# Natural and cultural heritage in coastal regions

A Policy Brief from the Policy Learning Platform on Environment and resource efficiency

July 2022

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## Summary

Seas and oceans cover over **70%** of our planet, hold 97% of water and <u>sustain 80% of all life forms</u>. As the world's largest carbon sinks, they produce at least <u>50% of oxygen</u> and are an important food source. Coastal and marine regions are, however, under numerous environmental and anthropogenic pressures, which have significant impacts on local natural and cultural heritage. To transform the current management of these areas, the EU has published a <u>Sustainable Blue Economy</u> strategy, which presents an opportunity for policy makers, scientists, businesses and citizens to create resilient seas and coastal regions.

The present policy brief provides an outlook on EU initiatives that local and regional authorities can refer to for improving their management of cultural and natural heritage in coasts, in compliance with the EU Directives. It also presents a selection of Interreg Europe good practices and EU-funded projects of particular interest and a high degree of replicability and adaptability to other municipal contexts.

## Current state of natural and cultural heritage in coastal regions

The coastline of EU member states and the United Kingdom is 68 000 km long, more than three times longer than the one of the United States and almost twice the one of Russia. Nearly half of the EU population lives less than 50 km away from the sea and many more spend their holidays there. Coastal areas are the most popular holiday destinations, **tourism** sector in these areas generates EUR **183 billion** in gross value added and represents over one third of the maritime economy.[1]

Ports, waterfront buildings, shipyards, fishing fleets, lighthouses and shipwrecks are all an important element of European cultural heritage. Coastal fishing villages and towns have unique architecture, which defines local identity and landscape. Communities around the coast are interconnected with each other and are often faced with similar challenges.[2] This heritage is particularly vulnerable to spatial changes in transport, industrialisation of fisheries and use of coastal zones for tourism.
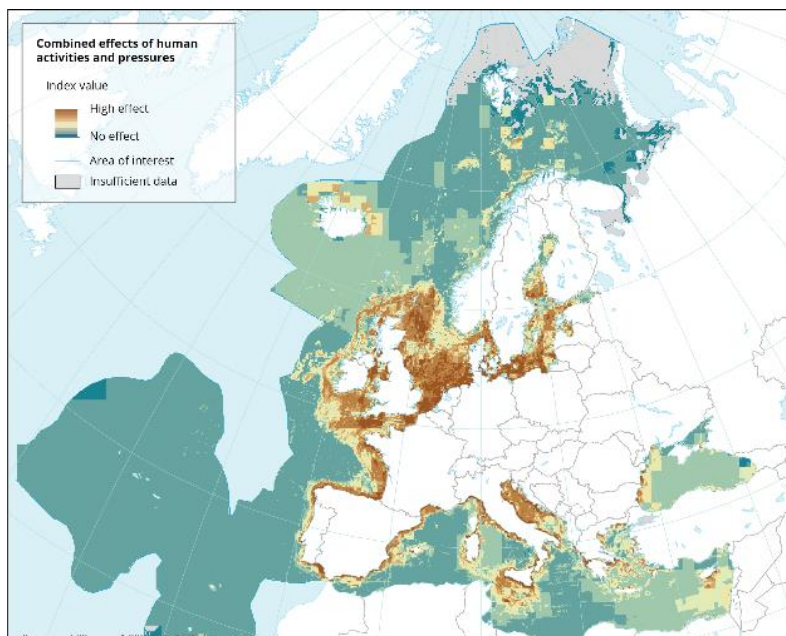
European coasts and seas host a vast range of ecosystems, with variety of species and habitats. "The Mediterranean Sea, for example, is one of the world's hot spots for biodiversity. Its highly diverse ecosystems host up to around **18% of the world's macroscopic marine biodiversity**", according to the <u>European Environmental Agency</u>. Unfortunately, most of European coastal and marine areas (<u>93%</u>) are under pressures, which affect both cultural and natural heritage. These include urbanisation, tourism, pollution (nutrients, underwater noise and litter), intensive fishery, invasive species and climate change related impacts such as ocean warming, sea level rise, acidification or coastal erosion. Luckily, many policymakers are finding innovative ways to improve the current state of natural and cultural heritage in coastal regions.

