FREGUESIA DE BUARCOS
Portugal

MUNICIPALITY OF KLANJEC
Croatia

KUNSILL LOKALI
HAL SAFI
MUNICIPALITY OF SAFI
Malta

MALTAS APVIENĪBAS PĀRVALDE
MUNICIPALITY OF REZEKNE
Latvia

ОБЩИНА СУХИНДОЛ
MUNICIPALITY OF SUHINDOL
Bulgaria

MUNICIPALITY OF CURTEA DE ARGES
Romania

MUNICIPALITY OF LWOWEK SLASKI
Poland

MUNICIPALITY OF HÉHALOM
Hungary

MUNICIPALITY OF BUSINCE
Slovakia

ASSOCIATION POUR LE SOUTIEN
A LA CITOYENNETE EUROPEENNE
France

THE ORGANIZATION FOR POVERTY
ALLEVIATION & DEVELOPMENT
Finland

CENTRO EDUCATIVO DI PROGETTAZIONE
E HOSTING INTERNAZIONALE
Italy

ONE TERRENE INTERNATIONAL GROUP
Cyprus

ASOCIACION XUVENIL VRENZA
Spain

Best practices for coastal or riverside sustainability: the sea, the land and the community

1. MUNICIPALITY OF SUHINDOL - Bulgaria
2. MUNICIPALITY OF KLANJEC - Croatia
3. ONE TERRENE INTERNATIONAL GROUP - Cyprus
4. THE ORGANIZATION FOR POVERTY ALLEVIATION & DEVELOPMENT - Finland
5. ASSOCIATION POUR LE SOUTIEN A LA CITOYENNETE EUROPEENNE - France
6. MUNICIPALITY OF HÉHALOM - Hungary
7. CENTRO EDUCATIVO DI PROGETTAZIONE E HOSTING INTERNAZIONALE - Italy
8. MUNICIPALITY OF REZEKNE - Latvia
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10. MUNICIPALITY OF LWOWEK SLASKI - Poland
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14. ASOCIACION XUVENIL VRENZA - Spain

FREGUESIA DE BUARCOS
Portugal

Dalia Project: Continuous Monitoring System for the Mondego Estuary

The Dalia Project, implemented by the Municipality of Figueira da Foz, represents a high-tech leap in riverside and estuarine sustainability. This initiative adapts innovative methodologies from the European "Dalia - Danube Region Water Lighthouse Action" to the specific local context of the Mondego Estuary. The primary goal is to establish a sophisticated, real-time environmental monitoring system that tracks water quality, sediment dynamics, and hydrological fluctuations. By deploying advanced sensors and data-gathering tools, the project provides a constant stream of reliable information that is essential for sustainable territorial planning and the protection of sensitive aquatic habitats. This technical framework allows the municipality to move beyond traditional, periodic sampling toward a proactive management model that can respond immediately to environmental changes or pollution risks.

This program is developed through an international knowledge transfer framework, fully funded by the European Dalia program with a budget of approximately €99,897. The implementation focuses on strengthening local technical capacity, training municipal staff to analyze complex data sets that integrate directly into environmental management tools. This evidence-based approach is crucial for designing effective climate adaptation strategies, such as managing the impacts of sea-level rise and extreme weather events on the estuary's ecosystem. By fostering collaboration between international experts and local authorities, the project ensures that the Mondego Estuary remains a healthy, productive environment. It serves as a flagship model for European coastal cities, demonstrating how digital innovation and trans-European cooperation can safeguard vital water resources and promote a sustainable blue economy for the future.

MUNICIPALITY OF KLANJEC
Croatia

Nature Connections: Sustainable Management of the Sutla Riverside Ecosystems

The "Nature Connections" project focuses on the sustainable management and cross-border protection of the Sutla River, a vital natural artery between Croatia and Slovenia. This initiative targets a protected area of 192 hectares characterized by its high biodiversity, including 29 native fish species, many of which are endangered. The primary idea is to implement targeted conservation and restoration measures within the Natura 2000 network to ensure long-term riverside sustainability. By protecting aquatic species and enhancing habitat connectivity, the project maintains the ecological balance of this sensitive river system, preventing degradation caused by human activity and ensuring that the river remains a healthy corridor for wildlife.

