

SCIENTIFIC RECOMMENDATIONS



- I**
Establish integrated transdisciplinary research on coastal social-ecological systems

This should address knowledge gaps for single pressure and site-specific multiple, cumulative pressure-response relationships, and tipping points.



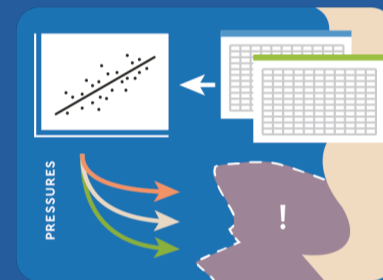
- II**
Develop sufficient observational, monitoring and data capacity

Increased investment in observations, monitoring, Big Data and artificial intelligence is needed. Data should be integrated into an interdisciplinary platform with resilience indicators.



- III**
Develop and operationalise standardised coastal resilience indicators for Europe

A pan-European framework to develop clarity and standardisation in the definition and practice of coastal resilience is needed to operationalise indicators in practice.



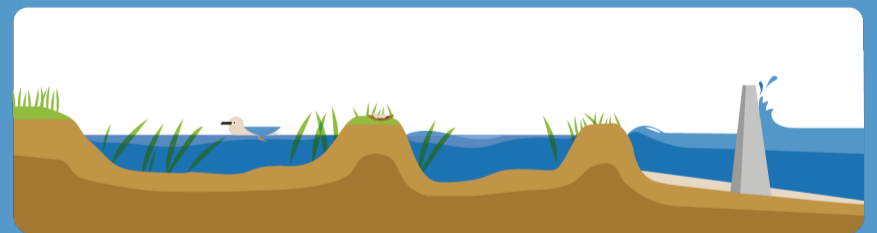
- IV**
Improve model prediction capacity

This is needed to forecast and develop future scenarios on the magnitude, timing, location and impacts of multiple, cumulative pressures.

- V**
Invest in research on nature-based and hybrid solutions

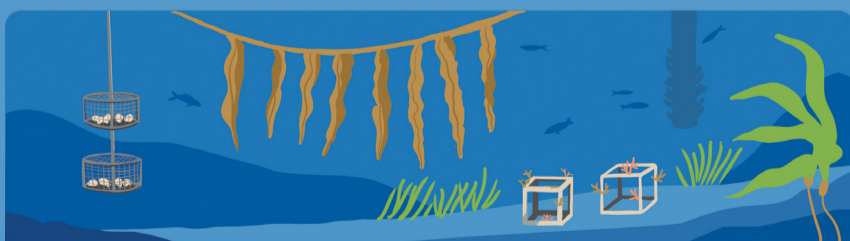
The environmental and socio-economic co-benefits, site specific feasibility, and impacts of various combinations of seaward and landward Nature-based Solutions should be identified.

Examples of Nature-based Solutions



HYBRID

Marsh-levee systems; artificial beaches in front of seawalls; dune-dyke systems.



SEAWARD

Conservation and restoration of marine coastal habitats; vertical ocean farming; marine protected areas; low trophic aquaculture.



LANDWARD

Conservation and restoration of landward coastal habitats; vegetated dunes and marshes; 'green' structural engineering.