



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

MARINE ECOSYSTEMS, SUSTAINABLE MANAGEMENT AND RESILIENCE TO ANTHROPIC IMPACTS

Developing scientific knowledge, technology, public outreach and capacity building to guide and motivate management actions to preserve marine biodiversity, enhance resilience to a variety of stressors, sustain critical ecosystem functions and services, and energise future sustainability.

Creating safe, resilient and sustainable marine ecosystems is a global objective requiring innovative and coordinated solutions. The University of Bologna addresses the multidisciplinary challenges needed to limit human impacts on marine species and habitats, maintain vital ecosystem services, and promote sustainable natural resource use and human wellbeing.

Research at the University of Bologna covers a wide range of issues:

- Monitoring/modelling the marine environmental status, and developing risk and vulnerability indicators to quantify the effects of human impacts and comply with the achievement of the “Good Environmental state” as from the EU Marine Strategy Framework Directory
- Predicting the adaptation potential of marine socio-ecological systems
- Identifying the ecological and socio-economic mechanisms enhancing the resilience of natural systems to multiple stressors and the provision of ecosystem services
- Designing conservation and restoration strategies, nature-based solutions, and ecosystem-based management
- Tools, include field/lab experiments, genetic and demographic data, environmental metabarcoding, analyses of microbiome interactions, GIS, modelling of coupled physical biogeochemical ocean dynamics, ecosystem services evaluation, marine citizen science and participatory approaches

HIGHLIGHTS

Ecosystem-based solutions for waterfronts, ports & offshore platforms:

H2020 **OPERANDUM** - *OPEn-air laboRAtories for Nature baseD solutions to Manage environmental risks*. LIFE [MARINA PLAN PLUS](#) - *Reliable & innovative technology for the realization of a sustainable marine and coastal seabed management plan*.

Interreg Italy-Croatia [CASCADE](#) - *CoAStal and marine waters integrated monitoring systems for ecosystems proteCtion AnD managemEnt*.

Analysis of fishery stock depletion & evolutionary potential erosion:

H2020 [STOCKMED](#) - *Stock units: identification of distinct biological units for different fish & shellfish species and among different GFCM-GSA*; EU JRC Tender [MEDBLUESGEN](#) - *Mediterranean blue shark genetics: population genetic study on Mediterranean blue shark for stock identification and conservation*.

Interreg Italy-Croatia [MARLESS](#) - *MARine Litter cross-border awareNess and innovation actions*.

Impacts of marine hazards &, pollutants, including microplastics, gas and oil: .

[BURNIMPACT](#) - *BurnImpact mesocosm experiment in the frame of AQUACOSM scheme*.

Monitoring, conservation & restoration of marine biodiversity:

LIFE NATURE [LIFE EEL](#) - *Urgent measures in the Eastern Mediterranean for the long term conservation of endangered European eel*.

Interreg Italy Croatia [SUSHI DROP](#) - *SUstainable fiSHeries with DRONes data Processing*.