The program's development relies on professional research and the implementation of specific ecological guidelines to manage the riparian zones effectively. A key objective is to improve the conservation status of endangered freshwater species while fostering international cooperation for shared water resources. The initiative not only preserves the biological richness of the Sutla River but also raises awareness about the importance of riverside ecosystems for regional climate resilience. By integrating scientific monitoring with active habitat management, this Croatian practice serves as a successful model for cross-border river governance, demonstrating how coordinated local actions can protect essential freshwater resources for future generations.

Cyprus Integrated Marine and Coastal Management Initiative

The Cyprus Marine and Maritime Institute (CMMI), in collaboration with local authorities, has spearheaded an innovative initiative focused on the sustainable management of Cyprus's coastal zones. The project addresses the critical challenges of coastal erosion and marine pollution through a multifaceted approach that combines advanced satellite monitoring with community-driven conservation efforts. By establishing "Blue Flag" corridors and implementing strict waste management protocols along popular shorelines, the initiative successfully balances the demands of a thriving tourism industry with the urgent need to preserve fragile Mediterranean marine ecosystems. The project's scientific framework provides real-time data on water quality and sea-level rise, enabling more resilient urban planning for seaside municipalities.

Beyond technical monitoring, the program places a significant emphasis on environmental education and active citizenship among coastal residents. Local "Sea Guardians" groups, composed of volunteers and students, participate in regular underwater clean-ups and biodiversity surveys, fostering a deep sense of ownership over the island's natural heritage. This participatory model has led to the restoration of several key seagrass meadows (*Posidonia oceanica*), which are essential for carbon sequestration and providing habitats for local marine life. By integrating scientific innovation with grassroots action, Cyprus provides a scalable model for coastal sustainability that ensures the long-term health of its maritime environment for future generations.

THE ORGANIZATION FOR POVERTY
ALLEVIATION & DEVELOPMENT
Finland

Community-Led Coastal Resilience and Sustainable Blue Economy Initiative

The Community-Led Coastal Resilience Initiative, implemented by OPAD Finland, is an integrated sustainability programme designed to strengthen environmental protection and climate adaptation in coastal communities. The initiative focuses on protecting marine ecosystems while creating green livelihood opportunities for vulnerable populations. Through coastal clean-up campaigns, climate education workshops, and blue economy innovation hubs, the project promotes sustainable fisheries and marine biodiversity conservation. By combining environmental protection with poverty alleviation strategies, the initiative ensures that sustainability efforts generate both ecological and social benefits, aligning with the EU Green Deal and Sustainable Development Goals.

This programme emphasizes community ownership and participatory planning, collaborating closely with municipalities, research institutions, and civil society actors. It empowers local residents, especially youth and women, to take an active role in managing coastal resources and developing climate-resilient infrastructure. The initiative also supports the development of sustainable seaweed farming and eco-tourism, providing alternatives to traditional intensive industries. By fostering local leadership and providing technical training, OPAD Finland creates a scalable model for coastal resilience that can be adapted to other Baltic and European regions facing similar environmental and economic challenges.

ASSOCIATION POUR LE SOUTIEN
A LA CITOYENNETE EUROPEENNE
France

The Martinique Marine Nature Park: Preserving Island Marine Heritage

The Martinique Marine Nature Park (PNMM), established in 2017, is a vital tool for the protection and sustainable management of the island's exceptional marine environment. Covering approximately 47,000 km², it is the second-largest marine park in the French overseas territories. The project's core idea is to balance the preservation of marine biodiversity with the sustainable development of maritime activities. By focusing on scientific research, habitat protection, and the regulation of human impact, the park ensures that Martinique's natural wealth—including its coral reefs and seagrass meadows—remains resilient against environmental pressures while continuing to support the local culture and economy.

