

**NEWSLETTER**

**ISSUE 4  
JAN 2025**



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## 1. INTRODUCTION

# Dear reader, welcome to the fourth issue of our newsletter!

**As we further progress into the third year of the project, we are transitioning from the study and conceptual phase to focus on taking a closer look at stakeholder needs and advancing towards co-creating the impactful solutions in Invest4Nature.**

The interviews and surveys carried out with stakeholders of the Nature-based Solutions (NbS) landscape has been a key activity over the past six months, underscoring the close collaboration between our consortium partners. Meanwhile, the development of Invest4Nature's central decision support toolbox (DS Toolbox) progresses steadily with a first preliminary version was reviewed within the consortium.

As we delve deeper into the complexities of understanding the economic benefits of NbS, we are grateful for your continued engagement with Invest4Nature. Exciting progress lie ahead still!

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**Andreas Türk**

Joanneum Research

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**Ingrid Kaltenegger**

Joanneum Research

## 2. PROJECT HIGHLIGHTS

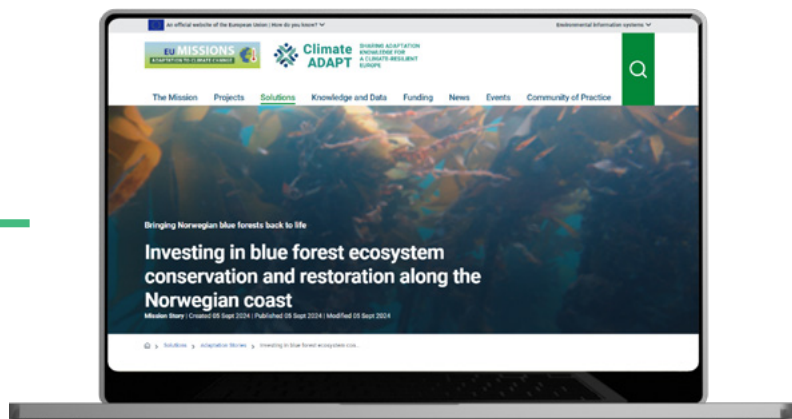




## Norway and Poland NbS featured on the EU's Mission Stories

Last year in September Invest4Nature's two Living Labs, Norway and Poznań, Poland, were featured in the EU's Mission on Adaptation to Climate Change stories as examples of stories showcasing successful implementations of climate adaptation solutions across Europe. These Adaptation Stories show real-life examples of regional or local adaptation actions regarding the planning, funding, implementing and monitoring of climate adaptation solutions.

Meant to inspire others to take action on climate adaptation, the stories are an accessible way of sharing our valuable experience, especially in the funding and implementation of the NbS projects at our Living Labs.



The adaptation story, [Creating a climate-resilient city by greening educational spaces in Poznań, Poland](#), details key learnings from the natural playgrounds and schoolyards implemented to create small scale green spaces in the city. It also explains the climate threat they face and the measures taken to redistribute green spaces, adding natural elements to schools and schoolyards to combat urbanisation and soil sealing.

In the adaptation story, [Bringing Norwegian blue forests back to life](#), the declining kelp forest and seagrass beds are threatening the underwater biodiversity. Thus the socioeconomic strategy for upscaling blue forest conservation and restoration was created. However, there can be funding barriers from the public side, leading to other enabling factors from private sector.

◀ Willow hut with wooden platform as a natural element in the kindergarten garden. *City of Poznań*



### 3. WORK PACKAGE UPDATES

#### WORK PACKAGE 2

## DEVELOPMENT OF A CONCEPTUAL FRAMEWORK FOR VALUING NbS







Measuring the monetary value of nature-based solutions (NbS) for society and nature is complex, especially when it comes to dynamic and long-term benefits such as disaster risk reduction and climate change adaptation. In recent months, the work in WP2 has been focused on extending the Total Economic Value (TEV) framework to include risk factors as well as the generation of insurance value.

