



OCEAN-DRIVEN SOLUTIONS FOR A **SUSTAINABLE ECONOMY** AND **RESILIENT COMMUNITIES**

Introduction to the Coastal Resilience Challenge

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PROGRAMME OF THE
EUROPEAN UNION



In collaboration with
the UN OD Data
Coordination Office



DCC-CR FRAMEWORK



DECADE CHALLENGES

- 1 Understand and beat marine pollution
- 2 Protect and restore ecosystems and biodiversity
- 3 Sustainably feed the global population
- 4 Develop a sustainable and equitable ocean economy
- 5 Unlock ocean-based solutions to climate change
- 6 Increase community resilience to ocean hazards**
- 7 Expand the global ocean observing system
- 8 Create a digital representation of the ocean
- 9 Skills, knowledge and technology for all
- 10 Change humanity's relationship with the ocean



'THE SCIENCE WE NEED'

UN Decade of Ocean
Science for Sustainable
Development

ENDORSED OCEAN DECADE ACTIONS

47 PROGRAMMES
277 PROJECTS
85 CONTRIBUTIONS
575 ACTIVITIES



DECADE ACTIONS LED
BY PARTNERS FROM
60
COUNTRIES

DECADE ADVISORY BOARD

15 MEMBERS
14 COUNTRIES
8 WOMEN
7 MEN
5 MEETINGS



DECADE OUTCOMES

'THE OCEAN WE WANT'



A clean ocean



A healthy and resilient ocean



A productive ocean



A predicted ocean



A safe ocean



An accessible ocean



An inspiring and engaging ocean



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DCC-CR FRAMEWORK

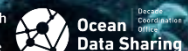
The main mission of the DCC-CR is to **strengthen the connection** between the new science and technology development in the Ocean Decade and coastal stakeholders, implementing innovative **co-design practices** for coastal resilience.



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DCC-CR Vision 2030 White Paper 6: Increase Community Resilience to Ocean Hazards

The White Paper has been published in 2024:
download it here!



#EUdata4OceanDecade



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*ECOPs



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Vision 2030 White Paper 6: Strategic ambition

- Establish robust, people-centered systems for risk mitigation.
- Enhance scientific and institutional frameworks for coastal resilience.

Outcome 1

Design ‘people-centred’ multi-hazard early warning systems

Characteristics:

- Stakeholder engagement
- Responsibility sharing
- Accessible communication
- Institutional capacity building

GOAL

A safe ocean where life and livelihoods are protected from ocean-related hazards

Outcome 2

Design adaptation planning strategies to increase coastal resilience

Use the new data from the Ocean Decade to prepare updated plans and solutions, also in view of the Marine Spatial Planning process



Relevant Ocean and Coastal Hazards



Geophysical/Geological: Tsunamis, Landslides, Subsidence, Volcanic eruptions, Coastal erosion, Earthquakes



Biological: Harmful algal blooms, invasive species, aquatic diseases, nuisance blooms



Ocean, Weather, Hydrology and Climate: Tropical and extratropical cyclones and storms, sea-level rise, storm surge, meteo-tsunami, coastal flooding, waves and wave runup, currents, marine heat waves, glacial melt, heavy rainfall and river flooding, saltwater intrusions, droughts



Local Anthropogenic: Coastal urbanization pressures, coastal wastewater system outflow, marine pollution, overfishing, chemical spills, oil spills, nuclear waste, agricultural runoff, coastal tourism pressures, political interference and corruption, maladaptive planning



Ecological: Wetland degradation, acidification, de-oxygenation, biodiversity loss, seabed habitat loss, coral bleaching, eutrophication, connectivity



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Components of Coastal Resilience



Risk Assessment

- Multi-hazard evaluation frameworks
- Multi-level, multi-sector risk analysis
- Exposure and vulnerability analysis



Risk Reduction

- Monitoring, Forecasting and Early warning systems (multi-hazard)
- Warning Dissemination & Communication
- Sectoral medium to long term planning (zoning, infrastructure)
- Nature-based solutions
- Digital twins