The program is governed by a long-term strategic management plan that extends until 2035, emphasizing a collaborative approach that involves professional fishers, tourism operators, and scientific experts. Key actions include large-scale monitoring of marine species, the implementation of sustainable fishing practices, and extensive public awareness campaigns to foster a culture of marine stewardship. By integrating ecological conservation with social and economic objectives, the PNMM serves as a flagship model for maritime sustainability in the Caribbean. It demonstrates how large-scale marine protected areas can successfully safeguard heritage while guaranteeing the long-term viability of human activities linked to the sea.

MUNICIPALITY OF HÉHALOM
Hungary

PET Cup: Clean Water and Professional Waste Management for the Tisza River

The PET Cup is a professional environmental initiative designed to combat severe plastic pollution in the Tisza River caused by seasonal floods. This project transforms local clean-up efforts into a large-scale international river protection program by combining ecological restoration with competitive sporting events. Volunteers and experts work together to build functional boats made entirely from collected plastic waste, which are then used to navigate and clean the river's floodplains. Beyond the physical removal of tons of debris, the initiative focuses on scientific mapping of pollution sources and developing long-term engineering solutions to maintain the health of the river's ecosystem.

The program's development relies on a sophisticated logistics system that involves the sorting, baling, and recycling of all collected materials, ensuring that 60% of the recovered waste is reintegrated into the circular economy. Through high-profile media coverage and the "Trash Hunter" mobile application, the PET Cup engages thousands of citizens in active environmental monitoring. This participatory model not only restores biodiversity and vital habitats along the Tisza but also fosters a deep sense of environmental responsibility across borders. By integrating social engagement with technical waste management, the initiative serves as a flagship European model for the sustainable protection of major inland waterways.

C.E.P.H.I.
Centro Educativo di Progettazione e Hosting Internazionale
CENTRO EDUCATIVO DI PROGETTAZIONE
E HOSTING INTERNAZIONALE
Italy

Summary of the LIFE Lagoon Refresh Project (Venice, Italy)

The LIFE Lagoon Refresh project represents a critical advancement in the field of coastal ecosystem restoration, specifically within the Venice Lagoon, which is the largest coastal wetland in Italy and a recognized UNESCO World Heritage site. This initiative was implemented between 2017 and 2022 with a total investment of 3.5 million €, primarily funded by the EU LIFE Programme. The project was coordinated by the Veneto Region in conjunction with CORILA, emphasizing a multidisciplinary approach to environmental management.

The primary objective of the program was to restore the natural salinity gradient that had been lost over centuries. Since the 16th century, major rivers were diverted to protect the city of Venice from sedimentation, which inadvertently eliminated the freshwater inflows necessary to maintain the balance between fresh and salt water. This lack of balance led to the degradation of the ecosystem and the disappearance of vital habitats such as salt marshes and reedbeds. To reverse this damage, the project utilized sustainable hydraulic engineering to reintroduce 1,000 liters per second of freshwater from the Sile River into the lagoon.

The technical implementation involved the use of biodegradable materials, such as coconut fiber and jute, to create natural barriers that slowed water dispersion and supported the establishment of new vegetation. Specifically, around 20 hectares of reedbeds were successfully restored through the transplantation of native Phragmites australis and other aquatic plants. These efforts were designed not only to recover lost habitats but also to improve overall water quality and increase local fish populations.

A fundamental aspect of the project's success was its participatory governance model. Scientists worked in direct collaboration with local stakeholders, including fishermen and hunters' associations, involving them in the restoration, monitoring, and maintenance of the site. This approach ensured that traditional community knowledge was integrated into the scientific process, fostering a sense of ownership and long-term sustainability. Ultimately, the LIFE Lagoon Refresh project serves as a replicable model for other coastal lagoons worldwide facing similar environmental challenges.

MALTAS APVIENĪBAS PĀRVALDE
MUNICIPALITY OF REZEKNE
Latvia

Restoration of Habitats and Shoreline Management in Lake Rāzna

The initiative focused on the conservation and restoration of Lake Rāzna, a key natural asset within the Rāzna National Park known for its biodiversity. In recent years, the lake faced significant environmental challenges, including the overgrowth of dense reed beds that transformed sandy shores into marshes and increased shoreline erosion. To combat this, the Nature Conservation Agency of Latvia, with a budget of approximately € 3.5 million (85% EU funded), implemented a series of management measures. These included reinforcing the shoreline using natural boulders to prevent erosion and creating pedestrian paths to manage human impact while preserving the scenic and ecological value of the area.

