

NATURAL BASE SOLUTIONS (NbS) IN THE EUSAIR REGION

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EUSAIR

- **The EU Strategy for the Adriatic and Ionian Region (EUSAIR)** is a practical cooperation framework that brings together ten countries around the Adriatic and Ionian seas to work on common goals like protecting the environment, improving transport and energy connections, and boosting tourism and the economy, reduce inequalities, support youth and skills, and make progress benefits everyone—in cities, towns and rural areas.
- **EUSAIR Mission:** Connecting people and institutions to build a common understanding of cooperation for a harmonised, integrated and sustainable region.
- **EUSAIR Vision:** Joint multi-level solutions for common challenges towards a stronger Adriatic and Ionian region.
- EU Member States (Croatia, Greece, Italy, Slovenia) work alongside EU candidate countries (Albania, Bosnia and Herzegovina, Montenegro, North Macedonia, Serbia) and San Marino

NbS (Nature-Based Solutions)

- Nature-Based Solutions (NbS) offer an important opportunity to strengthen climate resilience, protect biodiversity and ecosystems, reduce disaster risks and improve the quality of life of communities across the Adriatic-Ionian Region.
- Within the framework of the **EU Strategy for the Adriatic-Ionian Region (EUSAIR)**, NbS are relevant to **Pillar 3 – Environmental Quality (out of five Pillars)**, including the protection and restoration of biodiversity and ecosystems, sustainable management of natural resources, climate adaptation and improved environmental resilience.
- The Adriatic-Ionian Region is highly exposed to climate-related risks, including floods, droughts, heatwaves, wildfires, soil erosion, landslides, coastal erosion and water scarcity. These challenges are transboundary in nature and require coordinated solutions at regional, national and local levels.

What is a Nature-based Solution?

„Actions that protect, sustainably manage and restore natural or modified ecosystems, addressing societal challenges while benefiting both people and nature.”

— IUCN definition

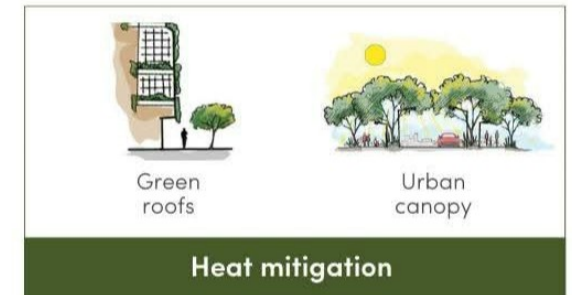
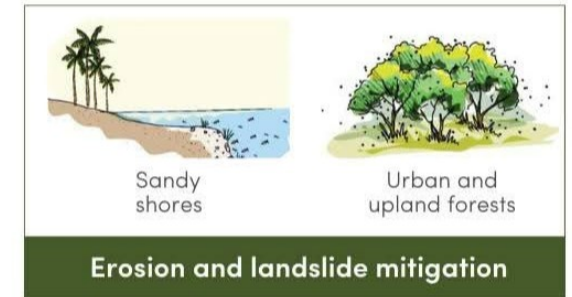
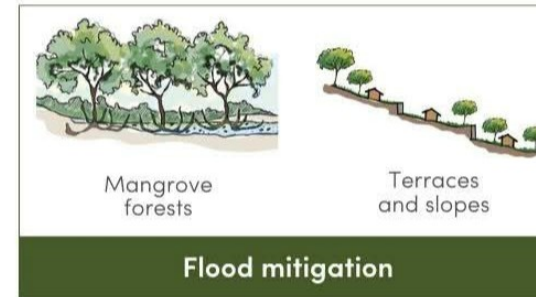


Illustration by J.W.Nduru/WRI, adapted from World Bank 2021

Why Nature-Based Solutions Matter for the Adriatic-Ionian Region?

- NbS can provide cost-effective and multifunctional responses to environmental and climate challenges by working with natural processes rather than relying exclusively on conventional grey infrastructure.
- Key areas of application include:
 - Flood risk reduction: restoration of wetlands, floodplains, river corridors and natural water-retention areas;
 - Drought and water scarcity: improving soil water retention, groundwater recharge and ecosystem restoration;
 - Urban climate resilience: urban forests, parks, green corridors, green roofs and other forms of green infrastructure;
 - Erosion and landslide prevention: forest restoration, vegetation cover and nature-based riverbank stabilisation;
 - Wildfire resilience: landscape restoration, sustainable forest management and natural fire-buffer zones;
 - Coastal resilience: restoration of dunes, wetlands, saltmarshes, seagrass meadows and other coastal ecosystems;
 - Biodiversity conservation: ecological corridors and improved connectivity between protected and Natura 2000 areas;
 - Land degradation: restoration of degraded soils, sustainable land management and ecosystem-based approaches.