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[1] Europe's seas and coasts: https://www.eea.europa.eu/themes/water/europes-seas-and-coasts

[2] Heritage in European Coastal Landscapes – Four Reasons for Inter-regional Knowledge Exchange, Egberts (2019),

# Blue Economy and related funding opportunities

**Guest contribution from the European Commission, DG Mare**
Author: Felix Leinemann

**In your view, what are the main challenges and barriers that coastal regions are facing?**

Europe is a maritime continent with a coastline stretching from the Arctic to the Mediterranean and from the Atlantic to the Black Sea. Its sea basins and coastal regions provide a unique source of natural and cultural wealth. Tackling the climate and biodiversity crises requires healthy seas and a sustainable use of their resources to create alternatives to fossil fuels and resource-intensive food production. All blue economy sectors including fisheries, aquaculture, coastal tourism, maritime transport, port activities and shipbuilding will have to reduce their environmental and climate impact.

The transformation towards sustainability will require investing in innovative technologies, but also behaviours. Integrating this innovation in the cultural and natural heritage will be a challenge, but also offers immense opportunities to coastal communities. Developing a common vision will be essential.

**Which key activities are supporting climate adaptation and coastal resilience?**

According to the European Commission's 2022 Blue Economy Report, in the absence of climate action, the damage of rising sea levels could cause a direct loss of more than EUR 200 billion per year in the EU by 2080, mostly due to damage to buildings in coastal areas. Indirect impacts on society may even cost up to EUR 500 billion worth of services in coastal regions, mostly by damage to water ecosystems and coastal erosion. This underlines once again the need for joint action on climate change and the transition to a sustainable blue economy.

Wind, wave and tidal energy, sustainable aquaculture or even seaweed and algae production, development of innovative fishing gear or techniques, or restoration of marine ecosystems will create new green jobs and businesses in coastal regions and beyond. Coastal tourism can actually benefit from well-managed marine protected areas, as indicated in the transition pathway for tourism.

**What funding opportunities exist for a sustainable blue economy?**

Specifically for coastal communities, the European Maritime Fisheries and Aquaculture Fund supports community-led local development (CLLD) to foster a sustainable blue economy. The Fisheries and Aquaculture Monitoring, Evaluation and Local Support Network (FAMENET) communicates, offers advice on CLLD and supports a network of local action groups.

The European Commission is also mobilising private investment through InvestEU Blue Economy, the scaled-up equity initiative that builds on the BlueInvest Fund pilot. Beyond this dedicated support, sustainable blue economy projects can also be supported through the EU Programme for the Environment and Climate Action (LIFE), as well as through Horizon Europe and notably its Mission Restore our Ocean and Waters.

## European policy

Environmental challenges are increasingly systemic and deeply rooted in the globalised economic system of production and consumption. According to predictions, sea levels could reach **37cm by 2080**[3], causing land loss that threatens infrastructure, livelihoods and heritage sites around coasts. Combined with urbanisation, mass tourism, population decline in rural areas and the loss of (mostly fishing related) traditions and occupations, costal cultural heritage is likely endangered. In order to tackle these challenges, European coastal regions and seas require a **holistic policy response**, which spans water management, ecosystems, pollution, climate change, fisheries, spatial planning and cultural heritage.

## Coastal and marine policies

One of the first systemic policies for marine and coastal areas introduced by the EU was the Marine Strategy Framework Directive (MSFD), which came into force in 2008. It presented an integrated approach and aimed to understand anthropogenic pressures on coasts and seas, along with their impact on marine ecosystems. This Directive represented the foundation for other related policies, for example the Single-use Plastics Directive, or the Maritime Spatial Planning Directive, which requires EU Member States to develop a spatial approach to improve sustainability of socioeconomic activities in marine areas. Member States that have adopted maritime spatial plans so far have aspired to an ecosystem-based approach considering environmental, economic, social and safety aspects in their plans. The EU also created an Integrated Coastal Zone Management system, a dynamic multidisciplinary process to foster sustainable management of coastal zones. It uses informed participation and collaboration of all stakeholders to achieve a long-term balance between environmental, social, economic, cultural and recreational objectives. The Water Framework Directive regulates the ecological status of rivers and coastal waters by limiting nutrient and chemical pollution, while coastal and marine habitats and species are protected under the Habitats and Species Directives.

**Activities and impacts in the coastal zone**



Image source: Spaceborne L-Band Synthetic Aperture Radar Data for Geoscientific Analyses in Coastal Land Applications: A Review

In the context of the European Green Deal, the EU developed a new approach to a sustainable blue economy. Such economy "enables society to obtain value from the oceans and coastal regions, whilst respecting their long-term ability to regenerate and endure such activities through the implementation of

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[3] Nicholls, R. J., Hoozemans, F. M. J., & Marchand, M. (1999). Increasing flood risk and wetland losses due to global sea-level rise: Regional and global analyses. Global Environmental Change, 9, S69-S87

sustainable practices"[4]. Among its objectives is the **decarbonisation of maritime sector and fishing**, which should decrease greenhouse gas emissions, water and air pollution and underwater noise. The strategy also counts with a significant increase in offshore wind energy. The new Zero Pollution Action Plan should tackle pollution from contaminants (including nutrients or pharmaceuticals) as well as marine litter. The new EU Biodiversity strategy for 2030 sets a target to increase marine protected areas to 30% by 2030.

