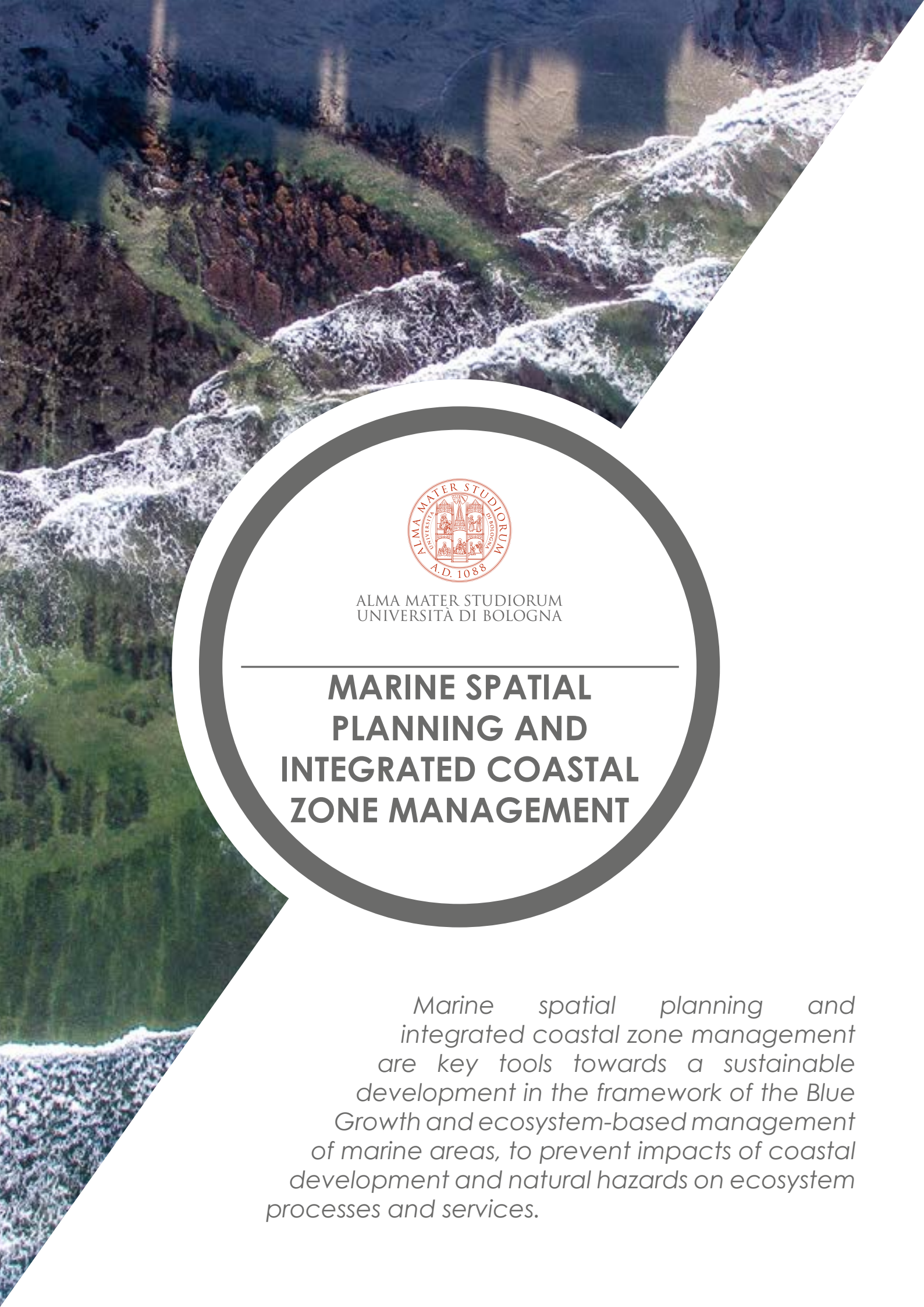

ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

MARINE SPATIAL PLANNING AND INTEGRATED COASTAL ZONE MANAGEMENT

Marine spatial planning and integrated coastal zone management are key tools towards a sustainable development in the framework of the Blue Growth and ecosystem-based management of marine areas, to prevent impacts of coastal development and natural hazards on ecosystem processes and services.

The intensification of traditional economic activities and exploitation of new resources in coastal and marine waters can lead to the overexploitation of resources, the University of Bologna research works on the following issues:

- Identifying the possibility for a coastal development, highlighting the vulnerabilities and priorities for sustainable management of coastal areas, integrating conservation necessities of the natural assets (marine and coastal ecosystems)
- Developing innovative methodologies for ecosystem monitoring and management, risk assessment, protection of marine habitats, species invasions, sustainable fisheries, sustainable coastal defence schemes, mitigation of the impact of oil and gas industries, ecotoxicology and emerging pollutants, harmful phytoplankton blooms impacts on marine organisms and human health
- Designing and planning ecosystem-based management of marine areas with the aim of guarantying the economic and social development as well as preserving the ecosystem processes and services that are essential for their economic development
- Evaluating threats to natural habitats, ecosystems and biodiversity, and preventing conflicts between different users

HIGHLIGHTS

Development and application of innovative methodologies to the contamination, quality and risk assessment, and monitoring of coastal ecosystems:

FP7 ERC **CoralWarm** - *Corals and Global Warming: the Mediterranean versus the Red Sea international training in Water and Coastal Management*. FP7 **THESEUS** - *Innovative technologies for safer European coasts in a changing climate*, **MERMAID** - *Innovative Multi-purpose off-shore platforms: planning, design & operation*; **MEECE** - *Marine Ecosystem Evolution in a Changing Environment*. JPI **PLASTOX** - *Direct and indirect ecotoxicological impacts of microplastics on marine organisms*. JPI **SEAMoBB** - *Solutions for SEmi-Automated Monitoring of Benthic Biodiversity*. ITN **MMMPA** - Training Network for Monitoring Mediterranean Marine Protected Areas. **BurnImpact** mesocosm experiment.

Erasmus Mundus Joint Master Degree: **WACOMA** - *Water and Coastal Management*; **FishMed** *Innovative technologies and sustainable use of Mediterranean Sea fishery and biological resource*.

Trans-boundary implementation of the EU Water Framework and Marine Strategy directives: Interreg **ECO GOVERNANCE** - *Ecological foundations for the governance of the Adriatic coastal space: ecology, monitoring and management of transitional aquatic ecosystems*. LIFE **MARINA PLAN PLUS** *Reliable and innovative technology for the realization of a sustainable MARINe And coastal seabed management PLAN*.