A “Source-to-Sea” Approach

- For the Adriatic-Ionian Region, NbS should increasingly be considered through a **Source-to-Sea** perspective.
- Rivers, forests, agricultural land, wetlands, groundwater systems and coastal ecosystems are interconnected. Actions taken upstream can directly influence downstream communities and the ecological condition of the Adriatic-Ionian marine environment.
- A regional NbS approach could therefore connect:
- **Forests → Mountains → River Basins → Agricultural Land → Wetlands → Coastal Areas → Adriatic-Ionian Sea**
- This approach would help integrate climate adaptation, biodiversity protection, water management, land restoration and marine environmental protection.

EUSAIR Countries and Nature-Based Solutions (NbS) some Projects and activities

<i>EUSAIR Countries</i>	<i>NbS / Ecosystem-based Projects</i>	<i>Main Focus</i>	Project / Acronym	Meaning / Main focus	Theme
<i>Albania</i>	<i>NATURED, ECOBASE, RES2FIRE, 4PETHABECO</i>	<i>Urban resilience, soil degradation, wildfires, biodiversity</i>	RES2FIRE	RESilience to FIRE	Forest fires, prevention and ecosystem resilience
<i>Bosnia and Herzegovina</i>	<i>NATURED, RES2FIRE, 4PETHABECO</i>	<i>Urban resilience, floods, heatwaves, wildfires</i>	PETHABECO	Related to PET HABitat ECO...	Habitat and ecosystem conservation and restoration
<i>Montenegro</i>	<i>NATURED, ECOBASE</i>	<i>Urban resilience, soil degradation</i>	ECOBASE	ECOlogical BASE...	Ecological data, knowledge base and support for nature management
<i>Croatia</i>	<i>NATURED, PREBIODUNES, 4PETHABECO</i>	<i>Coastal resilience, dunes, biodiversity, urban areas</i>	PREBIODUNES	PREservation of BIODiversity in DUNES	Biodiversity conservation and restoration of dune ecosystems
<i>Greece</i>	<i>NATURED, ECOBASE, RES2FIRE, BIOMIMICRY</i>	<i>Urban resilience, soil, wildfires, biodiversity</i>	BIOMIMICRY	Biomimicry	Applying solutions inspired by nature to technology, design and Nature-based Solutions
<i>Italy</i>	<i>NATURED, ECOBASE, RES2FIRE, PREBIODUNES</i>	<i>Urban resilience, soil, wildfires, coastal ecosystems</i>			
<i>North Macedonia</i>	<i>NATURED, ECOBASE, RES2FIRE</i>	<i>Urban resilience, soil degradation, wildfires, NBS strategy</i>			
<i>San Marino</i>	<i>STRATEGIC DOCUMENTS</i>	<i>No specific NbS project identified in this overview</i>			
<i>Serbia</i>	<i>NATURED, ECOBASE, RES2FIRE</i>	<i>Urban resilience, soil degradation, wildfires</i>			
<i>Slovenia</i>	<i>NATURED, ECOBASE, RES2FIRE, BIOMIMICRY</i>	<i>Urban resilience, soil, wildfires, biodiversity</i>			

All 10 countries participating in the EU Strategy for the Adriatic-Ionian Region (EUSAIR) are already implementing or developing Nature-Based Solutions (NbS) addressing climate change, floods, biodiversity loss, soil degradation, urban heat and ecosystem resilience

“**NATURED** is Nature-based Solutions for a Just Resilience in the Adriatic-Ionian Cities. Funded by INTERREG – ADRION)

City Blues project „Bluegreen nature-based solutions for climate change adaptation and citizen wellbeing”

Nature-Based Solutions in Action: Scaling Innovation Across Europe 17.09.2026. Tempere, Finland

Main Challenges and Obstacles for Nature-Based Solutions in EUSAIR (1)

- **1. Fragmented governance and institutional responsibilities**
NbS often require cooperation between ministries and sectors responsible for environment, water, agriculture, forestry, spatial planning, infrastructure, tourism and disaster-risk management. In the EUSAIR region, differences in administrative capacity and governance between EU and non-EU countries make coordination more difficult.
- **2. Limited and fragmented financing**
One of the biggest obstacles is moving from **pilot projects to large-scale implementation**. NbS frequently depend on grants and project-based financing, while long-term funding for maintenance and monitoring is less secure. EUSAIR itself identifies better integration with mainstream EU programmes and securing funding as important challenges.
- **3. Competition with “grey infrastructure”**
Traditional engineered solutions—dams, concrete channels, drainage systems, retaining walls—often have established technical standards, procurement procedures and budgets. NbS can therefore face a **path dependency in favour of conventional infrastructure**, even where hybrid green-grey solutions could provide better long-term results.