## Sustainable Blue Economy

Nature based climate adaptation strategies should become a new steering approach of the blue economy. This includes rehabilitation and creation of wetlands or new green infrastructure in coastal areas, which will protect coastlines from erosion and flooding, while benefiting biodiversity and tourism. A dramatic shift to responsible fishing is required and foreseen to bring fish stocks to sustainable levels. New sources of food, for example from algae, and innovative aquaculture methods, combined with new sets of standards should furthermore alleviate pressure on natural resources. The EU strives to support marine and coastal eco-tourism and resilience, preserving and restoring local natural and cultural heritage, while maintaining economic viability.

The cost of marine and coastal natural capital depletion is huge. According to the most recent figures from the EU Blue Economy Report 2022, "the established sectors of the EU Blue Economy directly employed [was] close to 4.45 million people and generated around €667.2 billion in turnover and €183.9 billion in gross value added". Two most notable of these sectors are living resources and the renewable energy sector. Coastal tourism, still recovering from the COVID-19 crisis is responsible for **63% of employment** in the blue economy. However, sea level rise leading to increased coastal erosion could decrease the turnover by more than €15 billion annually. Moreover, according to the EU Commission "the loss of 1-1.13% of land and inland waters would result in a 4.3-5.4% decline in the value of their ecosystem services, from €360 to €341-344 billion per year", making a strong financial case for the protection and restoration of coastal regions.



Image source: The Sustainable Blue Economy: EU's actions must match its words – EURACTIV.com

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[4] European Commission, Directorate-General for Maritime Affairs and Fisheries, Addamo, A., Calvo Santos, A., Carvalho, N., et al., *The EU blue economy report 2021*, Publications Office, 2021, **https://data.europa.eu/doi/10.2771/8217**

## EU Financial Support

EU public spending on protecting coastlines from the risk of erosion and flooding is estimated at over EUR 5 billion per year for the period from 1990 to 2020. On the other hand, the cost of inaction would amount to EUR 340-360 billion per year in terms of lost ecosystem services along the coastline. Investing EUR 2.54 trillion today in just four ocean-based solutions – offshore wind production, sustainable ocean-based food production, decarbonisation of international shipping, and conservation and restoration of mangroves – would yield a net benefit of EUR 14.11 trillion by 2050, a benefit-cost ratio of more than 5:18.

The Multiannual Financial Framework (MFF) adopted for the 2021–2027 programming period supports European regions in becoming greener and more circular. EU structural and investments funds (ESIFs) and direct funding instruments like the LIFE and Horizon Europe programmes will hence be accessible to projects aimed at flood and coastal management, and/or preparedness for extreme weather events, notably in coastal areas.

One of the five objectives of the European Regional Development Fund (ERDF) for the 2021–2027 period is a greener, low-carbon transitioning towards a net zero carbon economy and resilient Europe. ERDF supports many projects focused on natural and cultural heritage in coastal regions, as well as their climate adaptation. While this policy brief mainly focuses on interregional cooperation projects and their benefits for coastal regions, it is also important to mention that transnational cooperation projects are valuable means to tackle such challenges. One example is the COAST project that will deliver a Sustainable Resilient Coasts Toolbox, helping policymakers to overcome challenges faced by coastal communities, including climate change, loss of biodiversity and cultural heritage, and the sustainable exploitation of natural resources such as fisheries. Another example is BALTICRIM project, focused on integration of coastal and underwater cultural heritage.

The new regulation governing the LIFE programme between 2021 and 2027 has allocated a total budget of approximately EUR 3,09 billion to a wide range of projects under the subprogrammes 'Nature and biodiversity' and 'Climate change mitigation and adaptation'. This includes major investments for coastal regions. The funding is expected to help the dissemination of best practices and solutions like those promoted by the FLANDRE project, focused on dune restoration at the coasts of France and Belgium, or the Tartanet project in Italy, which aims to protect the loggerhead sea turtles.

