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ADAPT Legacy: Advancing Climate Resilience with Nature-based Solutions in the Western Balkans

Key achievements and accomplishments of the initiative **ADAPT: Nature-based Solutions for Resilient Communities in the Western Balkans**





Introduction

ADAPT: Nature-based Solutions for Resilient Communities in the Western Balkans is a pioneering initiative that promotes the use of Nature-based Solutions (NbS) to enhance resilience in communities facing the impacts of climate change and disaster risk. Funded by the Swedish International Development Cooperation Agency (Sida) and implemented by the IUCN Regional Office for Eastern Europe and Central Asia (ECARO), this four-year initiative collaborates with partners across six Western Balkan economies to integrate NbS into policy frameworks, practical applications, capacity building, and on-the-ground implementation.

ADAPT empowers regional, national, and local governments, civil society, academic institutions, and other key stakeholders involved in conservation to take concrete actions for sustainable and climate-resilient development through the implementation of NbS. By harnessing the power of nature, the initiative addresses interconnected challenges such as climate change and disaster risk, ultimately contributing to the creation of resilient landscapes and communities.

Through a comprehensive approach, ADAPT leverages nature's potential to tackle the complex challenges of climate change and disaster risk. By fostering collaboration and building capacity across sectors and economies based on the core principles of NbS, ADAPT lays the groundwork for scaling up NbS in the region, ensuring that healthy ecosystems contribute to both environmental sustainability and human well-being.

This publication summarises the key achievements of the ADAPT initiative following its first phase (2020–2024), highlighting the best practices, partnerships, and policies developed throughout the project. From piloting NbS in critical areas to influencing regional and national strategies, these accomplishments demonstrate how NbS can play a central role in shaping a more resilient future for the Western Balkans, enhancing climate change adaptation and mitigation, while reducing disaster risks.

Knowledge materials

Six Nature-based Solutions Scoping Studies: Albania, Bosnia and Herzegovina, North Macedonia, Montenegro, Kosovo, and Serbia.



These studies provide the state-of-the-art of the national context with regards to the application of Nature-based Solutions approaches for climate change adaptation (CCA) and disaster risk reduction (DRR).

Nature-based Solutions for climate: A compendium of best practices in the Western Balkans.

This publication presents diverse examples of NbS and related actions across the region. The selected examples illustrate the application of proven and piloted solutions for CCA and DRR.



Planning & policy

The publication **Integrating Nature-based Solutions into policies for climate change adaption and disaster risk reduction** is a regional policy analysis that investigates how NbS are captured within CCA and DRR policies in the Western Balkan economies, and gives recommendations for future policy mainstreaming.

POLICY BRIEFS: Economics, finance, and governance of Nature-based Solutions for climate change adaptation and disaster risk

(available in Albanian, Macedonian, English, and Serbian). These briefs present economic appraisal methods for CCA and DRR, discuss the role of NbS in leveraging public investments and mobilising finance in the sector, and provide governance dimensions of the IUCN Global Standard for Nature-based Solutions™.

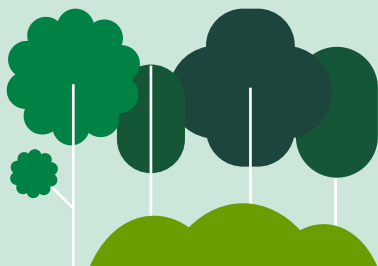


Policy efforts/update

Nature-based Solutions (NbS) play a crucial role in addressing the pressing challenges of climate change, biodiversity loss, and disaster risk management in the Western Balkans. As part of ongoing policy efforts, NbS have been integrated into key strategies and legislative frameworks across the region, demonstrating a commitment to sustainable development and environmental resilience.

The EU Green Agenda for the Western Balkans

prominently references NbS within its climate change and biodiversity chapters, emphasising their importance in fostering a greener and more sustainable future for the region.



The ADAPT project advocates the mainstreaming of NbS into several policies across the Western Balkans region, such as:

Law on Nature Protection and Decree on Methodology for Preparation of Risk Assessments in North Macedonia

Ishëm River Basin Management Plan in Albania

Forestry Development Strategy of Republika Srpska in Bosnia and Herzegovina

Law on Protection Against Adverse Impacts of Climate Change in Montenegro

National Disaster Risk Reduction Strategy in Serbia

Training & capacity building

Training workshops

were organised in **six economies** in the Western Balkans, focusing on key principals for NbS, pathways for mainstreaming this concept into policies and decision-making processes, guidance for the planning, design, and implementation for effective NbS, and their sustainability and upscaling.