To address this challenge, deep dive cases of NbS have been reviewed together with the Living Labs to develop new approaches. The most promising methodologies that Invest4Nature is working on are Bayesian belief networks and the Value-at-Risk (VaR) approach. The concept of VaR dates back to the mid-20th century, where the VaR was proposed as an indicator to measure market risks. In the 1990s, the VaR became popular in the investment banking sector by the Basel 2 and 3 Accords. Therefore, the VaR has the potential to create a common methodological basis with the investment sector and subsequently unlock investment for NbS, but there is still a lack of VaR tools in the valuation of nature and ecosystem services.

An additional interesting question is how to account for portfolio effects. However, the applicability of the methods depends on the availability of data and the resources for data collection. For NbS with limited data, methods such as vulnerability assessment, multi-criteria analysis, Delphi survey, Q-method and Monte Carlo simulations are most relevant. The developed approaches will be applied within WP3 to provide new evidence on the benefits of NbS. The methodological part will be described in the forthcoming deliverable D2.2, scheduled for early 2025.



WORK PACKAGE 3

# EVIDENCE OF NBS ECONOMICS AND FINANCING







Invest4Nature's latest major piece of work on stock-taking of markets, financing and incentives for NbS, has been published ([See on Zenodo](#)). The work contains results of a systematic literature review on the current landscape of NbS financing models and incentives, exploring how NbS projects are financed, the challenges involved, and potential solutions. It examines funding trends, effectiveness at different scales, and key financing tools like payments for ecosystem services, tradable credits, and green bonds. The report also offers practical recommendations for designing future funding strategies to scale up NbS.

Through interviews and surveys with the public sector, investors, and Nature-based Enterprises (NbEs), the report sheds light on their perspectives and existing financing instruments as well as drivers, incentives, and challenges for NbS projects.

While NbS are primarily funded publicly, our findings reveal that promising opportunities for private sector investment in NbS exist with a growing demand. To address this, we identify key opportunities for private sector involvement, especially through blended finance approaches, and highlights barriers such as knowledge gaps, high transaction costs, and unclear revenue streams.

To unlock the full potential of NbS, we a multi-level approach:

- Local level: Awareness-raising, integrating NbS into planning, capacity building, and streamlined funding for long-term maintenance.
- National level: Policy clarity, tax incentives, cross-sector coordination, and public-private partnerships.
- EU level: Supporting local NbS implementation, mainstreaming policies, and developing standardized monitoring and reporting mechanisms.

In 2025, we plan to publish three more reports on i) the economic and financial performance of NbS including the insurance value of NbS, ii) social benefits and costs of NbS and iii) demand and supply chains in NbS.

**Learn more on the survey insights:**

[Unlocking Private Capital for Nature-based Solutions](#)



WORK PACKAGE 4

# UNDERSTANDING STAKEHOLDER NEEDS AND ENABLING NbS READINESS





Over the past months, the Stakeholder Engagement Programme has been developed in collaboration with the Living Labs, which will host a series of online and in-person events. These activities are designed to engage stakeholders in the ecosystem of the Living Labs on key topics, gather feedback, and drive discussions that highlight the multi-benefits of NBS, the essential elements of successful governance models, and innovative financing strategies.

The events, primarily conducted in workshop formats, provide Living Labs with opportunities to address the pressing needs of their projects. Topics range from developing public-private cooperation models to exploring strategies for attracting investments from the financial sector. Each event is tailored to the unique challenges and goals of its host location, fostering locally relevant dialogue and action.

A key component of the Programme is the consultation on the DS Toolbox. Stakeholders will have the opportunity to test the toolbox and provide feedback, ensuring it meets user needs and delivers practical solutions. This collaborative approach will shape the final product, making it practical and relevant for its intended users.

While some events were launched in autumn 2024, the majority will take place throughout 2025. These sessions represent a significant step in the co-development process, ensuring that stakeholders of the Living Labs are actively involved in shaping the tools and outputs of Invest4Nature.



A lush green forest with tall trees and sunlight filtering through the canopy. A dark green banner is at the top, and a white graphic of diagonal bars is on the left side.