Restoring Europe's oceans and waters is one of the five "missions" of Horizon Europe. As such, it was included in the first strategic plan that will guide the new EU research and innovation programme between 2021 and 2024. Horizon Europe Cluster 6 – concerning food, bioeconomy, natural resources, agriculture and environment – is expected to contribute to the aforementioned key strategic orientation and will be the major source of financial support for R&I projects in coastal areas. Developing coastal, areas in a sustainable, balanced and inclusive manner is indeed among the expected outcomes pursued by the programme under Cluster 6.

Such expectations have therefore been translated into related impact-driven calls for proposals that appear in the Horizon Europe work programme for 2021–2022. By way of example, in order to contribute to the 'Biodiversity and Ecosystem Services' destination, several calls for projects have been launched in 2021, with a total budget of EUR 214.5 million. In 2022 the calls will provide funding of EUR 161 million in total. A different call, focusing on 'Resilient, inclusive, healthy and green rural, coastal and urban communities, will provide EUR 42 million in 2022. These and other calls will enable projects like the Horizon 2020-funded COASTAL project, aimed at improving the coastal-rural synergy to foster rural and coastal development while preserving the environment.

**Preserving and reviving maritime heritage**

Coastal landscapes in all their varieties share common features because humans have interacted in similar ways with their environments on the edge of land and sea, including coastal defence, fishing, shipping, mussel farming, harvesting salt, swimming, boating, and using the beach as a tourist attraction.

**Coastal zones are an important element of Europe's cultural history**, as the history of most European and global societies is closely connected with interactions between land and sea and across seas. Consequently, many buildings, port structures and production plants, as well as shipwrecks and submerged artefacts are concentrated in coastal areas. They embody a cultural heritage which needs to be preserved through sustainable and integrated coastal development, while it can, at the same time, be used as a means of economic development and quality tourism.

## Protecting coastal heritage

The protection of this heritage presents a special challenge in the context of coastal zones, where pressures on land use are high, and economic interests connected to the conservation are frequently not developed. Coastal cultural landscapes face risks from climate change, pollution, urbanisation, mass tourism, population decline in rural areas, the loss of traditional fishing fleets, neglect, and inconsistent policies of sea and shore conservation across European regions.

The Interreg Europe projects HERICOAST and CHERISH are aspiring to improve regional development policies to protect and promote cultural heritage in coastal areas and fishing communities, boosting the attractiveness of these regions for businesses, citizens and tourists. The following good practices illustrate the wealth of coastal heritage:

- In Greece, lagoon fishermen are following strict rules to conserve fragile habitats and species, but their sustainable fishing methods are not known to customers. A quality label now underlines the locality and sustainability of their fishing products.
- The La Nau project in Spain is saving traditional Mallorquin vessels from scrapping. Already 25 vessels have been saved from destruction or restored in a traditional shipbuilders' workshop.
- The Aquamuseum of Minho River in the North of Portugal addresses the lack of scientific knowledge about the aquatic ecosystem and social references of fishing activity.
- Irish lighthouses can be found in dramatic coastal locations but are often unused and difficult to reach. The Fanad Lighthouse makes them accessible for tours, supports the renovation of existing buildings as tourist accommodation and creates employment opportunities for local people.



Image source: CHERISH project

## Coastal tourism

The beauty, cultural wealth and diversity of the EU's coastal areas have made them a preferred destination for many holidaymakers in Europe and abroad, making coastal and maritime tourism an important tourism sector. Employing over 3.2 million people, this sector generates a total of **EUR 183 billion** in gross value added and represents over one third of the maritime economy. More than 50 % of bed capacity in hotels across Europe is concentrated in regions with a sea border. Coastal tourism covers beach-based tourism and recreational activities, as well as maritime tourism offering water-based activities and nautical sports.

Many coastal regions are devising new, sustainable tourism offers to fight economic decline and unemployment.

The Cult-Ring project for example featured the good practice 'Sea, nature, Sicily – underwater and nautical itineraries'. In order to better position Sicily on the maritime tourism market, the local actors designed and implemented offers on nature and active tourism related



Image source: https://lindesnesfyr.no/en/lindesnes-lighthouse/

to marine and undersea elements. The enhanced collaboration of public and private actors on the island resulted in new sustainable tourism offers including underwater itineraries, fishing tourism as well as sustainable and responsible boat charter. Moreover, digital guides provide information on cultural, historical, archaeological and natural heritage.



- **Coastlight – digital dissemination of coastal heritage (Norway)**

Many local and regional coastal authorities in Norway are facing the specific challenge of depopulation with an increasing number of people living in urban areas, away from the small coastal communities. A high proportion of coastal houses are only used for recreational purposes. Whilst their owners have maintained emotional ties to the sea, they also developed specific user interests in the coastal cultural landscape. Furthermore, the coastal cultural landscape is made up of vast historical maritime infrastructure that is difficult to interpret and access for the general public.