A critical component of the project was the targeted cutting of reeds across 35 hectares to restore the natural water movement and prevent the shallow areas from becoming over-fertilized. Special care was taken to protect the nesting areas of the Great Bittern (*Botaurus stellaris*) by leaving strategic clumps of reeds as "islands" for habitat preservation. This practice demonstrates a balanced approach between active engineering—such as building natural reinforcement cores—and ecological maintenance. By combining biodiversity protection with sustainable public access, the project serves as a vital model for managing large inland water bodies and protecting sensitive ecosystems against climate-induced changes.

KUNSILL LOKALI
HAL SAFI
MUNICIPALITY OF SAFI
Malta

Environmental Education and Sustainability for Young Generations in Hal Safi

The Hal Safi Local Council, in collaboration with Environment Malta, Project Green, and the Eco-Skola organization, has implemented a robust environmental education program integrated into the primary school curriculum. This initiative focuses on fostering environmental respect and sustainable development among children aged 7 to 10. A central pillar of the project includes practical methods for the conservation of the Maltese bee and hands-on activities that promote the circular economy. By teaching students how to create everyday items, such as greeting cards, from recycled materials, the program instills lifelong habits of waste reduction and ecological responsibility from an early age.

Beyond classroom learning, the project encourages active citizenship by connecting young students with local environmental challenges and nature-based solutions. These activities provide a platform for children to practice sustainable development in a way that is both educational and community-oriented. By investing in the environmental literacy of the younger generation, Hal Safi aims to create a long-term cultural shift towards sustainability. This participatory model serves as a vital tool for ensuring that future citizens are equipped with the knowledge and motivation to protect their local ecosystems and contribute to a greener Europe.

MUNICIPALITY OF LWOWEK SLASKI
Poland

Development of Gravel Pit Reservoirs in Rakowice Małe and Wielkie

This project, led by the Municipality of Lwówek Śląski, focuses on the long-term transformation of former gravel extraction reservoirs into functional, attractive, and publicly accessible recreational spaces. The initiative stands out for its innovative public-private partnership model, where the local government leases land to private investors over the long term. This approach allows for the funding of modern infrastructure for tourism and water sports without overburdening the municipal budget, while ensuring orderly spatial development. By giving new value to these post-industrial areas, the program improves the quality of life for residents and turns a degraded site into a local economic engine based on responsible leisure.

The program's development places a special emphasis on preserving the landscape's natural values. Alongside recreational facilities, the project includes the creation and expansion of green areas, ensuring that increased human activity does not compromise the local ecosystem. Infrastructure for water sports and active relaxation has been designed to coexist with environmental protection measures, fostering a balance between tourism exploitation and biodiversity. This practice serves as a solid model for other regions seeking to rehabilitate industrial lands, demonstrating that private investment and public management can unite to create spaces that are attractive, functional, and environmentally respectful.

ОБЩИНА СУХИНДОЛ
MUNICIPALITY OF SUHINDOL
Bulgaria

Restoration and Sustainable Management of the Belene Island Wetland

The "Restoration of the Belene Island Wetland" project focuses on the sustainable management of the largest Bulgarian island in the Danube River, located within the Persina Nature Park. The primary goal was to restore the natural water cycle of the marshes, which had been disrupted by historical drainage and dyke construction. By installing modern sluices and hydraulic infrastructure, the project allows for the controlled flooding of the marshes during high Danube levels. This restoration of the "riverside's lungs" has successfully revived biodiversity, providing essential spawning grounds for native fish species and nesting sites for rare waterfowl, such as the Dalmatian Pelican.