WORK PACKAGE 5

# STAKEHOLDER EMPOWERMENT AND NBS MARKET CREATION





Over the past few months, the development of the Decision Support Toolbox has resulted in the release of an initial internal version tailored for the project partners. Adopting an Agile approach, the toolbox was then tested by the partners.

Participants filled out a comprehensive set of questions that assessed various aspects of the software, including usability, utility, and overall satisfaction. The feedback gathered indicates that users found the toolbox intuitive, efficient, and valuable for their tasks. Many users appreciated the tool's design, highlighting its ease of use especially for the NBS recommender section.

The insights gathered from this round of testing will be incredibly useful in guiding the development of the next version of the software. The feedback provides clear direction on areas that are working well and those that could benefit from improvement like the partial lack of integration of its features and a need for more information and guidance for non-expert users. With these valuable informations, the project team is now in a strong position to make targeted adjustments that will further enhance the user experience and the technical requirements essential for ensuring that the toolbox remains aligned with the needs of its diverse audience. Overall, this user test has been an important step in refining the software and setting it up for even greater value in the future.



## 4. UPDATE FROM THE LIVING LABS



# PORTUGAL

**How are the short-term successes and long-term impacts of your NbS projects assessed to ensure they deliver lasting value?**

To measure the short-term success and long-term impact of the Nature-Based Solutions (NBS) projects at Ribeira das Vinhas and Cresmina Dune in Cascais, it is essential to adopt an integrated and multidimensional approach.





Short-term success can be assessed through immediate metrics such as biodiversity levels, water quality, and community engagement. Regular monitoring of flora and fauna, along with water analysis, provides clear data on ecological improvements. Community participation can be evaluated through surveys and attendance at workshops, reflecting public interest and support for the initiatives.

Long-term impact requires ongoing evaluation of ecosystem services, such as flood regulation, carbon sequestration, and soil health. Using remote sensing and geographic information systems helps track changes over time, enabling a comprehensive understanding of the projects' effectiveness.

Also, stakeholder partnerships are vital. Collaborating with local organizations and academic institutions can enhance the sustainability of NBS projects, ensuring ongoing research, education, and community involvement.

To create lasting value, it is crucial to integrate these projects into broader regional planning, aligning them with local development goals. Continuous feedback mechanisms should be established to adapt and improve the projects based on evolving community needs and environmental challenges. This holistic approach ensures that NBS projects not only achieve immediate results but also contribute to a resilient and thriving ecosystem for the future.

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**Bárbara Coelho**

*Empresa Municipal de Ambiente de Cascais*



# DENMARK



COASTAL



URBAN



RURAL



MOUNTAINOUS



FLUVIAL

▲ Illustration of rainwater management in the area. Dark blue arrows: Stormwater flow paths; Light blue arrows: Flow paths at terrain; Green: Green retention/roadside beds; Blue: Ponds; Red: Catchment in the project

*Risvangen, Aarhus*



## How are the short-term successes and long-term impacts of your NbS projects assessed to ensure they deliver lasting value?

Risvangen is a 50-hectare urban area in the northern part of Aarhus. In the early 2010's, a project was initiated here, as part of the implementation of Aarhus Municipality's wastewater plan, where rainwater and wastewater were to be separated in the area. At the same time, we wanted to adapt the area for future climate changes, to avoid overflows and consequent flooding of the area and pollution of the water quality in the Bay of Aarhus.

The use of nature-based solutions and water on the surface has given the area increased biodiversity, as well as increased recreational value due to the blue and green solutions. The project's functionality as a climate adaption solution was seriously tested in 2023, with the occurrence of a major cloudburst, corresponding to a 40-year rain event. The combination of the new ponds, infiltration basins and rain beds along the roadside proved a success, as there was no overflow into the Bay of Aarhus, and the nature-based solutions could contain the surplus water from this torrential rain-event. Furthermore, a subsequent modelling of the entire system has shown that it has a capacity corresponding to an 80-year rain-event in 2070.

To ensure that these solutions also deliver a satisfactory result in regards to nutrients, we compared the nature-based solutions to a conventional rainwater detention basin, and the nature-based solutions perform better than traditional retention basins and sufficiently supplement the water recipients.