To meet these challenges, Lindesnes Lighthouse Museum developed Coastlight.net as a website that tells maritime history through films, photos and text. The stories are linked to their geographical position with digital maps. The platform aims to deliver high quality content and to cover a growing geographical scope. However, the museum has neither the resources nor the knowledge to produce all content. To meet these objectives the museum has encouraged other stakeholders (mainly other cultural heritage institutions) to join in and contribute to the project in a cooperation spirit.

Further information about the practice is available here.

- **CHERISH Policy change: Preservation cultural maritime heritage, Zeeland (Netherlands)**

The cultural, maritime and fishery sector as well as small and medium-sized enterprises in the tourism sector have been very hardly hit by the COVID pandemic in the Zeeland region. With these challenges in mind, the region carefully studied good practices from the CHERISH partners in Cyprus, Mallorca and Portugal to find adequate policy solutions that better valorise the cultural assets of local fisheries communities and improve sustainability of coastal regions.

Following a roadshow involving regional stakeholders, the region developed a roadmap and an overview of priorities for projects with both an economic and a cultural (heritage) angle. This contributed to the opening of a special priority for these sectors within the Operational Programme Zuid (React-EU Programme). As a result, a specific call opened in March 2021 focussing on tourism, maritime culture, heritage (including fishery-maritime culture and heritage) and digitalisation.

- **CHERISH Policy change: Providing a new fishing tourism experience (Cyprus)**

The good practices identified within CHERISH, in particular the **Pescatourism** approach and the legislation of the Italian Region Abruzzo, foreseeing fishing tourism in the Regional Operational Programme, inspired Cyprus to implement policy measures for fishing tourism on the island as well.

Following several meetings with fishermen and the Department of Fisheries, a framework for fishing tourism was finalised and the Local Fisheries Strategy was amended to include a new measure on "Fishing Tourism", allowing to upgrade traditional boats for fishing tourism in line with the relevant legislation. To transfer the good practice from Abruzzo, the Cypriot partners followed these steps:

1. Carrying out a more detailed study of Pescaturismo, the related regional law and the definition given for fishing tourism
2. Preparing a detailed study of the concept of fishing tourism in Cyprus including the current status and activities carried out thus far
3. Meeting the Association of fishermen, the Department of Fisheries and the Department of Merchant Shipping to discuss how the Pescatourism experience can be implemented in Cyprus
4. Agreeing the concept and definition of fishing tourism and all the relevant conditions for someone to practice fishing tourism
5. Preparing the relevant documentation for a change in the Local Fisheries Strategy (as part of the Local Development Strategy 2014-2020) with the addition of a new call and a new budget.
6. Obtaining approval from the Managing Authority (Department of Fisheries)
7. Preparing and launching the call for Fishing Tourism

The new call was really successful receiving 32 applications of which 24 have been approved and are currently implemented. Moreover, some funds have been used to develop a web platform to promote the traditions of the fisheries areas of Paphos introducing the gastronomy, the traditional shipbuilding, the net making, stories from fishermen, testimonials as well as photos and videos.

Further information about the fishing tourism in Cyprus is available here.

**Tackling environmental pressures on coastal regions**

Coastal ecosystems are facing an increasing pressure and their degradation can be observed in the Baltic, Black and Mediterranean Seas and the North-East Atlantic and Arctic Oceans. The intensive use of European seas is taking its toll on the overall condition of marine ecosystems. Shift in physical and chemical composition, as well as bad condition of almost all marine species can be observed as a result of accumulated pressures.

Luckily, many local administrations have already taken initiative to reduce the impacts and restore coastal areas. For example, the Land-sea project aims to improve policies and practices for sustainable management, conservation and restoration of land-sea ecosystems. This chapter is dedicated to showcasing a selection of good practices from Interreg Europe projects that could inspire local and regional policymakers to take action. For better readability, the chapter is divided into three sections covering the topics of restoration, pollution and fishing.

## Restoration

Climate change, combined with human activities is having a dramatic impact on shorelines, with increase in coastal erosion and rising seas. **Coastal wetlands** provide natural shield from storm surges and coastal flooding and by stabilising the shore they reduce coastal erosion. While being the perfect protection from coastal erosion, coastal wetlands have suffered serious losses due to land conversion and ecological degradation, mainly from inbound river pollutant discharge.

