

AROUSA lab

Arousa-Lab Blueprint

Participatory marine restoration and coastal resilience in the Ria de Arousa



Key message

- Arousa-Lab turns the Ria de Arousa into a real-world living lab for coastal restoration.
- It combines ecological pilots, community mobilisation, education and governance.
- The model can be replicated where coastal actors are ready to co-create practical solutions.

What this blueprint helps others replicate

A partnership-based route to adapt tested marine restoration methods, mobilise local actors and monitor results in coastal communities.

Policy relevance

Why public authorities and coastal managers should care

- Supports the European Mission to Restore our Ocean and Waters through local, practical restoration.
- Aligns with A-AAGORA by transferring methods from European demonstration regions into an associated region.
- Contributes to coastal protection, biodiversity recovery, climate resilience and participatory governance.
- Creates an inclusive model by involving people with intellectual disabilities in awareness and mobilisation activities.

The local context

The Ria de Arousa is environmentally rich and economically strategic for Galicia. It is an ideal place to connect science, traditional maritime knowledge, fisheries and shellfish activity, public administration and citizen action. Arousa-Lab was created by AMICOS under A-AAGORA cascade funding to speed up learning and action on coastal restoration and marine biodiversity.

What is the challenge?

Coastal and marine ecosystems in the Ria de Arousa face linked pressures: habitat degradation, waste, climate-related vulnerability and the need to sustain productive maritime activities. Action is needed, but isolated projects can struggle to keep local commitment, align permissions and partners, and translate scientific methods into practical activities.

The core challenge is therefore not only ecological. It is also social and institutional: building a stable working space where fisheries, public authorities, researchers, schools, companies and citizens can co-design, test and maintain restoration actions over time.

Challenge framed positively

Arousa-Lab treats the Ria as a shared restoration platform: a place where ecological recovery, learning, local stewardship and social inclusion can reinforce each other.

An innovative solution

Arousa-Lab is a participatory living lab for marine restoration in which local actors co-create, test and adapt solutions in the real coastal environment of the Ria de Arousa. It brings together a Social Committee, knowledge transfer from A-AAGORA demonstration regions, direct restoration pilots, environmental education, citizen science and marine litter actions.

The innovation lies in the integration: Arousa-Lab does not treat restoration, awareness and governance as separate workstreams. It connects them so that community learning supports practical restoration, while restoration results give local people visible reasons to remain involved.

The Arousa-Lab model

A repeatable living-lab pathway for participatory marine restoration



What is this innovative solution?

Headline solution

Arousa-Lab embeds participatory marine restoration in a local governance model so coastal communities can restore habitats, learn together and sustain action beyond a single project.

Implementation starts by convening actors around a shared diagnosis of coastal challenges, then adapts tested methods from the A-AAGORA demonstration regions to the Galician context. The approach combines a Social Committee, field pilots for habitat restoration, education and clean-up programmes, and continued monitoring of social and ecological outcomes.



The benefits the solution produces

Arousa-Lab has already produced a mix of social, governance and ecological benefits. The most important benefit is the creation of a practical bridge between local people and marine restoration: residents, schools, companies, cofradías and institutions are not just informed; they become part of the work.

Marine ecosystem recovery Restoration pilots contribute directly to priority habitats through gorgonian restoration and planting/reintroduction of <i>Zostera</i> and <i>Laminaria</i> .	Community stewardship More than 500 people took part across awareness, clean-up and engagement activities, strengthening a culture of shared responsibility.
Inclusive governance The Social Committee gives fisheries, public bodies, education, science, business and social entities a stable place to work together.	Replicable knowledge Arousa-Lab adapts solutions transferred from A-AAGORA demo regions and documents how they can work in Galicia.

Arousa-Lab at a glance

Real-world living lab indicators reported for the 2025 activity cycle



How developed is the solution?

The solution is at an advanced pilot and demonstration stage. The governance structure has been created, the Social Committee has met repeatedly, international exchanges with A-AAGORA demo regions have taken place, and ecological restoration pilots have been implemented with measurable outputs. The next step is continued monitoring: survival and ecological succession of restored habitats, long-term behaviour change, and formal uptake of the model by other coastal territories.

Readiness summary
High practical readiness for replication as a living-lab model, with long-term ecological validation still dependent on monitoring and continued local commitment.

Where could the solution also be applied to?

This blueprint is most relevant for coastal areas that combine ecological vulnerability with active maritime use and a network of local institutions. It is especially suitable where restoration cannot succeed through technical action alone and where long-term stewardship must be built with the people who use, manage and care for the coast.

- Rias, estuaries, bays, ports or nearshore zones with degraded or vulnerable marine habitats.
- Places with fisheries, shellfish harvesting, aquaculture or maritime businesses that can support sustainable practice.
- Communities with schools, NGOs, volunteer groups and local authorities willing to co-create activities.
- Coastal territories that can benefit from methods already tested in other regions but must adapt them to local ecology and governance.

Who is this relevant to?

Local and regional authorities coastal policy, permissions, funding, scaling	Cofradias and fisheries actors traditional knowledge, access, sustainable practice	Research and technical partners methods, monitoring, ecological indicators
Schools and educators marine literacy and youth engagement	Social inclusion organisations accessible participation and community facilitation	Companies and volunteers clean-ups, logistics, sponsorship and stewardship

What do you need to have in place?