Main Challenges and Obstacles for Nature-Based Solutions in EUSAIR (2)

- **4. Lack of evidence and comparable data**
Decision-makers often need convincing evidence that an NbS will actually reduce flood risk, erosion, heat or drought at the required scale. There are still gaps in data, monitoring, cost-benefit analysis and common indicators.
- **5. Difficulty demonstrating economic benefits**
Many benefits of NbS—biodiversity, recreation, health, groundwater recharge, carbon storage and improved landscape quality—are not immediately reflected in conventional financial calculations. This can make NbS appear less attractive than conventional infrastructure.
- **6. Land ownership and availability**
Large-scale NbS may require land for wetlands, floodplains, ecological corridors, forest restoration or natural water retention. Fragmented land ownership and the absence of incentives for landowners can significantly delay implementation.

Main Challenges and Obstacles for Nature-Based Solutions in EUSAIR (3)

- **7. Different national legislation and standards**
The EUSAIR region includes EU Member States and Western Balkan countries at different stages of EU integration. Different legislation, permitting systems, planning procedures and environmental standards can make transboundary NbS projects more complicated.
- **8. Lack of technical and institutional capacity**
Some municipalities and public institutions lack staff with sufficient experience in designing, procuring, monitoring and maintaining NbS. Capacity building is therefore essential, particularly in smaller municipalities and Western Balkan countries. EUSAIR's governance framework explicitly recognises the need to strengthen institutional capacity.
- **9. Maintenance and long-term responsibility**
An NbS is not necessarily “maintenance-free”. Forests, wetlands, urban green infrastructure and restored rivers require long-term management. A major question is often: **Who is responsible for maintaining the solution after the project ends?**

Main Challenges and Obstacles for Nature-Based Solutions in EUSAIR (4)

- **10. Stakeholder acceptance and public perception**
Some stakeholders may perceive NbS as less reliable than concrete infrastructure, particularly where there is a history of floods or landslides. Successful NbS therefore require participation, communication and demonstration of results.
- **11. Difficulty scaling up successful pilots**
The EUSAIR region has numerous individual projects and pilot activities, but the major challenge is turning them into **replicable regional solutions**. A successful pilot in one municipality does not automatically mean that the same solution can be transferred to another country or ecosystem.
- **12. Transboundary complexity**
This is particularly important for EUSAIR. Rivers, forests, ecosystems and the Adriatic Sea do not follow administrative borders. An intervention upstream may generate benefits—or costs—downstream. This requires joint planning between countries, municipalities and river-basin authorities.

The Role of TSG3 in Advancing Nature-Based Solutions in EUSAIR (1)

- 1. Strategic coordination to provide a regional strategic framework for NbS**
- 2. Moving from projects to a regional NbS agenda**
 - A key role for TSG3 should be to move from: individual projects → common regional approach → investment and implementation.**
- 3. Linking NbS with the Source-to-Sea approach**
- 4. Mountains → Forests → River Basins → Wetlands → Coastal Ecosystems → Adriatic/Ionian Sea**

The Role of TSG3 in Advancing Nature-Based Solutions in EUSAIR (2)

5. Establishing common NbS criteria and indicators

6. Supporting policy integration

7. Mobilising financing (the most important practical role).

Project concept → mature project → financing → implementation → replication (rather than simply producing studies).

8. Strengthening cooperation between EUSAIR countries

9. Creating an EUSAIR NbS Knowledge and Demonstration Platform (bringing together: **knowledge → good practices → pilot sites → financing → replication**)

Possible strategic role for TSG3

- **TSG3 should play a leading role in positioning Nature-Based Solutions as a strategic instrument for climate resilience, biodiversity protection and sustainable development across the Adriatic-Ionian Region.**
- **Its role should go beyond supporting individual projects and focus on creating a common regional framework for NbS, strengthening policy integration, developing common indicators, mobilising financing and promoting transboundary implementation and replication.”**
- **The added value of TSG3 is not to create another collection of NbS projects, but to connect existing knowledge, projects and financing mechanisms and transform them into scalable, transboundary solutions.**

Thank you for your attention!