Protection and restoration of coastal wetlands is increasingly becoming an important policy topic. Healthy wetlands are among the most **effective carbon sinks**, contribute to water purification and are important habitats for a diverse population of animals such as birds, fish or shellfish. The restoration and preservation of wetlands marshes reduces eutrophication and helps to maintain freshwater quality by reducing saltwater intrusion.

Wetlands can be restored for example by adding sediment to raise the land above the water level and to allow wetland plants colonisation, or by re-wetting the drained coastal wetlands by blocking drainage and reducing groundwater extraction. River restoration and removal of dams are also among the actions that indirectly help in restoration of wetlands. The Interreg Europe projects Land-Sea and Delta Lady have a number of inspirational examples of coastal restoration.



Image source: camargue-social.jpg (1024×512) (worldnomads.com)

**Delta Lady**
Interreg Europe

**Contrat de Delta Camargue**

The Camargue Nature Parc protects a unique area of wetlands around the delta of river Rhone and the coast of Mediterranean Sea. Water in the area is an important economic, cultural and natural resource, but also the reason behind conflicts between human activities such as fishing, hunting or agriculture, and nature protection. The "Contract de Delta Camargue" is a management plan designed to balance protection of natural environment with respect of different users. The program is built through extensive consultation of the organisations involved in the management of water and aquatic environments: local authorities and public institutions, associations, professional structures, union association owners. The involved parties collectively agree on an action plan and projects related to water management.

Further information about the practice is available here.

**Land-Sea**
Interreg Europe

**Adaptation strategies in the Ebro Delta wetland area (Spain)**

The Ebro Delta is an important wetland area. At present the Delta is experiencing a loss of wetlands and rice fields due to coastal regression, caused by the lack of input of fluvial sediments – which are retained by the river dams along the Ebro basin. To address the issue, the EBRO-ADMICLIM project combines sea level rise adaptation measures with mitigation measures designed to reduce the emissions of greenhouse gases (GHG) and increase the amount of carbon stored in rice fields and wetland areas. The principal pilot actions of adaptation are focused on transferring sediments from the river Ebro to the Delta. It is an integrated approach for management of water, sediment and habitats with the aim of optimizing ground elevation, reducing coastal erosion, increasing the accumulation of carbon in the soil, reducing greenhouse gas emissions and improving water quality.

Further information about the practice is available here.

## Pollution

Coastal and marine areas are impacted by visible pollution such plastic litter and oil spills to invisible pollution from microplastics, chemicals, nutrients, or underwater noise. Implementation of the Zero Pollution Action Plan is expected to help significantly. Decarbonisation of maritime transport should decrease air and water pollution, as well as underwater noise. The Commission plans to build new **emission control areas** in the Mediterranean and Black Sea, which should potentially lead to reduction of air emissions of $SO_2$ and $NO_x$ from international shipping by up to 80% and 20% respectively within ten years.

Image source: Rubbish floating in blue water of sea (pexels.com)

Chemical contamination, or nutrient pollution, is concerning for health, environmental, and economic reasons. Human activities are the major cause of this type of pollution, particularly the extensive use of fertilizers, which results in **runoff of chemicals** into waterways that ultimately flow into the ocean. The increased concentration of chemicals, such as nitrogen and phosphorus, in the coastal ocean promotes the growth of algal blooms, which can be toxic to wildlife and harmful to humans. The negative effects on health and the environment caused by algal blooms also hurt local fishing and tourism industries.

Every year, **150 000 to 500 000 tonnes** **of plastic waste** enter European seas. Plastic pollution has impact on marine fauna and can injure, entangle or kill animals. The majority (70%) of this waste is from fishing gear and single-use plastics products, which are now being tackled by the Single-Use Plastics Directive. Apart from that, action on microplastics and implementation of new circular economy business models will be needed to truly tackle marine plastic pollution. That is why many coastal cities and regions in Europe are looking for new measures to tackle pollution entering the oceans.

**Regional Charter "Zero Plastic Waste in the Mediterranean" in South France region**

Every year, millions of tons of plastic materials end up in the Mediterranean Sea, making it one of the most polluted seas in the world. As a reaction, the South Provence-Alpes-Côte d'Azur Region proposed a "Zero Plastic Waste" commitment charter, which has been led by the Regional Agency for Biodiversity and the Environment (ARBE). It aims to raise awareness through education and plastic clean-ups, reduce the use of single-use plastics (reusable alternatives, zero waste purchasing policy) and manage and recover plastic waste (collection, recycling, promoting reuse and repair). Numerous tools were developed to support involved stakeholders, such as  guides to zero waste plastic approach, a directory of zero waste plastic suppliers, workshops, trainings and newsletters.