A clear local problem Define the habitat, pollution, resilience or stewardship challenge that justifies action.	A trusted convenor Identify one organisation able to coordinate partners and communicate across sectors.
A multi-actor group Bring together authorities, fisheries, research, education, business, NGOs and citizens.	Restoration know-how Select appropriate methods, sites, species and safety protocols with expert input.
Access and permissions Secure legal permissions, protected-area coordination, insurance and field logistics.	Participation capacity Plan inclusive facilitation, school engagement, citizen science and volunteer support.
Monitoring plan Agree simple indicators before field work begins so results can be compared over time.	Funding and continuity Budget for coordination, boats, materials, monitoring, communications and follow-up.

Key components of implementation

- 1. Convene the Social Committee.** Map and invite the people with knowledge, influence and responsibility: cofradías, public bodies, science partners, schools, local businesses, social organisations and community representatives.
- 2. Diagnose and prioritise.** Use the group to identify ecological pressures, priority restoration zones, sustainable fisheries practices and outreach needs.
- 3. Transfer and adapt methods.** Review A-AAGORA demo-region protocols and adapt them to local Galician conditions, permissions and available partners.
- 4. Deliver restoration pilots.** Carry out field actions such as gorgonian restoration, *Zostera* planting and *Laminaria* reintroduction with technical experts and local partners.
- 5. Mobilise awareness and citizen science.** Run school sessions, workshops, clean-ups and observation activities that connect people to habitats and responsible marine behaviour.
- 6. Document, monitor and scale.** Record participation and ecological outputs, share evidence with partners, and prepare the model for replication or expansion.

Monitoring your success

Monitoring should be designed from the start so that the project can show both ecological progress and the social conditions that make restoration viable. In Arousa-Lab, the most useful monitoring categories are ecological recovery, participation, governance and learning transfer.

Ecological indicators	Social indicators	Governance indicators
• Number and location of restored gorgonians, planted <i>Zostera</i> and reintroduced <i>Laminaria</i>. • Survival, growth and habitat condition at agreed intervals. • Associated biodiversity and visible signs of ecological succession. • Marine litter quantities and types collected during clean-ups.	• Participants by activity, age group and organisation type. • Number and diversity of schools, cofradías, companies and volunteers engaged. • Evidence of changed awareness or pro-environmental behaviour. • Inclusive participation, including roles for people with disabilities.	• Social Committee meetings, attendance and decisions. • Joint actions, agreements or shared protocols created. • Use of outputs by local or regional authorities. • Replication enquiries, new partnerships and follow-up funding.



Monitoring tip

Keep indicators simple enough for local partners to use consistently, but robust enough to support decisions and future funding.

Costs and timeframes

The activity report does not provide a detailed budget. The guidance below is therefore a planning framework based on the type and scale of activities delivered by Arousa-Lab. Actual costs will vary depending on local salaries, boat access, diving needs, restoration materials, monitoring intensity and whether partners can contribute in-kind support.

Activity package	Typical timeframe	Indicative cost band	What drives cost
Set-up and governance	1-3 months	Low to medium	Coordination time, facilitation, meeting venues, translation or accessibility support.
Diagnosis and permissions	2-4 months	Low to medium	Technical advice, site visits, permitting and stakeholder time.
Restoration pilots	3-12 months	Medium to high	Species/material sourcing, expert divers, boats, equipment, safety and monitoring.
Awareness and clean-ups	Ongoing	Low to medium	Materials, transport, facilitation, insurance, waste handling and communications.
Monitoring and scaling	12+ months	Medium	Field surveys, data management, reporting, partner coordination and replication support.

What can increase cost or delay?

- Difficulty sustaining local participation after the first round of activities.
- Weather, tides and sea conditions that reduce available field days.
- Permissions or coordination requirements in protected areas or working maritime zones.
- Shortages of specialised expertise, divers, boat time or restoration materials.
- Unclear baseline data or monitoring methods that make results harder to evidence.
- Need for extra accessibility, insurance, transport or safeguarding measures for community activities.
- Funding gaps between pilot implementation and the longer monitoring period.

Key contact - who to talk to about your application idea

Primary contact point

Arousa-Lab coordination team

Asociacion AMICOS

Email: info@amicos.org

Website: www.amicos.org

Before contacting them, prepare:

- your coastal challenge and target area
- which actors are already involved
- possible restoration habitats or species
- available permissions, assets and funding
- how you will monitor outcomes

Further information

- Arousa-Lab activity report / Memoria Xustificativa de Actividades, AMICOS, 2025.
- A-AAGORA project resources and demonstration-region methods for marine restoration and coastal resilience.
- Local restoration protocols, permissions and monitoring guidance agreed with technical experts and public authorities.
- Education and communication materials developed for schools, volunteers and citizen-science activities.
- Records from the Social Committee, including decisions, partner lists and follow-up actions.

Blueprint summary

Arousa-Lab shows how a coastal community can move from awareness to organised restoration by using a living lab: convene the right actors, adapt proven methods, test actions visibly, involve people inclusively, and monitor what changes. The model is practical, modular and scalable, but its success depends on keeping the local partnership active long enough for ecological and social benefits to mature.