The green and blue elements in Risvangen serve both as water retention elements and recreational elements, and they have been well received by the local citizens. One major wish from the local citizens was to change the very broad avenue in a way that would prevent speeding and car-racing in the area. This has been successfully handled, as the blue and green elements make speeding far less appealing.

All in all, the use of nature-based solutions instead of expensive piping has proved to be a success, and these experiences will be carried on to future projects.

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Lone Nørgaard Telling  
Aarhus Kommune



# POLAND



◀ Green schoolyards represent a further step in Poznań's efforts to promote and implement Nature-Based Solutions, building on the success of previously established natural playgrounds. Elementary and secondary school teachers have recognized the growing interest and need for students' contact with nature, with schools now showing an increasing willingness to invest in these solutions. Here, we present visualizations from one of the primary schools—School No. 20 in Poznań.

Ł. Dworniczak, City of Poznań



COASTAL



URBAN



RURAL



MOUNTAINOUS



FLUVIAL





◀ In 2018-2021, Poznań introduced natural playgrounds as an example of Nature-Based Solutions that provide a variety of environmental and socioeconomic benefits. A key measure of their success is not only the scale of implementation across the city but also the enthusiastic openness of kindergartens to transform their garden spaces with these nature-inspired features.  
*H. Bugajny, City of Poznań*

## How are the short-term successes and long-term impacts of your NbS projects assessed to ensure they deliver lasting value?

Poznań's nature-inspired playgrounds and green schoolyards NbS project addresses environmental challenges by fostering ecological awareness and community well-being. To gauge the short-term success of these projects, Poznań's Project Coordination and Urban Regeneration Office conducts qualitative assessments, gathering feedback from community members and stakeholders. Regular monitoring and data collection provide insights into environmental and social benefits, ensuring each project meets stakeholder expectations.

To ensure lasting impact, Poznań is working to establish specific metrics that capture the ecological, social and economic benefits of nature-based solutions. Effective measurement of these benefits requires robust cross-departmental collaboration, allowing the city to align diverse priorities and coordinate resources. While fully assessing NbS cost-efficiency remains a challenge, Poznań's dedication to adaptive planning is designed to meet current needs and secure enduring value for urban resilience.

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**Agnieszka Dziubala**  
*Poznań Municipality*



# NORWAY

## Kelp forest recovery – the successful outcome of removing sea urchins

**In Northern Norway, vast areas of kelp forests have been decimated by overgrazing from abundant sea urchin populations. However, there's hope!** Through intensive sea urchin removal, we can help the kelp forests recover. Pilot studies show that kelp can recolonize quickly if the sea urchins are removed to a sufficiently low density.

Our ongoing restoration project involves working with local communities and industry partners to remove sea urchins and develop new harvesting technologies.





## How are the short-term successes and long-term impacts of your NbS projects assessed to ensure they deliver lasting value?

While kelp can recover quickly after sea urchin removal, long-term success depends on controlling mechanisms maintaining the sea urchin abundance at low levels. This means preventing new generations of sea urchins from booming within the restored sites and restrict sea urchins from nearby areas from moving in. If the urchins' natural predators is not restored, we must repeat our sea urchin removal efforts to ensure a long-term recovery of the kelp forest.

Here is our plan to measure the short- and long-term success of our restoration efforts:

1. **Baseline ecosystem assessments:** We will conduct surveys of the urchin barrens and of ungrazed kelp forests, to have a baseline for each of the two ecosystem states.
2. **Monitoring:** Key features will be regularly monitored as indicators of success. Sea urchin density will be used as an indicator of the removal success, and kelp density, kelp biomass and the extent of the recovered kelp forest will be used as indicators of kelp forest health and recovery. We will also monitor the abundance and diversity of associated species.
3. **Evaluating indicators of success:** The extent of recovered kelp forest, the density and biomass of kelp, density of sea urchins, and the abundance and diversity of other species will be used as indicators of success in short and long term. The goals for each of the indicators will be set based on the design of the study, and the project's ambitions. Kelp forest biodiversity indicators will be related to the levels of the ungrazed kelp forest.