Further information about the practice is available here.

**The environmental restoration of Bagnoli-Coroglio Bay (Italy)**

Dismissed industrial activities are responsible for persistent environmental degradation, mainly due to long-term accumulation of xenobiotic contaminants in the environment. Such a chronic form of pollution represents a major threat for human health, biodiversity and ecosystem functioning.

New approaches were developed for the removal and remediation of contaminated sediments and restoration of marine habitats in the Bagnoli-Coroglio Bay. These include: i) identifying the environmental benchmark of the area, ii) assessing its present health status, iii) studying the effects of contaminated sediments on biodiversity and ecosystem functioning, iv) assessing the combined effects of multiple stress factors, (v) experimenting innovative methods of transplantation and restoration of key species and habitats, and new biotechnological instruments for the remediation of sediments (bioremediation, bioaugmentation) in degraded habitats.

Further information about the practice is available here.

In April 2022, The Policy Learning Platform held an online peer review concerning protection of the Baltic Sea from pollution by hazardous substances, mainly **pharmaceuticals in the environment,** including antimicrobial resistance.

Some of the recommendations included **increasing awareness** on both policy and citizen levels, **stakeholder involvement**, and the use of **incentives and regulation** on national and EU levels. Creating a list of the **most frequently used and critical types** of antibiotics for human and veterinary use and **monitoring the concentrations** of selected substances, **mapping pollution hotspots**, or **reducing consumption** through **communication** campaigns were also included.

## Fishing

Overfishing is one of the most important pressures on coastal and marine environment. During the last twenty years, EU countries have overfished 8.78 million tons. Despite establishment of fishing quotas in the Common Fisheries Policy, Members States and fishing companies greatly and consistently exceed these limits. The Mediterranean is currently the most overfished sea in Europe, with **90% of fish stocks exploited** in an unsustainable manner. Some of the main commercial fish stocks are at the risk of collapse. An often-used practice is discarding dead fish into the ocean, before reaching the port where the measurements are taken.

The alarming state of fish stocks in the Mediterranean, but also elsewhere is the result of mismanagement, misreporting, and illegal fishing, as well as ignored scientific advice, failed implementation of existing measures, and failed attempts to set adequate control mechanisms.



Image source: Norwegian-Seafood-Council-1.jpg (1440×959) (thefishingdaily.com)

According to the organisation Our Fish, sustainable fishing represents an immense opportunity: "If the EU delivered on its commitment to end overfishing and rebuild damaged fish stocks to sustainable levels, it could create over 20,000 new jobs, provide food for 89 million people, and generate an extra EUR 1.6 billion in annual revenue."



**Tag your out – creating sustainable catch levels of wild salmon**

Due to overfishing, migration barriers and industrial pollution only 27 of the original 80 wild salmon populations are currently present in the Baltic Sea. Thanks to improving water quality, river restoration and changes in fisheries management most salmon rivers are slowly recovering. The return of wild salmon caused increased popularity of sports fishing. While this is benefiting the regional economy, it has to be managed sustainably in order to keep good levels of salmon populations in rivers. To control and manage stocks, the Norrbotten County Administration Board developed a tag system, obligating anglers to digitally report their catch, allowing them to harvest a limited number of fish per year. The tool enables decision makers in fisheries conservation to design better policies and create balance between environmental protection and regional economic growth.

Further information about the practice is available here.

## Recommendations and key learnings

This brief shows many policy solutions implemented on the ground to successfully tackle environmental pressures and preserve cultural heritage in coastal regions. These provide inspiration to policy makers at all administrative levels, who can implement these practices in their own territories. Some of the recommendations Interreg Europe projects can suggest can be found below.

**Cultural heritage**

- Develop **innovative and digital tools** to make historical maritime infrastructure and cultural heritage accessible to a wider population, following the example from Norway.
- **Develop a roadmap** and funding opportunities for projects with both an economic and a cultural (heritage) angle as in Zeeland, the Netherlands, to support local small businesses and fisherman communities, while improving sustainability.
- Integrate heritage in **regional development measures**, for example by including fishing tourism in the Operational Programme as in Cyprus, or by strengthening and promoting rich coastal fishing cultural heritage and traditions as in Latvia.
- Introduce a robust **sustainable tourism strategy** with focus on promotion of local heritage, traditions. As in Sicily, diversify tourism demand over time and space via targeted offerings such as underwater itineraries, fishing tourism, and sustainable and responsible boat charter.
- Shift towards more **participatory and evidence-based** policymaking processes.
- **Involve the private sector and NGOs** in the protection of cultural heritage as in Molise Orientale (Italy), where a Smart Tourism Governance model based on landscape and heritage management suits 40 municipalities and a vast number of tourist operators, associations, agencies and institutions managing the cultural heritage of the region.