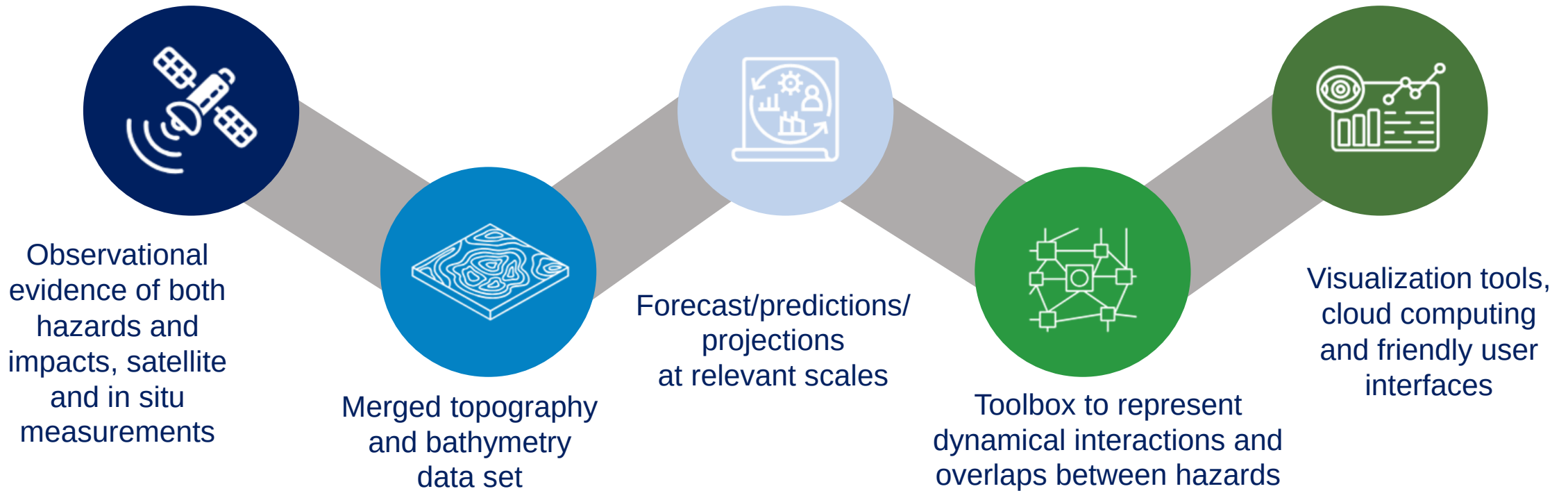


Institutional/ Governance/ Social Transformation

- Marine and Maritime Spatial Planning
- Governance Framework
- Disaster recovery planning
- Equitable coastal resilience
- Government investments, financing and insurance
- Capacity building
- Corporate social responsibility

Multi-hazard Evaluation Framework: what is needed?

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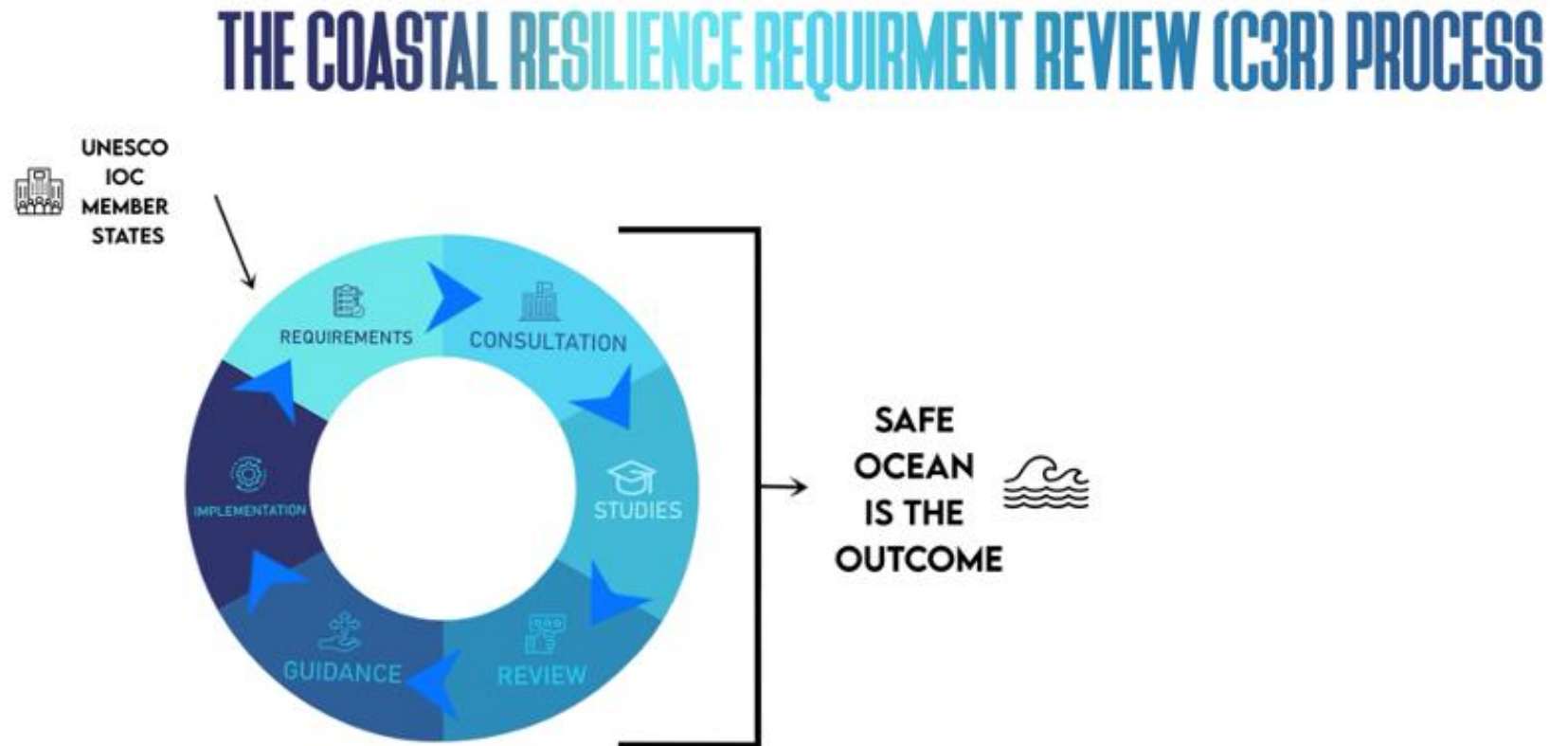
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Implementation Pathways

Key Recommendations:

- Develop open, accessible information systems for risk management using advanced technologies and data-sharing frameworks.
- Integrate coastal resilience targets into global Sustainable Development Goals (SDGs).
- Launch a Coastal Resilience Review of Requirements (C3R) for stakeholder needs assessment and progress tracking.



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