A recent study found that while the kelp canopy can recover quickly, the associated animal community takes much longer time to return. This means that ecosystem resilience and the ability to withstand new grazing pressures will take time to fully restore. Hence, kelp forest restoration is a long-term effort that requires a long timeline before we can fully evaluate its success.

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**Camilla With Fagerli**  
NIVA



# AUSTRIA

## How are the short-term successes and long-term impacts of your NbS projects assessed to ensure they deliver lasting value?

### Monitoring: Challenge or new opportunity - the case of LIFE Lech

Climate change is increasingly affecting ecosystems and the basis of Nature-based solutions (NBS). At the same time monitoring the resilience of NBS and ecosystems is difficult, and often with the projects. The two LIFE Lech Projects aimed to prevent flooding, but moreover to revitalize the river ecosystem. By the end of the project, the conditions were in place for the establishment and reintroduction of the project's target species and habitats.







To assess the ecological success, a comprehensive monitoring program and research were conducted, throughout the projects, attracting scientific interest and visits. However, the short recording period within the project framework made it challenging to prove the success of the ecological measures, as many species and habitats first develop after the project implementation.

To ensure the continuation of the monitoring, post-project, the LIFE II project integrated the continuation of the monitoring into a regional management plan, for the Tiroler Lech Nature Park. As the river's revitalization progresses, data monitoring continues and is made available, thanks to early focus and dedicated local organizations.

While monitoring and coherent data collection post-project is often a challenge, the early efforts and regional cooperation in the Life project have spurred new activities and attracting scientists-based tourism and activities, creating a Silicon Valley hub for NBS around the revitalization process of the river Lech in Außerfern.

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**I4N team in Tyrol**  
*Klimabündnis Tirol*

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### **Monitoring within the framework of the Life-Lech project focused on:**

- River Morphological changes
- Small fish (bullhead, minnow)
- Gravel bar breeding bird species
- Amphibians
- Insects and spiders
- Dwarf bulrush
- Habitats protected at the European (FloraFauna-Habitat) level
- Socio-economic impact

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**The Tyrolean Lech Nature Park** has established a knowledge database, available on request, containing studies, articles and updates. This makes the results public and showcases the projects outcomes for tourists on site.

The independent non-profit research institution, **Lechforschung2050+** has been founded to ensure ongoing monitoring and attract scientific interest, focusing on the ecosystem regeneration of the river Lech

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## 5. EVENTS





## NATURANCE

Nature for insurance,  
insurance for nature

### ➤ NATURANCE Webstival: Advancing Finance Innovations for Nature-Based Solutions

11-13 February 2025 | Online

[Webstival on Advancing Finance  
Innovations for Nature-based  
Solutions | NATURANCE](#)



## NBS EduWORLD

### ➤ 3rd NBS EduCommunity Workshop

18 February 2025

[NBS EduWORLD | Events](#)



## ECCA

7th Conference  
June 16-18, 2025 | Rimini

EUROPEAN  
CLIMATE  
CHANGE  
ADAPTATION  
2025

### ➤ European Climate Change Adaptation Conference 2025

16-18 June 2025 | Rimini, Italy

[Save the date for ECCA2025 | JPI Climate](#)



## 6. 'AT MY DESK'



▲ Chiara Bidoli, Andrea Staccione, Soraya Melinato, Jaroslav Mysiak of the Euro-Mediterranean Center on Climate Change (CMCC).

## Who are you and what is your role in Invest4Nature?

We are **Chiara Bidoli, Andrea Staccione** and **Soraya Melinato**, coordinated by **Jaroslav Mysiak**. We work at the Euro-Mediterranean Center on Climate Change (CMCC) in the Risk Assessment and Adaptation Strategies Division.

Since the launch of Invest4Nature, we have engaged in tasks like collecting data on the economic costs and benefits of nature-based solutions (NBS) and exploring their financing mechanisms. Our research has been enhanced by collaboration with the Living Labs, particularly Cascais. Here, in collaboration with NIVA, we aim to apply a new framework to assess the insurance value of NBS and to evaluate the avoided costs of damage related to the restoration of the Ribeira das Vinhas.

