

Strengthening coastal resilience through participatory governance and integrated planning

How A-AAGORA connects participatory knowledge, coastal planning, and digital monitoring to support adaptation to climate change and resilience in coastal systems



A-AAGORA is positioned within the EU Mission “**Restore our Ocean and Waters by 2030**” as a lighthouse initiative demonstrating how participatory governance and integrated coastal planning can strengthen climate resilience across coastal regions. This policy brief responds to the need for actionable guidance by translating the A-AAGORA approach into targeted recommendations for decision-makers, supporting the integration of local knowledge, planning instruments, and digital monitoring tools into more coherent and adaptive coastal governance.

Key messages

Coastal adaptation remains fragmented across governance scales. Coastal communities, municipalities, and management authorities often rely on dispersed information, making it difficult to identify shared priorities and align planning with local realities.

A-AAGORA demonstrates an integrated approach. The project shows how participatory knowledge gathered through stakeholder workshops and digital participatory mapping can relate to coastal planning instruments, revealing areas of alignment, gaps, and opportunities for improvement.

Georeferenced cross-referencing supports more informed decisions. Linking local perceptions with planned actions helps identify where existing measures respond to community concerns and where additional coordination or adjustment is needed.

Digital monitoring strengthens implementation and accountability. The development of a monitoring form in ArcGIS Survey123 Connect provides a practical basis for tracking implementation, improving transparency, participation, and institutional follow-up.

Introduction

Across Europe, coastal regions face growing pressures from climate change, ecosystem degradation, and competing land and sea uses. Yet adaptation and resilience planning often remain fragmented, with local perceptions, sectoral knowledge, and formal planning processes insufficiently connected.

A-AAGORA addresses this gap by validating an approach that combines participatory governance, integrated coastal planning, and digital monitoring. Through stakeholder workshops and digital participatory mapping, the project gathers spatially explicit knowledge on where resilience exists for people and nature and cross-references these perceptions with planning actions to identify alignments, conflicts, and emerging priorities.

In parallel, A-AAGORA supports continuous follow-up through a digital monitoring form developed in ArcGIS Survey123 Connect, creating a basis for more transparent, adaptive, and collaborative implementation of coastal actions.

Example from Portugal: aligning local perceptions and coastal planning

In the Portuguese demonstration area, A-AAGORA co-developed, together with the Portuguese Environment Agency (APA), an integrated approach to connect local knowledge with coastal planning. Stakeholder workshops and digital participatory mapping, implemented through the Maptionnaire platform, were used to collect spatially explicit perceptions of coastal resilience, including areas affected by coastal erosion and priority zones for intervention.

These georeferenced inputs were systematically cross-referenced with the actions defined in the Programa da Orla Costeira Ovar–Marinha Grande (POC-OMG), enabling the identification of alignments between local perceptions and planned measures, as well as gaps requiring further coordination and adaptation.

In parallel, a digital monitoring form developed in ArcGIS Survey123 Connect established a practical mechanism for continuous, transparent, and collaborative follow-up of implementation, supporting adaptive management and accountability across responsible entities.



Relevance to legislation and strategic frameworks

This Policy Brief contributes to the implementation of key European policy frameworks, including the EU Mission “Restore our Ocean and Waters by 2030”, by supporting participatory coastal governance, better alignment between planning and local knowledge, and more adaptive implementation of coastal actions.

It also supports broader European objectives related to climate adaptation, resilience, and sustainable coastal management by strengthening the coherence between community knowledge, territorial planning, and implementation monitoring.

In the Portuguese context, the approach is relevant to the National Strategy for Adaptation to Climate Change and to the implementation of the Programme of the Coastal Zone Ovar–Marinha Grande (POC-OMG) under Resolution of the Council of Ministers No. 112/2017, of 10 August, particularly through its contribution to continuous, dynamic, and cyclical monitoring.

Recommendations

Embed participatory knowledge into coastal planning and decision-making Regional and local authorities should systematically integrate knowledge gathered through stakeholder engagement and digital participatory mapping into coastal planning processes. This strengthens the legitimacy of decisions, improves the identification of priorities, and helps align planned measures with local realities.

Use georeferenced cross-referencing to improve coherence and prioritization Planning authorities should use spatial cross-referencing between local perceptions and planned actions to identify areas of alignment, gaps, and emerging conflicts. This can support more coherent prioritisation, targeted adaptation measures, and better coordination across responsible institutions.

Institutionalise digital monitoring and transparent implementation follow-up Digital monitoring tools, including the Survey123 Connect form developed in A-AAGORA, should be embedded in implementation cycles to strengthen reporting, transparency, accountability, and adaptive follow-up over time.

Strengthen collaborative governance for long-term resilience and replication Authorities should support regular collaboration among coastal management bodies, municipalities, research organisations, and other stakeholders, while documenting and sharing methodologies that combine participatory mapping, planning cross-referencing, and digital monitoring to facilitate replication in other coastal areas.

Additional information

A-AAGORA DEMO-PT [platform](#) and [book](#) (in Portuguese)

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Digital Knowledge System



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