Cross-cutting topics:	
	Gender
	Economics
	Inclusion
	Justice

Over **120** **participants** from public institutions, CSOs, academia, young professionals, experts, and private sector representatives received training.

In all, **48** **decision-makers** and natural resource managers from the region were trained and gained new NbS and climate-smart planning knowledge.

Study Tour to Bonn, Germany - a delegation of

18 **decision-makers**, conservation practitioners, and policymakers from the Western Balkans shared experiences and knowledge with international and national institutions and organisations on a Study Tour to Bonn, Germany.

Work on the ground: Piloting



Nature-based Solutions Interventions in Gledić Mountains, City of Kraljevo, Serbia

Gledić Village faces significant challenges due to degraded landscapes and the increasing impacts of climate change, including more frequent extreme weather events. The Nature-based Solutions (NbS) interventions in the Gledić Mountains aim to address critical environmental issues, particularly soil erosion, flood risks, and disaster risk reduction.



The NbS intervention includes several strategies for restoring the forest landscape:



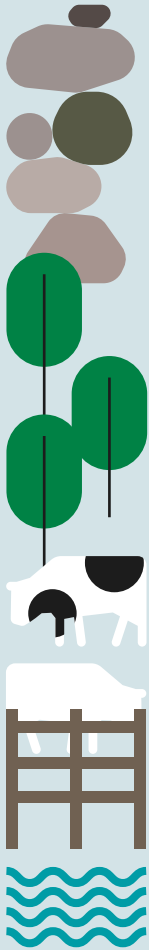
Natural Forest Rehabilitation (assisted natural regeneration): This aims to enhance forest stability and resilience, reduce soil erosion, and improve water retention by converting coppice forests into high forests. Active support for natural regeneration includes the selection and marking of regenerants, and the removal of weeds and competitive plants.



Rehabilitation by Planting: This involves restoring forest and ecosystem functions with the planting of 575 seedlings of native tree species on barren land or in severely degraded areas.



Underplanting and Enrichment Planting: These efforts focus on increasing forest stability and resilience, enhancing biodiversity, and providing high-value timber and non-timber forest products. This measure has combined manually digging a total of 22,783 planting holes and planting native trees.



Loose-Stone Check Dams: A total of 80 erosion control dams have been constructed using locally available stones to control flash floods and soil erosion. These dams were built in existing gullies, perpendicular to the water flow, directly stabilising an area of 1.38 hectares. They also have an indirect positive impact on soil stability over an area of 2.5 hectares, helping to prevent future floods.

Creating a Silvopastoral System to provide conditions to support cattle husbandry through:

Fencing: Wooden fencing has been installed around pastures and parts of the existing natural forest to establish a silvopastoral system. The 1-metre-high fence extends over 1,090 meters and features Black Locust posts and horizontal wooden rails in three rows. This fencing protects livestock and provides shelter during extreme weather conditions.

Building a Water Reservoir: A cylindrical water reservoir has been installed, providing a permanent water source for livestock. The tank has a volume of 12 m³, measuring 6 meters in length and 1.6 meters in diameter. It can also supply water to the local fire department during emergencies.

More than

23,000

seedlings of native species such as Hungarian Oak, Turkey Oak, Sessile Oak, Turkish Hazel and Wild Cherry planted as a part of this intervention.

Environmental and

Socio-Economic Benefits:

reduced risks and damages from torrential floods, improved living conditions, improved safety of local communities, improved state of biodiversity, improved ecological conditions of habitats, increased carbon storage, increased stability of forest ecosystems, and thereby strengthened sustainability and resilience of communities to climate change.

Nature-based Solutions intervention in Shushica village, City of Elbasan, Albania



Elbasan, situated in the Shkumbini River basin, faces increased vulnerability due to climate change, with increasing incidence of extreme rainfall, soil erosion, and flooding. Nature-based Solutions (NbS) interventions in Elbasan have been designed to restore extremely degraded forest landscapes and enhance community resilience within the project area. Each measure has been tailored in close collaboration with local stakeholders to address specific environmental challenges.



Key restoration measures involved in the NbS interventions:

Rehabilitation by Planting: This measure involves dense planting of mixed tree and shrub species with deep-root systems to stabilise soil, reduce erosion, and minimise landslide risks. Afforestation will also improve biodiversity and support local livelihoods through the inclusion of fruit-bearing species. Over 8500 seedlings were planted.

Natural Forest Rehabilitation: A minimal-intervention approach allowing natural regeneration to restore ecosystem functions. Limited to areas with some existing vegetation cover, this approach emphasises the inherent resilience of natural ecosystems.