Beyond ecological restoration, the project emphasizes social and economic sustainability through the "Danube Sturgeon" initiative and local eco-tourism development. The Bulgarian Society for the Protection of Birds (BSPB) and the WWF collaborate to monitor the ecosystem while engaging the local community in conservation efforts. This practice serves as a vital model for riverside sustainability, demonstrating how technical engineering and community participation can work together to protect the Danube's unique natural heritage. The initiative not only preserves the environment but also strengthens the regional identity by promoting the responsible use of natural resources.

MUNICIPIUL CURTEA DE ARGES
Romania

RetuRO: Romania's National Return Guarantee System for Sustainable Packaging

The RetuRO Return Guarantee System is a landmark initiative in Romania's transition toward a circular economy and sustainable water resource protection. Established in 2022 as a unique partnership between the Romanian state and major private sector associations—including brewers, soft drink producers, and retailers—the system was created to manage the national lifecycle of beverage packaging. Its primary goal is to ensure the efficient collection and reuse of single-use containers, significantly reducing the amount of waste that ends up in Romania's rivers and natural landscapes. By formalizing the return process, the system provides a structured response to the environmental impact of industrial packaging, fostering a culture of accountability among both producers and consumers.

The program operates through a highly organized administrative framework designed to optimize the recovery of glass, plastic, and metal materials. By creating a nationwide network of collection points and incentivizing public participation, RetuRO minimizes the leakage of non-biodegradable waste into the environment, thereby protecting vital ecosystems and improving overall urban and rural cleanliness. This collaborative model demonstrates how the public and private sectors can work together to achieve national environmental targets and comply with European sustainability standards. Ultimately, RetuRO serves as a strategic pillar for Romania's sustainable development, proving that efficient resource management is essential for preserving the country's natural heritage for future generations.

MUNICIPALITY OF BUSINCE
Slovakia

Sustainable Salmonid Farming in Lubietova

Fish Farm Lubietova utilizes a local mountain stream to breed rainbow trout, brown trout, and Siberian sturgeon year-round. Located at 491 meters above sea level, the farm provides the specific high-oxygen and temperature-controlled environment these species require. The project promotes local engagement by allowing families to catch fish with rods and observe various farm animals, creating an educational and recreational experience focused on riverside sustainability.

The initiative operates independently of financial institutions, relying solely on direct sales and self-funded infrastructure repairs. With a total budget of 100,000 EUR, the future vision includes establishing a local restaurant to serve fresh trout. This goal addresses Slovakia's low per capita fish consumption by providing high-quality, local food options while reinforcing the community's connection to sustainable water resources

ASOCIACIÓN XUVENIL Vrenza

ASOCIACION XUVENIL VRENZA
Spain

Sustainable Turbot Aquaculture

Stolt Sea Farm S.A., based in Boiro and Rianxo (A Coruña, Galicia), operates the world's largest land-based turbot aquaculture production system, producing over 6,500 tons annually. This good practice helps reduce overfishing by providing a sustainable alternative to wild capture, completing the entire turbot lifecycle from egg to harvest (18–24 months) in controlled facilities without extracting fish from coastal ecosystems. The company combines advanced recirculation aquaculture systems (RAS) with seawater flow-through systems, supported by strict disease monitoring, traceability, and water management protocols. As a result, 99% of turbot consumed in Spain now comes from Galician aquaculture rather than wild fishing, proving its effectiveness in protecting marine biodiversity.

The initiative aims to reduce pressure on Atlantic wild turbot stocks, strengthen coastal economic resilience by creating more than 300 stable jobs, and ensure environmental responsibility through certification standards aligned with ASC. Its operations rely on integrated facilities with continuous water-quality monitoring, biosecurity measures, and innovation in aquaculture technology. The program also works closely with research centers such as CETGA and regional marine authorities to improve sustainability and assess environmental impacts. With an estimated investment of €20 million, Stolt Sea Farm promotes transparent and premium seafood supply chains, distributing sustainably farmed turbot across European markets and positioning aquaculture as a key solution for long-term coastal sustainability.

Collaborators

MARE
centro de
ciências do mar
e do ambiente

AQUATIC RESEARCH NETwork

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