**Natural heritage**

- **Include wetlands restoration**, flood and coastal erosion protection in strategic plans of the territory at the relevant administrative level. Combine sea level rise adaptation measures with mitigation measures designed to reduce the emissions of greenhouse gases through wetland restoration as in Ebro Delta in Spain. River restoration -for inspiration see example of restoration of river Cagne in France, and removal of dams are also among the actions that indirectly help in restoration of wetlands.
- **Balance protection of natural environment** with respect of different users. Get inspired by Camargue and engage in conversations with the organisations involved in the management of water and aquatic environments: associations, professional structures, union association owners or universities.
- **Remove and remediate** contaminated sediments and **restore marine habitats** as in Italian Bagnoli-Coroglio Bay.
- Improve **waste-water treatment** to reduce nutrient and chemical contamination of coastal and marine areas.
- Develop regional "Zero Pollution" or **"Zero waste" charter** as in Southern France. Raise awareness through plastic clean-ups, offer reusable alternatives, properly manage and recover plastic waste.
- Create **sustainable fishing stocks** through control and monitoring such as the Swedish Norbotten County.
- **Raise citizen and stakeholder awareness** on the topics of pollution and littering, sea level rise, local cultural heritage and sustainable fishing. Offer clear guidance to citizens on how to support sustainable initiatives in their town. Use communication opportunities such as school seminars and information stands.
- **Educate local fishing communities** on the topics of overfishing, climate change and circular economy (prevent their used plastic equipment to end up in the sea) such as the Enaleia project.

**Interreg Europe Policy Learning Platform support to regions in biodiversity conservation and restoration**

Interreg Europe, through its Policy Learning Platform, provides a number of services to both ongoing projects and the wider regional policy Community. As well as operating the Good Practice Database, drawing together the best of the good practices, and providing a Knowledge Hub of policy briefs and articles, the Policy Learning Platform offers on-demand Expert Support, including a helpdesk, matchmaking service and peer reviews to assist regions in their transition:

- Via the Policy Helpdesk, policy-makers may submit their questions to receive a set of resources ranging from inspiring good practices across Europe, policy briefs, webinar recordings, information about upcoming events, available European support and contacts for relevant people, as well as matchmaking recommendations and peer review opportunities.
- Matchmaking sessions are thematic discussions hosted and moderated by the Policy Learning Platform and designed around the policy needs and questions put forward by the requesting public authority or agency. It brings together peers from other regions in Europe to present their experiences and success stories to provide inspiration for overcoming regional challenges.
- Peer Reviews are the deepest and most intensive of the on-demand services, bringing together peers from a number of regions for a two-day working session to examine the specific territorial and thematic context region in question, discuss with stakeholders, and devise recommendations for the region.

Other sources of information can be found here:
- Policy Brief on Preserving and restoring biodiversity
- Policy Brief on Halting ocean plastics pollution
- Policy Brief on Protection and sustainable management of heritage in coastal and fluvial regions
- Policy Brief on Rivers and wetlands: drivers of sustainable regional development
- Policy Brief on Sustainable tourism: strategies to counteract over tourism
- Webinar recording on 'Living rivers: a driver for sustainable regional development'
- Workshop recording on 'Preserving and restoring ecosystems and biodiversity'
- Webinar recording on Green policy challenges in maritime regions
- Explore the HERICOAST Toolbox – Improving Heritage Policies in Coastal and Fluvial Regions
- Read a story about an innovative tourism offering Star gazing at the Wadden Sea
- Read a story about maritime cultural heritage focused on CHERISH and HERICOAST good practices
- Explore the outcomes of a Peer Review on Pharmaceuticals and antimicrobial resistance in the environment

**Other sources**
- The European Green Deal
- The Blue Economy Report 2022
- Protection, restoration and management of coastal wetlands, Green Adapt
- Losses of natural coastal wetlands by land conversion and ecological degradation
- Transforming the EU's Blue Economy for a Sustainable Future
- Europe's seas and coasts — European Environment
- Marine Pollution | National Geographic Society
- Restoration and management of coastal wetlands

# Interreg Europe Policy Learning Platform on Environment and Resource Efficiency

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*Contact us to share your views on this policy brief!*



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