Direct Seeding: Grass species suited to site conditions were directly seeded to reduce surface water flow and control erosion. Seed mixes were carefully selected to ensure soil stabilisation, with fertilisers applied to promote growth.

Vegetative Sediment Trapping: Over 50 double-brushwood check dams were constructed to slow water flow and trap sediment, especially in gullies, and to reduce flash flood risks.

Grass Filter Strips: Narrow strips of grass planted along slopes to trap sediment and improve water quality, allowing cleaner water to filter through before entering water bodies downstream.

Additional Measures for Sustainability:

Community Grazing Management: A sustainable community grazing plan was developed as a guideline to protect planted areas. Proposed measures include redirecting grazing to alternative areas with shepherd-led rotation, shortening grazing periods and supplementing with concentrated feed, installation of awareness signs at planting sites, and guarding or fencing implemented around the planting area.

Guidelines for Restoration Measures for the Gurra Stream: To support future restoration and flood prevention in the Shushica village, guidelines were developed for local authorities. Key measures include establishing vegetated buffer zones and reinforcing natural embankments to stabilise riverbanks, constructing erosion control terraces and biodegradable fibre log barriers in high-erosion zones, and setting up an early warning system with flood monitoring sensors and community training. These comprehensive solutions aim to mitigate flood risks, regulate water flow, and strengthen community resilience through sustainable, nature-based approaches and local engagement.

Environmental and Socio-

Economic Benefits: restored ecosystem services provided by forests, improved resilience of the local community to climate change, prevented further land degradation, implemented sustainable approach to disaster risk reduction and climate adaptation, with long-term benefits for biodiversity and human well-being in the region, improved economic benefits for the local population, particularly through the sustainable production of timber, medicinal plants, and fruits, and reduced disaster risk.



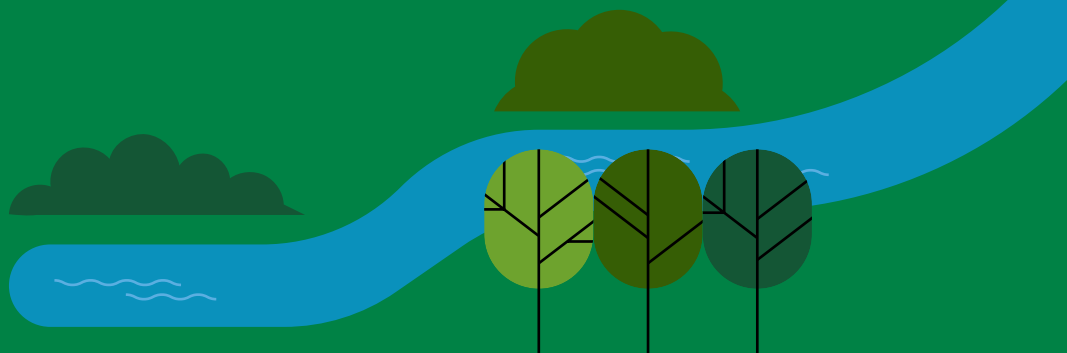
Planting of more than

8,500

seedlings of Aleppo Pine, Maritime Pine, Plum, Willow, Olive, Pomegranate, Downy Oak, Common Hawthorn, Poplar, Black Alder, Honey locust, Common Hazel, European Hornbeam, Manna Ash, Red Firethorn.

Scaling up NbS in the Western Balkans

The Green Climate Fund (GCF) project concept, entitled **Scaling up Nature-based Solutions for Resilient Communities in Serbia**, was developed to expand NbS efforts and strengthen resilience across Serbian communities. The project focuses geographically and thematically on deploying large-scale Forest and Landscape Restoration (FLR) within the Zapadna Morava River Basin, emphasising ecosystem restoration at the river basin scale. The development of the GCF Concept Note continues under the broader ADAPT 2.0 framework.



Preparation of the Tender Dossier in North Macedonia.

This initiative, carried out in close collaboration with the Ministry of Environmental and Physical Planning and the Crisis Management Centre, is focused geographically and thematically on implementing Nature-based Solutions and improving livelihoods in the Radovish municipality, specifically the Kodjalia village, home to a Turkish minority community. Next steps involve finalising the NbS design and moving forward with implementation as part of the ADAPT 2.0 framework.



Three other concept notes and pre-feasibility studies developed to support NbS project implementation in Bosnia and Herzegovina, Montenegro, and Kosovo.