## What motivates you in Invest4Nature?

Nature-based solutions have gained international recognition as effective strategies for addressing climate-related challenges, enhancing societal well-being, and preserving biodiversity. Given their significance in today's landscape, we are highly motivated to deepen our understanding of these solutions and facilitate their implementation.

We are particularly excited to collaborate with municipalities and organizations throughout Europe that are actively implementing NBS. These partnerships allow us to co-develop knowledge, gather valuable feedback from practitioners, and refine our research outcomes based on real-world experiences.

Moreover, the passion that all organizations involved in these projects bring to this topic serves as a significant source of motivation for us, inspiring us to contribute meaningfully to the field of climate adaptation and resilience.

## What upcoming activities in Invest4Nature are you most excited about?

We are thrilled to embark on the next phase of the project, where we will analyze the extensive data we have collected over the past year. This has been a significant undertaking, and we believe these findings will be useful to other researchers looking to improve the understanding of NBS valuation and financing models.

Additionally, we will lead a new task focused on NBS market creation and policy framework analysis. Our research will review policy cases and drivers that promote NBS across various sectors. A crucial aspect will be assessing how well NBS are integrated into the current EU Sustainable Finance policy framework, including the EU Taxonomy of sustainable economic activities, and evaluating its support to incentivize investment in NBS.

For these activities, we are pleased to welcome new colleagues to our team: Caterina Guidi, biodiversity and climate change adaptation policy expert, and Simone Taddeo, sustainable finance and ESG expert. They will bring fresh perspectives and expertise to our efforts.



## 7. FROM THE SECTOR

### NATURETHON

#### From global to glocal: Financing NbS for climate action and urban adaptation

Invest4Nature teamed up with NATURANCE for the final event in their NATURETHON initiative, focusing on the collective understanding of NbS deployment. This webinar explored impactful financing frameworks, emphasizing cities and the social value of nature-inspired urban adaptation solutions. Invest4Nature researcher, Marianne Andersen from Aarhus University discussed the social and economic benefits of NbS at the urban scale, highlighting well-being, health values, and insights from the REGREEN Project.

Other key topics presented by climate policy expert Silvia Ainio included securing sustainable funding, integrating socioeconomic factors, and the potential of blue carbon markets for funding NbS. The event emphasized the need for public-private collaboration, effective blended financing approaches, and clear investment frameworks. The event was a vital platform for exchanging best practices and highlighted the role of innovative financial models in advancing a sustainable blue economy.



**NATURETHON**  
WEBINAR 17.9.24 | 16:00 CEST

From global to glocal:  
Financing NbS for climate action  
and urban adaptation

**Invest4Nature**  
**NATURANCE**

**SILVIA AINIO**  
European Climate Pact  
Ambassador

**MARIANNE ZANDERSEN**  
Aarhus University

#### Poznań's NBS Guidebook and Inspiration: Solutions to support urban nature

In previous EU initiatives CONNECTING Nature and Health&Greenspace project Poznań has implemented various NbS and green infrastructure projects to advance its environmental objective while also improving quality of life for its residents. Based on this experience, they have developed a comprehensive handbook detailing lessons learned for practitioners curious about NbS and their tangible benefits based on practical experience.

With its practical content and visual appeal, the 17 illustrated cards presents various NbS examples and a dedicated chapter on funding opportunities. They collaborated with scientists, graphic designers, to create a user-friendly material that appeals to a broad audience.collaboration possibilities.

[Learn more about Poznań's NbS Guidebook \(only in Polish\).](#)





Have any remarks, questions, or suggestions?...

Are you part of an organization that could benefit from Invest4Nature results or a stakeholder in the field of NbS and you would like to contribute?

Then don't hesitate to contact us at:

[info@invest4nature.eu](mailto:info@invest4nature.eu)

Reach out to us and we'll get you involved!

Make sure to subscribe to our Newsletter!

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Funded by the European Union