe (Belgium, Denmark, France, Germany, Iceland, Ireland, Norway, Portugal, Spain, Sweden and United Kingdom), Africa (South Africa), North America (Canada) and South America (Brazil).