In Bosnia and Herzegovina, the project focuses on enhancing community resilience within the Vrbas River basin, spanning both the Federation of BiH and Republika Srpska, through forest landscape restoration and flood mitigation, and addressing critical ecosystem degradation. In Montenegro, efforts are centred on bolstering resilience in the wider area of Lake Plav by integrating policies and piloting NbS to address climate change and disaster-related challenges, particularly within the forestry and water management sectors. In Kosovo, the project aims to strengthen climate resilience in the catchment of the Erenik River (a tributary of the Drin River) through integrated landscape management, with a focus on flood protection, water scarcity, and erosion control.

Communications and promotional items

Over 100 media hits
in relevant regional
and national media

**Robust social
media presence**
on Facebook and
X (ex/Twitter)



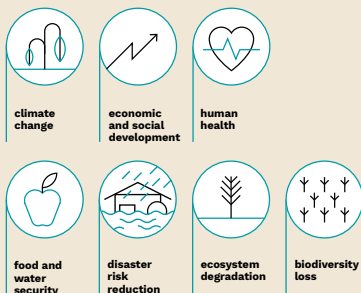
**Climate change in
12 pictures** in four
languages

5 videos with
over **5k views**

What are Nature-based Solutions (NbS)?

NbS are defined by IUCN as “actions to **address societal challenges** through the protection, sustainable management and restoration of ecosystems, benefiting both biodiversity and human well-being.” They use the power of nature and functioning ecosystems as infrastructure to provide natural services to benefit society and the environment.

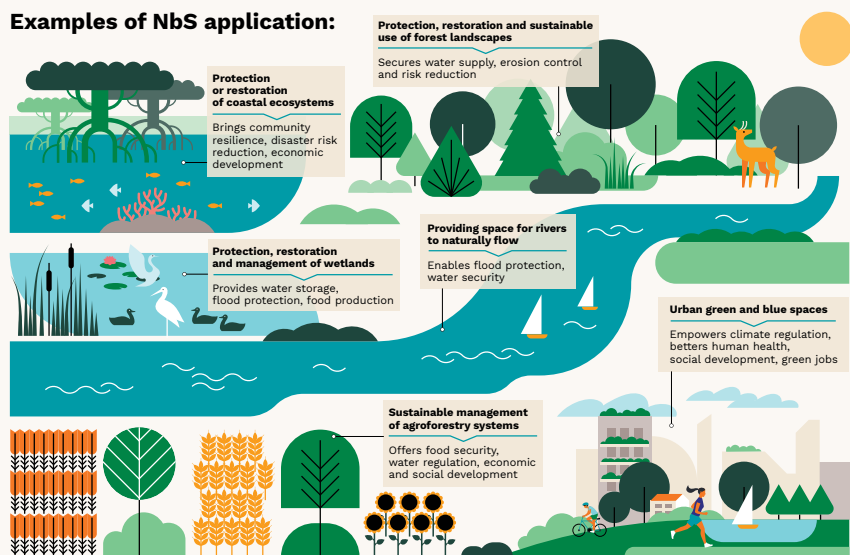
NbS have prime potential to help address global challenges such as:



NbS can provide long-term environmental, societal and economic benefits:



Examples of NbS application:



www.iucn.org/adapt

[@theadaptproject](https://www.facebook.com/theadaptproject)



1 NbS infographic translated into 10 languages and distributed globally



Check out:
iucn.org/adapt

Acknowledgements

We would like to express our sincere gratitude to our key partners who have played a crucial role in implementing the ADAPT project. Their joint action, collaboration and efforts have been instrumental in advancing Nature-based Solutions for climate resilience across the Western Balkans.

The following key partners of each economy have made significant contributions to the success of this initiative:

Ministry of Tourism and Environment, Albania

Agency for Water Resources Management, Albania

Municipality of Elbasan, Albania

Ministry of Foreign Trade and Economic Relations, Bosnia and Herzegovina

Federal Ministry of Environment and Tourism, Federation of Bosnia and Herzegovina

Ministry of Spatial Planning, Construction and Ecology, Republika Srpska

Ministry of Environment, Spatial Planning and Infrastructure, Kosovo

Ministry of Ecology, Sustainable Development and Northern Region Development, Montenegro

Ministry of Environment and Physical Planning, North Macedonia

Crisis Management Centre, North Macedonia

Municipality of Radovich, North Macedonia

Ministry for Public Investment, Serbia

City of Kraljevo, Serbia



Embassies of Sweden
to Albania, Bosnia and
Herzegovina, Kosovo,
Montenegro, Serbia, and
North Macedonia

Swedish International
Development Cooperation
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